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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 40-F

☐ REGISTRATION STATEMENT PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

OR

☒ ANNUAL REPORT PURSUANT TO SECTION 13(a) OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2023 Commission File Number 001-15144

TELUS Corporation

(Exact Name of Registrant as specified in its charter)

British Columbia, Canada
(Province or other jurisdiction of incorporation or organization)

4812
(Primary Standard Industrial Classification Code Number (if applicable))

7th Floor – 510 West Georgia Street
Vancouver, British Columbia V6B 0M3, Canada
(604) 697-8044
(Address and telephone number of Registrant's principal executive offices)

CT Corporation System, 28 Liberty Street
New York, New York 10005
(212) 590-9200
(Name, address (including zip code) and telephone number (including area code) of agent for service in the United States)

Securities registered pursuant to section 12(b) of the Act.

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Shares	**TU**	**New York Stock Exchange**

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

None
(Title of Class)

For annual reports, indicate by check mark the information filed with this Form:
☒ Annual information form ☒ Audited annual financial statements

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of December 31, 2023:

1,467,785,977 Common Shares

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files).

Yes ☒ No ☐

Indicate by check mark whether the Registrant is an emerging growth company as defined in Rule 12b-2 of the Exchange Act.

Emerging Growth Company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act.

☐

†The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark whether the Registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

☐

This annual report on Form 40-F shall be incorporated by reference into or as an exhibit to, as applicable, each of the following of the Registrant's Registration Statements under the Securities Act of 1933, as amended: Form S-8s (File Nos. 333-125486, 333-181463 and 333-268186), Form F-3D (File No. 333-258770), and Form F-10 (File No. 333-266633).

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CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Based on the evaluation by TELUS Corporation ("TELUS" or the "Registrant") as of December 31, 2023 of the effectiveness of the design and operation of the Registrant's disclosure controls and procedures under the supervision of the Audit Committee, including the Registrant's Chief Executive Officer and Chief Financial Officer, the Chief Executive Officer and Chief Financial Officer have concluded that the Registrant's disclosure controls and procedures as defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act") are effective to a reasonable level of assurance to ensure that information required to be disclosed by the Registrant in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the United States Securities and Exchange Commission's (the "SEC") rules and forms, and to ensure that information required to be disclosed by the Registrant in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Registrant's management, including the Registrant's Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

It should be noted that while TELUS' Chief Executive Officer and Chief Financial Officer believe that TELUS' disclosure controls and procedures provide a reasonable level of assurance that they are effective, they do not expect that TELUS' disclosure controls and procedures or internal control over financial reporting will prevent all errors and fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

Management's Annual Report on Internal Control Over Financial Reporting

The report of management on our internal control over financial reporting is located under the heading "Report of Management on Internal Control Over Financial Reporting" in our audited consolidated financial statements, which are filed as Exhibit 99.4 to this annual report on Form 40-F, and is incorporated by reference herein.

Attestation Report of Independent Registered Public Accounting Firm

The attestation report of the registered public accounting firm on our internal control over financial reporting is located under the heading "Report of Independent Registered Public Accounting Firm" in our audited consolidated financial statements, which are filed as Exhibit 99.4 to this annual report on Form 40-F, and is incorporated by reference herein.

Changes in Internal Controls Over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the above evaluation that occurred during the period covered by this annual report on Form 40-F that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

IDENTIFICATION OF THE AUDIT COMMITTEE

TELUS has a separately designated standing Audit Committee established in accordance with section 3(a)(58)(A) of the Exchange Act. The current members of the Audit Committee are David Mowat (Chair), Hazel Claxton, Thomas Flynn, Denise Pickett and Sean Willy. All members of the Audit Committee are "independent" as such term is defined under applicable securities laws and applicable New York Stock Exchange ("NYSE") rules.

AUDIT COMMITTEE FINANCIAL EXPERT

The Board of Directors (the "Board") of TELUS has determined that David Mowat, the Audit Committee Chair, is the "audit committee financial expert" as such term is defined by U.S. securities laws and "independent" as noted above. The information contained under the heading "Audit Committee" starting on page 36 of TELUS' year-end 2023 Annual Information Form, filed as Exhibit 99.3 to this annual report on Form 40-F, is incorporated by reference herein.

CODE OF ETHICS

The Registrant has adopted a Code of Ethics and Conduct (the "Code") that applies to all directors, officers, including the Chief Executive Officer and the Chief Financial Officer, and employees. The Code has been posted on the Registrant's Internet website at https://www.telus.com/en/about/policies-and-disclosures/code-of-ethics-and-conduct. The Code is also available to any person, upon request, without charge by contacting TELUS Investor Relations by telephone at 1-800-667-4871 or by mail at 510 W. Georgia Street, 8th Floor, Vancouver, B.C. V6B 0M3 . The Code was amended in November 2021 to make minor clarifications to existing provisions.

PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table is a summary of billing by Deloitte LLP (PCAOB ID No. 1208), as external auditor of TELUS (the "External Auditor"), during the period from January 1, 2023 to December 31, 2023 (all amounts are in Canadian dollars):

Type of work	$ (millions)	%
Audit fees(1)	4.096	32.7
Audit-related fees(2)	7.978	63.6
Tax fees(3)	0.463	3.7
All other fees	—	0.0
Total	**12.537**	**100.0**

(1) Includes fees for services rendered by Deloitte in relation to the audit and review of our financial statements.
(2) Includes fees for audits in relation to our statutory and regulatory filings, audits and reviews of subsidiaries including TELUS International, pension-related audits, customer required reviews and translation services rendered by Deloitte in relation to the audit or review of our financial statements that were not part of audit fees.
(3) Relates to tax compliance, tax advice and tax planning.

The following table is a summary of billing by the External Auditor, during the period from January 1, 2022 to December 31, 2022 (all amounts are in Canadian dollars):

Type of work	$ (millions)	%
Audit fees(1)	3.125	27.4
Audit-related fees(2)	7.230	63.3
Tax fees(3)	0.870	7.6
All other fees(4)	0.192	1.7
Total	**11.417**	**100.0**

(1) Includes fees for services rendered by Deloitte in relation to the audit and review of our financial statements.
(2) Includes fees for audits in relation to our statutory and regulatory filings, audits and reviews of subsidiaries including TELUS International, pension-related audits, customer required reviews and translation services rendered by Deloitte in relation to the audit or review of our financial statements that were not part of audit fees.
(3) Relates to tax compliance, tax advice and tax planning.
(4) Includes fees for services rendered by Deloitte that were not in relation to the audit or review of our financial statements, such as proxy circular assurance work, Data Analytics Maturity Assessment and Benchmarking and other Specified Procedures.

All requests for non-prohibited audit, audit-related and non-audit services provided by the External Auditor and its affiliates to TELUS are required to be pre-approved by the Audit Committee of the Board. To enable this, TELUS has implemented a process by which all requests for services involving the External Auditor are routed for review by the VP Risk Management and Chief Internal Auditor to validate that the requested service is a non-prohibited service and to verify that there is a compelling business reason for the request. If the request passes this review, it is then forwarded to the Chief Financial Officer for further review. Pending the Chief Financial Officer's affirmation, the request is then presented to the Audit Committee for its review, evaluation and pre-approval or denial at its next scheduled quarterly meeting. If the timing of the request is urgent, it is provided to the Audit Committee Chair for his review, evaluation and pre-approval or denial on behalf of the Audit Committee (with the Audit Committee's review at the next scheduled quarterly meeting). Throughout the year, the Audit Committee monitors the actual versus approved expenditure for each of the approved requests. During the fiscal year ended December 31, 2023, the Audit Committee did not approve any of the fees captioned in the table above subject to waiver of pre-approval provisions set forth in Rule 2-01(c)(7)(i)(C) of Regulation S-X.

OFF-BALANCE SHEET ARRANGEMENTS

The Registrant has no off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on the financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The information provided under the heading "Commitments and contingent liabilities - Contractual obligations as at December 31, 2023" set forth on page 84 of the Management's Discussion and Analysis filed as Exhibit 99.4 to this annual report on Form 40-F, is incorporated by reference herein.

MINE SAFETY DISCLOSURE

Not applicable.

DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

SUMMARY OF SIGNIFICANT DIFFERENCES FROM NYSE CORPORATE GOVERNANCE RULES

A summary of significant ways in which corporate governance practices followed by TELUS differ from the corporate governance practices required to be followed by U.S. domestic companies under the New York Stock Exchange's Listing Standards (disclosure required by section 303A.11 of the NYSE Listed Company Manual) is available on the Registrant's corporate governance website at https://www.telus.com/en/about/investor-relations/corporate-governance/statement-of-our-governance-practices.

UNDERTAKING AND CONSENT TO SERVICE OF PROCESS

A. Undertaking

The Registrant undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the SEC staff, and to furnish promptly, when requested to do so by the SEC staff, information relating to: the securities registered pursuant to Form 40-F; the securities in relation to which the obligation to file an annual report on Form 40-F arises; or transactions in said securities.

B. Consent to Service of Process

The Registrant has previously filed with the SEC a Form F-X in connection with the class of securities in relation to which the obligation to file this annual report on Form 40-F arises.

EXHIBIT INDEX

The following documents are filed as exhibits to this annual report on Form 40-F:

Exhibit Number	Document
97	Incentive Compensation Recovery Policy
99.1	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act
99.2	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act
99.3	Annual Information Form for the year ended December 31, 2023, dated February 9, 2024
99.4	Audited Consolidated Financial Statements as at and for the years ended December 31, 2023 and 2022 and Management's Discussion and Analysis
99.5	Consent of Independent Registered Public Accounting Firm
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Scheme Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Scheme Definition Linkbase
101.LAB	XBRL Taxonomy Extension Scheme Label Linkbase
101.PRE	XBRL Taxonomy Extension Scheme Presentation Linkbase
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

SIGNATURES

Pursuant to the requirements of the Exchange Act, the Registrant certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this annual report to be signed on its behalf by the undersigned, thereto duly authorized.

Registrant: TELUS Corporation

By: */s/ Andrea Wood*
Andrea Wood
Executive Vice President and Chief Legal and Governance Officer

Date: February 9, 2024

Exhibit 97

Clawback Policy

1. The Board of Directors of TELUS Corporation (the "**Company**") has determined that it is in the best interests of the Company to adopt a policy (the "**Policy**") that permits the Company to recoup certain incentive or deferred compensation paid to certain executives of the Company and its subsidiaries.

2. The Company may recoup certain incentive and deferred compensation paid to the President and Chief Executive Officer and any Executive Vice President of the Company (together, the "**Affected Officers**") and cancel any incentive or deferred compensation granted to the Affected Officers in the following circumstances:

- where there has been a material misrepresentation or material error resulting in the restatement of the Company's financial statements, and
- the Affected Officer would have received less incentive or deferred compensation based upon the restated financial statements, and
- the Board determines that the Affected Officer engaged in Misconduct which contributed to the obligation for such restatement.

For the purposes of this Policy, Misconduct means an act of fraud, dishonesty or wilful negligence or material non-compliance with legal requirements or TELUS policies, any act or omission which would justify termination with cause or any failure to report or take action to stop Misconduct of another employee that the Affected Officer knew, or ought to have known, about.

3. In the circumstances described in paragraph 2, the Board may cancel or require the Affected Officers to repay to the Company, all or part of the following compensation paid or awarded to the Affected Officer in respect of the financial year for which restated financial statements are required:

- the annual performance bonus
- unvested options, Restricted Share Units and Executive Performance Units
- vested but unexercised options
- any monetary payments and shares received from the exercise of options or redemption of Executive Performance Units and Restricted Share Units, net of the exercise price paid

4. While the Company has a class of securities listed on the New York Stock Exchange, certain Affected Officers and other individuals who are Executive Officers (as defined in Schedule A to this Policy) are subject to recoupment under the Stock Exchange Recoupment Policy set out in Schedule A to this Policy which has been adopted by the Board of Directors of the Company in compliance with the requirements of section 10D of the *Securities Exchange Act of 1934* and the listing standards of that stock exchange.

5. This Policy is effective with respect to financial years beginning on and after January 1, 2013, provided that Schedule A is effective as of October 2, 2023. Except as otherwise provided under Schedule A, the Board may only seek recoupment if the restatement of the financial statement occurs within 36 months of the original date the audited financial statements were filed with the requisite provincial securities commissions. Any limitation on the amount subject to recoupment under either component of this Policy shall not limit the amount subject to recoupment under the other component of this Policy (so long as amounts are not double counted).

SCHEDULE A

Stock Exchange Recoupment Policy

1.0 Purpose

This Stock Exchange Recoupment Policy provides for the recoupment by TELUS Corporation (the " **Company**") of certain executive compensation in the event of a Financial Restatement and has been adopted in compliance with the requirements of section 10D of the *Securities Exchange Act of 1934* and the listing standards of the New York Stock Exchange (the "**Exchange**").

2.0 Definitions

For purposes of this Stock Exchange Recoupment Policy:

"**Committee**" means the People, Culture and Compensation Committee of the Board of Directors of the Company or, in the absence of such committee, a majority of independent directors serving on the Company's Board of Directors.

"**Executive Officer**" means, with respect to the Company, (i) its president, (ii) its principal financial officer, (iii) its principal accounting officer (or if there is no such accounting officer, its controller), (iv) any vice-president in charge of a principal business unit, division or function (such as sales, administration or finance), (v) any other officer who performs a policy-making function for the Company (including any officer of the Company's parent(s) or subsidiaries if such officer performs policy-making functions for the Company) and (vi) any other person who performs similar policy-making functions for the Company.

"**Financial Reporting Measure**" means any (i) measure that is determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, (ii) stock price, (iii) total shareholder return, and (iv) any measures that are derived wholly or in part from any measure referenced in (i), (ii) or (iii). Such measures need not be presented within the Company's financial statements or included in a filing with the U.S. Securities and Exchange Commission to constitute a Financial Reporting Measure.

"**Financial Restatement**" means an accounting restatement of any of the interim quarterly or annual consolidated financial statements of the Company due to the material non-compliance of the Company with any financial reporting requirement under securities laws, including any required accounting restatement to correct:

(a) an error in previously issued financial statements that is material to the previously issued financial statements, or

(b) that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period,

but does not include (1) an out-of-period adjustment (i.e., the correction of an immaterial error in previously-issued financial statements, provided that such correction is immaterial to the current period); (2) an accounting restatement pursuant to an order

issued by an applicable securities regulatory authority (provided such order is unrelated to any material non-compliance of the Company with any financial reporting requirement under securities laws); (3) the retrospective application of a change in accounting principles; (4) the retrospective revision to reportable segment information due to a change in the structure of the Company's internal organization; (5) a retrospective reclassification due to a discontinued operation; (6) the retrospective application of a change in reporting entity, such as from a reorganization of entities under common control; (7) retrospective adjustments to provisional amounts in connection with a prior business combination and (8) retrospective revision for stock splits, stock dividends, or other changes in the Company's capital structure.

"**FRM-Based Incentive Compensation**" means that portion of an Executive Officer's total compensation from the Company that is:

(a) granted, earned, or vested based wholly or in part upon the attainment of a Financial Reporting Measure; or

(b) determined based on, or was otherwise calculated by reference to, compensation in (a) above (including, without limitation, any amounts under any long-term disability, life insurance or supplemental retirement or severance plan or agreement or any notional account that is based thereon, as well as any earnings or dividend equivalents accrued thereon).

"Restatement Recoupment Amount" means the amount determined under 4.1 of this Stock Exchange Recoupment Policy.

"**Received**", with respect to FRM-Based Incentive Compensation, occurs in the Company's fiscal period during which the Financial Reporting Measure specified in the FRM-Based Incentive Compensation award is attained, even if the payment or grant of the FRM-Based Incentive Compensation occurs after the end of that period.

"**Recoupment Period"** means the three fiscal years completed immediately preceding the date of any applicable Restatement Date plus any transition period (that results from a change in the Company's fiscal year) within or immediately following those three completed fiscal years, provided that a transition period between the last day of the Company's previous fiscal year end and the first day of its new fiscal year that comprises a period of nine (9) to twelve (12) months would be deemed a completed fiscal year.

"**Restatement Date**" has the meaning set out in section 3.0 of this Stock Exchange Recoupment Policy.

3.0 When is FRM-Based Incentive Compensation Subject to Recoupment?

FRM-Based Incentive Compensation shall be subject to recoupment under this Stock Exchange Recoupment Policy as of the date (the "**Restatement Date**") which is the earlier to occur of:

(a) the date the Company's Board of Directors, a committee of the Board of Directors, or the officer or officers of the Company authorized to take such action if board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare a Financial Restatement; or

(b) the date a court, regulator, or other legally authorized body directs the Company to prepare a Financial Restatement.

4.0 Recoupment Process for FRM-Based Incentive Compensation

4.1 Determination of Restatement Recoupment Amount

Subject to subsection 4.3, the "**Restatement Recoupment Amount**" shall be the amount by which the FRM-Based Incentive Compensation Received by the Executive Officer during the Recoupment Period exceeds the amount the Executive Officer would have Received during that period had it been determined based on the restated amounts in the Financial Restatement, measured on a before-tax basis, as determined by the Committee. Where the Restatement Recoupment Amount is not subject to mathematical recalculation directly from the information in the Financial Restatement, then (i) the amount will be based on a reasonable estimate of the effect of the Financial Restatement on the applicable Financial Reporting Measure, (ii) the Company will maintain documentation related to that determination, and (iii) the Company will provide such documentation to the Exchange.

4.2 Procedure for Recoupment

The Committee shall determine, in its sole discretion and subject to applicable law, the method for recovery of any Restatement Recoupment Amount, which to the fullest extent permitted by applicable law may include any one or more of the following:

(a) withholding, forfeiting and/or cancelling any incentive compensation of the individual; and/or

(b) deducting amounts from salary, wages, incentive compensation and/or any other compensation payable to the individual; and/or

(c) cancelling or setting-off against planned future grants of incentive compensation; and/or

(d) requiring reimbursement of amounts previously received by the individual; and/or

(e) setting off against other amounts payable to the individual.

The Company shall not indemnify any individual, directly or indirectly, for any amount recouped under this Stock Exchange Recoupment Policy.

4.3 Exceptions to FRM-Based Incentive Compensation Recoupment Requirement

Notwithstanding anything to the contrary in this Stock Exchange Recoupment Policy, the Company may elect not to recover some or all of the Restatement Recoupment Amount to the extent the Committee determines that recovery would be impracticable and one or more of the following conditions, and any other requirements of applicable laws, are met:

(a) the direct expense paid to a third party to assist in enforcing Stock Exchange Recoupment Policy would exceed the Restatement Recoupment Amount, and the Company (i) has made a reasonable attempt to recover the Restatement

Recoupment Amount, (ii) documented such attempt, and (iii) provided such documentation to the Exchange;

(b) recovery of the Recoupment Amount by the Company would violate applicable laws in Canada that were adopted prior to November 28, 2022, and the Company (i) has obtained an opinion of Canadian counsel that recovery would result in a violation of such laws and (ii) has provided such opinion to the Exchange; or

(c) recovery of the Recoupment Amount would likely cause an otherwise tax- qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the requirements of sections 401(a)(13) or 411(a) of the U.S. Internal Revenue Code of 1986, as amended.

5.0 Administration

The Committee shall administer this Stock Exchange Recoupment Policy and may make all determinations under it, and all such determinations will be final and binding on all interested parties.

Exhibit 99.1

Certification

I, Darren Entwistle, certify that:

1. I have reviewed this annual report on Form 40-F of TELUS Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: February 9, 2024

/s/ Darren Entwistle
Darren Entwistle
President and Chief Executive Officer

Certification

I, Doug French, certify that:

1. I have reviewed this annual report on Form 40-F of TELUS Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: February 9, 2024

/s/ Doug French
Doug French
Executive Vice President and Chief Financial Officer

Exhibit 99.2

Certifications

Pursuant to 18 U.S.C. §1350, each of the undersigned officers of TELUS Corporation ("TELUS") hereby certifies that to his knowledge, (a) the annual report for the period ended December 31, 2023 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and (b) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of TELUS.

Date: February 9, 2024

/s/ Darren Entwistle
Darren Entwistle
President and Chief Executive Officer

Date: February 9, 2024

/s/ Doug French
Doug French
Executive Vice President and Chief Financial Officer

Exhibit 99.3

Annual Information Form for the year ended December 31, 2023, dated February 9, 2024

[previously filed on SEDAR]

TELUS Corporation
Annual Information Form for the year ended
December 31, 2023

February 9, 2024



1. CAUTION REGARDING FORWARD-LOOKING STATEMENTS

The terms *TELUS, the Company, we, us* and *our* refer to TELUS Corporation and, where the context of the narrative permits or requires, its subsidiaries.

This document contains forward-looking statements about expected events and our financial and operating performance. Forward-looking statements include any statements that do not refer to historical facts. They include, but are not limited to, statements relating to our objectives and our strategies to achieve those objectives, our expectations regarding trends in the telecommunications industry (including demand for data and ongoing subscriber base growth), and our financing plans (including our multi-year dividend growth program). Forward-looking statements are typically identified by the words *assumption*, *goal*, *guidance*, *objective*, *outlook*, *strategy*, *target* and other similar expressions, or future or conditional verbs such as *aim*, *anticipate*, *believe*, *could*, *expect*, *intend*, *may*, *plan*, *predict*, *seek*, *should*, *strive* and *will*. These statements are made pursuant to the "safe harbour" provisions of applicable securities laws in Canada and the United States *Private Securities Litigation Reform Act of 1995*.

By their nature, forward-looking statements are subject to inherent risks and uncertainties and are based on assumptions, including assumptions about future economic conditions and courses of action. These assumptions may ultimately prove to have been inaccurate and, as a result, our actual results or other events may differ materially from expectations expressed in or implied by the forward-looking statements.

These risks and assumptions underlying our forward-looking statements are described in additional detail in *Section 9 General trends, outlook and assumptions, and regulatory developments and proceedings* and *Section 10 Risks and risk management* in our 2023 annual Management's discussion and analysis (MD&A). Those descriptions are incorporated by reference in this cautionary statement but are not intended to be a complete list of the risks that could affect the Company or of our assumptions.

Risks and uncertainties that could cause actual performance or other events to differ materially from the forward-looking statements made herein and in other TELUS filings include, but are not limited to, the following:

- **Regulatory matters**. *We operate in a number of highly regulated industries and are therefore subject to a wide variety of laws and regulations domestically and internationally. Policies and practices of elected officials and regulatory decisions, reviews and government activity may have strategic, operational and/or financial implications (including on revenue and free cash flow).*

  Risks and uncertainties include:

  - changes to our regulatory regime or the outcomes of proceedings, cases or inquiries relating to its application, including but not limited to those set out in *Section 9.4 Communications industry regulatory developments and proceedings* in the MD&A;
  - the potential for government to allow consolidation of competitors in our industry or conversely for government to intervene with the intent of further increasing competition, for example, through mandated wholesale access, including to fibre-to-the-premises (FTTP) facilities;
  - the potential for additional government intervention on pricing, including internet overage charges and roaming fees;
  - changes to federal or provincial legislation or its application (including consumer protection legislation);
  - the introduction of new privacy legislation by the federal, provincial or territorial governments or in non-Canadian jurisdictions where we do business that could materially expand or alter the scope of consumer privacy rights, include significant administrative monetary penalties and a private right of action, and implement a new regulatory regime for the use of artificial intelligence (AI) in the private sector, with significant enforcement powers;
  - potential threats to unitary federal regulatory authority over communications in Canada;
  - potential threats to the CRTC's ability to enforce competitive safeguards such as the Standstill Rule and the *Wholesale Code*, which aim to ensure the fair treatment by vertically integrated firms of rival competitors operating as both broadcasting distributors and programming services;
  - regulatory action by the Competition Bureau or other regulatory agencies;
  - spectrum allocation and compliance with licences, including our compliance with licence conditions, changes to spectrum licence fees, spectrum policy determinations such as restrictions on the purchase, sale, subordination, use and transfer of spectrum licences, the cost and availability of spectrum and timing of spectrum allocation, and ongoing and future consultations and decisions on spectrum licensing and policy frameworks, auctions and allocation;
  - draft legislation permitting the government to restrict the use in telecommunications networks of equipment made by specified companies, including Huawei and ZTE;

- draft legislation imposing new cybersecurity reporting requirements; the request by the Minister of Innovation, Science and Industry to telecommunications service providers, including TELUS, to improve network resiliency, along with CRTC proceedings to investigate network reliability and resiliency;
- potential limitations on international roaming fees and ancillary service fees;
- restrictions on non-Canadian ownership and control of the common shares of TELUS Corporation (Common Shares) and the ongoing monitoring of, and compliance with, such restrictions;
- unanticipated changes to the current copyright regime, which could impact obligations for internet service providers or broadcasting undertakings;
- our ability to comply with complex and changing regulation of the healthcare, virtual care and medical devices industries in the jurisdictions in which we operate, including as an operator of health clinics; and risks related to the quality of care and provision of insured/uninsured services; and
- our ability to comply with, or facilitate our clients ' compliance with, numerous, complex and sometimes conflicting legal regimes, both domestically and internationally.

· **Competitive environment.** *Competitor expansion, activity and intensity (pricing, including discounting, bundling), as well as non-traditional competition, disruptive technology and disintermediation, may alter the nature of the market and impact our market share and financial results (including revenue and free cash flow*).

Risks and uncertainties include:

- our ability to continue to retain customers by providing a customer service experience that meets or exceeds expectations, a range of relevant products and services and a reliable state-of-the-art network;
- the intensity of competition, including aggressive promotional offers and device financing strategies and the ability of industry competitors to offer bundled and/or discounted services;
- competition across all services with communications companies and virtual broadcast distribution undertakings and other over-the-top (OTT) services, which, among other things, places pressures on current and future average revenue per subscriber per month (ARPU), cost of acquisition, cost of retention and churn rates for all services;
- consolidation, mergers and acquisitions of industry competitors (including the acquisition of Shaw by Rogers and associated assets divested to Videotron), as well as any related regulatory actions;
- regional operators leveraging wholesale access regulations to enter the market;
- low-earth-orbit satellite internet services becoming available in urban areas;
- our ability to obtain and offer content on a timely basis across multiple devices on mobile and TV platforms at a reasonable cost as content costs per unit continue to grow;
- vertical integration in the broadcasting industry resulting in competitors owning broadcast content services, and timely and effective enforcement of related regulatory safeguards;
- TI's ability to compete with professional services companies that offer consulting services, information technology companies with digital capabilities, and traditional contact centre and business process outsourcing companies that are expanding their capabilities to offer higher-margin and higher-growth digital services;
- in our TELUS Health business, our ability to compete with other providers of employee and family assistance programs, benefits administration, electronic medical records and pharmacy management products, claims adjudicators, systems integrators and health service providers, including competitors with a vertically integrated mix of health services delivery, IT solutions and related services, global providers that could achieve expanded Canadian footprints, and providers of virtual healthcare services, preventative health services and personal emergency response services; and
- in our TELUS Agriculture & Consumer Goods business, our ability to compete with focused software and IoT competitors.

· **Technology.** *Consumer adoption of alternative technologies and changing customer expectations have the potential to impact our revenue streams and customer churn rates.*

Risks and uncertainties include:

- reduced utilization and increased commoditization of traditional fixed voice services (local and long distance) resulting from impacts of OTT applications and mobile substitution;
- a declining overall market for TV services, resulting in part from content piracy and signal theft, a rise in OTT direct-to-consumer video offerings and virtual multichannel video programming distribution platforms;
- the increasing number of households with only mobile and/or internet-based telephone services;
- potential decline in ARPU as a result of, among other factors, substitution by messaging and OTT applications; substitution by increasingly available Wi-Fi services;

- disruptive technologies, such as OTT IP services, including software-defined networks in the business market that may displace or cause us to reprice our existing data services, and self-installed technology solutions;
- any failure to innovate, maintain technological advantages or respond effectively and in a timely manner to changes in technology;
- high subscriber demand for data that challenges wireless networks and spectrum capacity levels and may be accompanied by increases in delivery cost;
- the roll-out, anticipated benefits and efficiencies, and ongoing evolution of wireless broadband technologies and systems;
- availability of resources and our ability to build out adequate broadband capacity;
- our reliance on wireless network access agreements, which have facilitated our deployment of mobile technologies;
- our choice of suppliers and those suppliers ' ability to maintain and service their product lines, which could affect the success of upgrades to, and evolution of, technology that we offer;
- supplier limitations and concentration and market power for products such as network equipment, TELUS TV and mobile handsets;
- our expected long-term need to acquire additional spectrum capacity through future spectrum auctions and from third parties to address increasing demand for data, and our ability to utilize spectrum we acquire;
- deployment and operation of new fixed broadband network technologies at a reasonable cost and the availability and success of new products and services to be rolled out using such network technologies;
- network reliability and change management; and
- our deployment of self-learning tools and automation, which may change the way we interact with customers.

- **Security and data protection**. *Our ability to detect and identify potential threats and vulnerabilities depends on the effectiveness of our security controls in protecting our infrastructure and operating environment, and our timeliness in responding to attacks and recovering business operations. A successful attack may impede the operations of our network or lead to the unauthorized interception, destruction, use or dissemination of customer, team member or business information*.
- **Generative AI (GenAI)**.
  GenAI exposes us to numerous risks including risks related to the responsible use of AI, data privacy and cybersecurity, and the possibility that our use of AI may produce inaccurate or inappropriate content or create negative perceptions among companies and regulators that could affect demand for our services.
- **Climate and the Environment.** *Natural disasters, pandemics, disruptive events and climate change may impact our operations, customer satisfaction and team member experience*.

  Risks and uncertainties include:

  - loss of employee work time as a result of illness or injury;
  - public concerns related to radio frequency emissions
  - climate-related risks (such as extreme weather events and other natural hazards);
  - waste and waste recycling;
  - risks relating to fuel systems on our properties and the environmental impact of our network including legacy network equipment; and
  - changing government and public expectations regarding environmental matters and our responses.

  Our goals to achieve carbon neutrality and reduce our greenhouse gas (GHG) emissions in our operations are subject to our ability to identify, procure and implement solutions to reduce energy consumption and adopt cleaner sources of energy, our ability to identify and make suitable investments in renewable energy, including in the form of virtual power purchase agreements, and our ability to continue to realize significant absolute reductions in energy use and the resulting GHG emissions in our operations.

- **Operational performance and business combination**. *Investments and acquisitions present opportunities to expand our operational scope, but may expose us to new risks. We may be unsuccessful in gaining market traction/share and realizing benefits, and integration efforts may divert resources from other priorities*.

  Risks and uncertainties include:

  - our ability to identify suitable candidates for partnerships or strategic transactions and our ability to complete these transactions;
  - our reliance on legacy systems and our ability to implement and support new products and services and business operations in a timely manner;
  - our ability to manage the requirements of large enterprise deals;

- our ability to implement effective change management for system replacements and upgrades, process redesigns, cost efficiency programs and business integrations (such as our ability in a timely manner to successfully complete and integrate acquisitions into our operations and culture, complete divestitures or establish partnerships and realize expected strategic benefits, including those following compliance with any regulatory orders);
- our ability to identify and manage new risks inherent in new service offerings that we may provide, including as a result of acquisitions, which could result in damage to our brand, our business in the relevant area or as a whole, and additional exposure to litigation or regulatory proceedings;
- our ability to effectively manage the growth of our infrastructure and integrate new team members;
- our reliance on third-party cloud-based computing services to deliver our IT services; and
- economic, political and other risks associated with doing business globally (including war and other geopolitical developments), as we have assets and operations located outside Canada and the U.S.

- **Customer service**. *Our service delivery directly impacts customer experience, customer churn rates, and likelihood to recommend outcomes. We may not be able to deliver the excellence our customers expect or maintain our competitive advantage in this area*.

  Risks and uncertainties include:

  - our ability to successfully implement cost reduction initiatives (including efficiency and effectiveness programs, business integrations, business product simplification, business process automation and outsourcing, offshoring, reorganizations, procurement initiatives, and real estate rationalization).

- **Our systems and processes.** *Systems and technology innovation, maintenance and management may impact our IT systems and network reliability, as well as our operating costs*.

  Risks and uncertainties include:

  - our ability to maintain customer service and operate our network in the event of human error or human-caused threats, such as cyberattacks and equipment failures that could cause various degrees of network outages;
  - technical disruptions and infrastructure breakdowns;
  - delays and rising costs, including as a result of government restrictions or trade actions; and
  - the completeness and effectiveness of business continuity and disaster recovery plans and responses.

- **Our team.** *The rapidly evolving and highly competitive nature of our markets and operating environment, along with the globalization and evolving demographic profile of our workforce, and the effectiveness of our internal training, development, succession and health and well-being programs, may impact our ability to attract, develop and retain team members with the skills required to meet the changing needs of our customers and our business. There may be greater physical and mental health challenges faced by team members (and their families) as a result of the pandemic, and the effect of other significant change initiatives at the organization may result in the loss of key team members through short-term and long-term disability*.

  Risks and uncertainties include:

  - recruitment, retention and appropriate training in a highly competitive industry (including retention of team members leading recently acquired businesses in emerging areas of our business);
  - the level of our employee engagement and impact on engagement or other aspects of our business or any unresolved collective agreements;
  - our ability to maintain our unique culture and team member engagement as we grow and implement organizational changes and cost reduction initiatives;
  - the risk that certain independent contractors in our business could be classified as employees; and
  - the physical and mental health of our team, which are critical to engagement and productivity.

- **Suppliers**. *We may be impacted by supply chain disruptions and lack of resiliency in relation to global or local events. Dependence on a single supplier for products, components, service delivery or support may impact our ability to efficiently meet constantly changing and rising customer expectations while maintaining quality of service.*
- **Real estate matters**. *Real estate investments are exposed to possible financing risks and uncertainty related to future demand, occupancy and rental rates, especially following the pandemic. Future real estate developments may not be completed on budget or on time and may not obtain lease commitments as planned.*
- **Financing, debt and dividends**. *Our ability to access funding at optimal pricing may be impacted by general market conditions and changing assessments in the fixed-income and capital markets regarding our ability to generate sufficient future cash flow to*

service our debt. Our current intention to return capital to shareholders could constrain our ability to invest in our operations to support future growth.

Our capital expenditure levels and potential outlays for spectrum licences in auctions or purchases from third parties affect and are affected by: our broadband initiatives, including connecting more homes and businesses directly to fibre; our ongoing deployment of newer mobile technologies, including wireless small cells that can improve coverage and capacity; investments in network technology required to comply with laws and regulations relating to the security of cyber systems, including bans on the products and services of certain vendors; investments in network resiliency and reliability; the allocation of resources to acquisitions and future spectrum auctions held by Innovation, Science and Economic Development Canada (ISED), including the millimetre wave spectrum auction, which is expected to commence in 2024. Our capital expenditure levels could be impacted if we do not achieve our targeted operational and financial results or if there are changes to our regulatory environment.

Lower than planned free cash flow could constrain our ability to invest in operations, reduce leverage or return capital to shareholders. This program may be affected by factors such as the competitive environment, fluctuations in the Canadian economy or the global economy, our earnings and free cash flow (which may be affected by restructuring and other costs resulting from initiatives such as post-acquisition integration and cost efficiency programs), our levels of capital expenditures and spectrum licence purchases, acquisitions, the management of our capital structure, regulatory decisions and developments, and business continuity events. Quarterly dividend decisions are subject to assessment and determination by our Board of Directors based on our financial position and outlook. There can be no assurance that our dividend growth program will be maintained through 2025 or renewed.

Factors that may affect TI ’s financial performance are described in TI ’s public filings available on SEDAR+ and EDGAR. TI may choose to publicize targets or provide other guidance regarding its business and it may not achieve such targets. Failure to meet these targets could affect TELUS’ ability to achieve targets for the organization as a whole and could result in a decline in the trading price of the TI Subordinate Voting Shares or the TELUS Common Shares or both.

- **Tax matters**. *Complexity of domestic and foreign tax laws, regulations and reporting requirements applying to TELUS and our international operating subsidiaries may impact financial results, effective governance of tax considerations and compliance. International acquisitions and expansion of operations heighten our exposure to multiple forms of taxation*.

  Risks and uncertainties include:

  - interpretation of complex domestic and foreign tax laws by the relevant tax authorities that may differ from our interpretations;
  - the timing and character of income and deductions, such as depreciation and operating expenses;
  - tax credits or other attributes;
  - changes in tax laws, including tax rates;
  - tax expenses that are materially different than anticipated, including the taxability of income and deductibility of tax attributes or retroactive application of new legislation;
  - elimination of income tax deferrals; and
  - changes to the interpretation of tax laws, including those resulting from changes to applicable accounting standards or the adoption of more aggressive auditing practices by tax authorities, tax reassessments or adverse court decisions impacting the tax payable by us.
- **The economy**. *Changing global economic conditions, including a potential recession and alternating expectations about inflation, as well as our effectiveness in monitoring and revising growth assumptions and contingency plans, may impact the achievement of our corporate objectives, our financial results (including free cash flow), and our defined benefit pension plans*.

  Risks and uncertainties include:

  - the state of the economy in Canada, which may be influenced by economic and other developments outside of Canada, including potential outcomes of future policies and actions of foreign governments;
  - expectations regarding future interest rates;
  - inflation;
  - unemployment levels;
  - immigration levels;

- effects of volatility in oil prices;
- effects of low business spending (such as reducing investments and cost structure);
- pension investment returns and factors affecting pension benefit obligations, funding and solvency discount rates;
- fluctuations in exchange rates of the currencies of various countries in which we operate;
- sovereign credit ratings and effects on the cost of borrowing;
- the impact of tariffs on trade between Canada and the United States; and
- global implications of the dynamics of trade relationships among major world economies.

· **Litigation and legal matters**. *Complexity of, and compliance with, laws, regulations, commitments and expectations may have a financial and reputational impact*.

Risks and uncertainties include:

- our ability to successfully respond to investigations and regulatory proceedings;
- our ability to defend against existing and potential claims and lawsuits (including intellectual property infringement claims and class actions based on consumer claims, data, privacy or security breaches and secondary market liability), or our ability to negotiate and exercise indemnity rights or other protections in respect of such claims and lawsuits; and
- the complexity of legal compliance in domestic and foreign jurisdictions, including compliance with competition, anti-bribery and foreign corrupt practices laws.

Many of these risks and uncertainties are beyond our control or outside of our current expectations or knowledge. Additional risks and uncertainties that are not currently known to us or that we currently deem to be immaterial may also have a material adverse effect on our financial position, financial performance, cash flows, business or reputation. Except as otherwise indicated in this document, the forward-looking statements made herein do not reflect the potential impact of any non-recurring or special items or any mergers, acquisitions, dispositions or other business combinations or transactions that may be announced or that may occur after the date of this document.

Readers are cautioned not to place undue reliance on forward-looking statements. Forward-looking statements in this document describe our expectations, and are based on our assumptions, as at the date of this document and are subject to change after this date. Except as required by law, we disclaim any intention or obligation to update or revise any forward-looking statements.

This cautionary statement qualifies all of the forward-looking statements in this Annual Information Form.

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1 As filed on SEDAR+ on February 9, 2024

Each Section of the Management's Discussion and Analysis for the fiscal year ended December 31, 2023 (2023 annual MD&A), referred to in this Annual Information Form (AIF) is incorporated by reference and filed on SEDAR+ at sedarplus.ca. For greater certainty, notwithstanding references to TELUS' information circular, consolidated financial statements, sustainability and ESG report and the telus.com website, these documents and website are not incorporated into this AIF. In this AIF, except where otherwise indicated, all references to dollars or $ are to Canadian dollars.

3. CORPORATE STRUCTURE

3.1 Name, address and incorporation

TELUS was incorporated under the *Company Act* (British Columbia) (the B.C. Company Act) on October 26, 1998, under the name BCT.TELUS Communications Inc. (BCT). On January 31, 1999, pursuant to a court-approved plan of arrangement under the *Canada Business Corporations Act* among BCT, BC TELECOM Inc. (BC TELECOM) and the former Alberta-based TELUS Corporation (TC), BCT acquired all of the shares of BC TELECOM and TC in exchange for common shares, and non-voting shares of BCT and BC TELECOM were dissolved. On May 3, 2000, BCT changed its name to TELUS Corporation and in February 2005, the Company transitioned under the *Business Corporations Act* (British Columbia), successor to the B.C. Company Act. On February 4, 2013, in accordance with the terms of a court approved plan of arrangement under the *Business Corporations Act* (British Columbia), TELUS exchanged all of its issued and outstanding Non-Voting Shares into Common Shares on a one-for-one basis. On April 16, 2013, TELUS subdivided its Common Shares on a two-for-one basis. On March 17, 2020, TELUS subdivided its issued and outstanding Common Shares on a two-for-one basis. On January 1, 2024, as part of an internal reorganization TELUS Holdings 2023 Inc. amalgamated with TELUS Corporation.

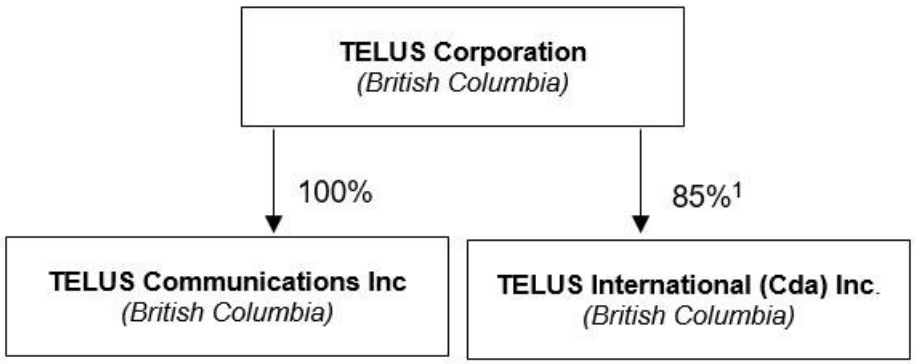
TELUS maintains its registered office at Floor 7, 510 West Georgia Street, Vancouver, British Columbia (B.C.) and its executive office at Floor 23, 510 West Georgia Street, Vancouver, B.C.

3.2 Intercorporate relationships and TELUS subsidiaries

TELUS' telecommunications businesses are primarily operated through TELUS Communications Inc (TCI). TELUS International (Cda) Inc. (TELUS International or TI) is a digital customer experience innovator that designs, builds and delivers next-generation solutions, including artificial intelligence and content moderation, for global and disruptive brands, supporting their clients' digital transformation journeys and enabling clients to swiftly embrace next-generation digital technologies to deliver better business outcomes.

In February 2021, TELUS International made an initial public offering (IPO) of subordinate voting shares (TI Subordinate Voting Shares); both TELUS Corporation and a TELUS International non-controlling shareholder individually also offered TI Subordinate Voting Shares in conjunction with the IPO.

In the year ended December 31, 2023, TCI and TI were the only subsidiaries that owned assets constituting more than 10% of the consolidated assets of TELUS and that generated sales and operating revenues that exceeded 10% of the consolidated sales and operating revenues of TELUS. In addition, all of the assets, sales and operating revenues of TELUS' other subsidiaries (other than TCI and TI), together did not exceed 20% of TELUS' total consolidated assets or 20% of TELUS ' total consolidated sales and operating revenues as at December 31, 2023.



1 As of December 31, 2023, TELUS Corporation retained, directly and indirectly, approximately 85% of the combined voting interest attached to all issued and outstanding shares in TI.

4. GENERAL DEVELOPMENT OF THE BUSINESS

4.1 Three-year history

During the three-year period ended on December 31, 2023, we continued to advance our national growth strategy, guided by our six strategic imperatives.

For a review of the events and conditions that influenced our general development during 2023, and how our business has continued to evolve, please see *Section 1.2 - The environment in which we operate*, *Section 2.2 - Strategic imperatives*, as well as progress on our corporate priorities in *Section 3 - Corporate priorities* and *Section 5 – Discussion of operations* of our 2023 annual MD&A which sections are hereby incorporated by reference. This AIF also incorporates by reference *Section 11 - Definitions and reconciliations* of our 2023 annual MD&A.

The following discussion relates to 2021 and 2022 events and conditions.

Strategic imperative: Building national capabilities across data, IP, voice and wireless

We were recognized with various accolades from Opensignal throughout 2021.

- In the *Mobile Network Experience Canada* report released in February 2021, we were recognized as being number one for Video Experience, Voice App Experience, Download Speed Experience and Upload Speed Experience, and we tied for number one in 4G Availability, 4G Coverage Experience and Games Experience. This achievement marked the ninth consecutive time an aspect of our mobile network, including download speed experience, has earned top spot from Opensignal.
- In the *Canada 5G User Experience Report* released in April 2021, we tied for first in 5G Download Speed, 5G Video Experience, 5G Upload Speed, 5G Availability, 5G Voice App Experience and 5G Reach.
- In *The State of Group Video Calling Experience – North and Latin America* report released in June 2021, we were the joint winner for Group Video Calling Experience in Canada. As well, Canada ranked third out of 19 countries and territories in North and Latin America.
- In the *Mobile Network Experience: Canada Report* (August 2021), we earned the top spot in six of seven categories, won top spot in four awards (Video Experience, Voice App Experience, Download Speed Experience and Upload Speed Experience), and tied for first in two awards (Games Experience and 4G Coverage Experience). Our speed in the Download Speed Experience category was 73.9 Mbps, which was 5.8% faster than the second place finisher and 28.6% faster than the third place finisher.
- In the *Canada 5G Experience Report* released in August 2021, we tied for first in 5G Video Experience, 5G Download Speed and 5G Upload Speed.

In 2021, we won two Speedtest Awards from U.S.-based Ookla for Canada's Fastest Mobile Network and Canada's Best Mobile Coverage.

In Canada-based Tutela's report entitled *Canada: State of Mobile Experience March 2021*, we were awarded two of the national awards for Excellent Consistent Quality and Core Consistent Quality, and tied for Download Throughput and Coverage, based on data from September 1, 2020 to February 28, 2021. Tutela also named us the best mobile experience provider in Canada.

In U.S.-based PCMag's report *The Fastest ISPs of 2021: Canada*, released in June 2021, we were ranked as the fastest ISP in Canada among major ISPs for the second consecutive year. The report also noted that we expanded the gap between our speeds and those of our peers by a wider margin.

In February 2021, we announced the completed deployment of TELUS 4G LTE technology in 14 isolated communities in Quebec's Lower North Shore region, nearly one year ahead of the targeted completion date. For the first time ever, the region's 2,000 households have access to high-speed internet and mobile phone service, and can browse the internet at speeds similar to those living in urban areas.

In March 2021, we announced a five-year partnership with the University of Alberta (U of A) to establish a 5G Living Lab at the U of A campus to advance research and development of innovative technologies. The $15 million investment will enhance U of A's innovation and commercialization capacity in areas of strength, starting with precision agriculture and autonomous vehicle systems.

In June 2021, in partnership with the Kanata North Business Association and Canada 's Centre of Excellence in Next Generation Networks, we announced the launch of the 5G Innovation Zone in Ottawa's Hub350. This innovation hub is designed to leverage emerging technology advancements, including edge computing, network slicing and IoT commercialization, to tackle real-world challenges. These technologies are foundational to unleash the potential of 5G and the TELUS innovation zone is expected to help realize both economic and societal value from these capabilities.

In December 2021, we expanded our strategic relationship with IBM by deploying a Canada-wide 5G edge computing platform to enable enterprises across multiple industries to accelerate innovative solutions that deliver new value to their clients and operations.

Our investments to deploy our PureFibre technology have brought fibre-optic connectivity further into our infrastructure and directly to homes and businesses. At the end of 2021, over 2.7 million homes and businesses in communities across B.C., Alberta and Quebec had access to ultra-fast, symmetrical internet speeds of 150 Mbps up to 1 Gbps, and approximately 1.3 million premises in B.C. and Alberta had access to symmetrical internet speeds of up to 2.5 Gbps with TELUS PureFibre. Recognizing the need for highly reliable connectivity with low latency throughput to support emerging services such as virtualized networks and IoT applications, we have also begun rolling out new equipment for enhanced speeds and services.

We were recognized with various accolades from Opensignal throughout 2022. These results make us Canada 's most awarded network by Opensignal for the 11th consecutive time.

- In the *Mobile Network Experience Canada* report released in February 2022, we were recognized as being first for Video Experience, Games Experience, Voice App Experience and Upload Speed Experience, and we tied for first in Download Speed Experience and 4G Coverage Experience. This achievement marked the tenth consecutive time an aspect of our mobile network, including download speed experience, has earned top spot from Opensignal.
- In the *Canada 5G User Experience Report* released in February 2022, we tied for first in 5G Video Experience, 5G Voice App Experience and 5G Download Speed.
- In the *Mobile Network Experience: Canada Report (August 2022)* , we earned the top spot in four categories (Excellent Consistent Quality, Core Consistent Quality, Games Experience and Voice App Experience), and tied for first in two categories (Video Experience and 4G Coverage Experience).
- In the *Canada 5G Experience Report (August 2022)*, we earned top recognition in the 5G Video Experience category, and tied for first in two categories (5G Voice App Experience and 5G Download Speed).
- In the *5G Global Mobile Network Experience Awards 2022* released in September 2022, TELUS was noted as a 5G Global High Performer for 5G Reach.

We were recognized by U.S.-based Ookla for our network performance in 2022.

- We won the award for North America 's Fastest Mobile Network in January 2022, according to results from tests taken with Speedtest by Ookla for Q3-Q4 2021.
- According to Ookla's Speedtest Intelligence, we delivered the fastest median download speeds among top providers in Canada during the first, second and third quarters of 2022, while tying for fastest median download speed in the fourth quarter of 2022.
- We were named Canada's Fastest Mobile Network for Q3-Q4 2021 (January 2022) and Q1-Q2 2022 (July 2022), marking 10 consecutive times that our mobile network has earned this recognition from Ookla.

For the second consecutive year, in 2022 TELUS was named Canada 's Most Respected Mobile Service Provider in Canada's Most Respected Corporation Awards Program, ranking first out of 13 other mobile service providers. Koodo ranked second overall for this year's award. The award recognized our reputation across customer service excellence, community giving, team culture, diversity, equity and inclusion efforts, as well as overall brand trust by the Canadian public.

In Canada-based Tutela's report entitled Canada: *State of Mobile Experience March 2022*, we were awarded the four national awards for Excellent Consistent Quality, Core Consistent Quality, 5G Excellent Consistent Quality and 5G Core Consistent Quality, based on data from September 1, 2021 to February 28, 2022.

In U.S.-based PCMag's report The Fastest ISPs of 2022: Canada, released in June 2022, we were ranked as the fastest nationwide internet service provider (ISP) in Canada among major ISPs for the third consecutive year. Among all major providers across Canada, the testers at PCMag experienced peak download speeds on the TELUS PureFibre network of up to 2,500 Mbps, and upload speeds more than 30% faster than any other widely available plans in Canada.

In January 2022, we announced our multi-year contract with Sandvine, which will enable us to use Sandvine 's application and network intelligence solutions on Google Cloud to further assist us in monitoring and managing expected growth in mobile data and video traffic across our network.

In January 2022, we announced a five-year partnership with the University of Ottawa (uOttawa) to transform the campus into a 5G-connected innovation hub. In addition to this collaboration fueling multidisciplinary research to advance global health and life-saving diagnostics and treatments and cybersecurity, it will also transform uOttawa campuses and enrich the student experience through new curriculums and teaching methods as students participate in cutting-edge research leveraging the power of 5G.

In February 2022, we announced that we are partnering with Google Cloud and NXN Digital to make Canadian cities safer, greener and smarter. This strategic alignment combines our leading networks with Google Cloud's infrastructure and data analytics, and NXN Digital's smart-city-as-a-service platform, to enable cities and districts of any size to improve the lives of their citizens through initiatives such as controlling traffic signals to reduce congestion and emissions, and utilizing data analytics that create smarter, more efficient city planning.

In March 2022, together with Samsung Networks, we announced the successful deployment of Canada 's first next-generation Mission Critical Push-to-X (MCPTX) services. Deployed over our leading networks, this new MCPTX solution will equip Canada's first responders with the information and data they need to more accurately assess emergency situations, improve responsiveness and operational efficiency, and drive better public safety outcomes.

In March 2022, we announced that we will be utilizing our Smart Hub technology and leading 5G network to bring fixed wireless internet speeds up to 100 Mbps to nearly 60 rural communities across B.C. and Alberta by the end of the year. Our Smart Hub technology uses a fixed wireless connection that is powered by our 5G network to deliver faster home internet speeds, making this an innovative alternative for customers living in remote communities or areas that are more challenging to serve with a traditional broadband connection.

In March 2022, together with the Vector Institute, we announced the launch of the energy optimization system, which uses artificial intelligence (AI) to reduce climate impacts from data centres. This development uses model-based reinforcement learning to fine-tune the heating, ventilation and air conditioning (HVAC) systems across network locations, allowing for energy-efficient temperature control. This new algorithm will be open sourced as a contribution to the energy conservation community to leverage AI to create better outcomes for Canadians and our environment.

In April 2022, we were recognized as one of the Best B2B Brands in Canada in 2022 by Report on Business, ranking sixth out of 79 companies in Canada, up from eighth in 2021. This is a testament to our team's commitment to leverage our social purpose to create remarkable human outcomes while delivering exceptional experiences in the business-to-business (B2B) space.

In May 2022, we announced a strategic collaboration with Taoglas Waste Technologies to combine our Smart City solutions with the Taoglas Waste Insights software to allow for cities to vastly enhance the operation of waste management systems. These smart waste solutions present practical commercial benefits and, more importantly, make a lasting positive impact on the environment.

In June 2022, our #StandWithOwners program returned for the third consecutive year, recommitting $1 million to help businesses across Canada with funding, localized advertising and technology prizes.

In June 2022, we deployed new 3500 MHz spectrum on our next-generation 5G mobile network to further support our country's economic growth and competitiveness, bringing enhanced capacity, low latency and even faster speed to our customers in Toronto, Montreal, Ottawa, Edmonton and Victoria.

In October 2022, we announced our collaboration with the Peel Regional Police Service to advance 5G innovation and deploy technologies that will keep our communities safe. This association will provide greater connection while in the field, advance the next generation of 9-1-1 services and connect mental health services within the community as well as equip first responders with improved multimedia tools and real-time data, enabling them to better assess emergency situations and provide urgent support.

We continued to invest in our leading-edge broadband technology, which has enabled the success of our internet, TV and security offerings and business services, as well as our mobility solutions, and helped us deploy our 5G technology in 2020.

- At December 31, 2022, our 4G LTE technology covered 99% of Canada ’s population and our LTE advanced technology covered over 96% of Canada’s population.
- Our 5G network connected over 30.8 million Canadians, representing approximately 83% of Canada ’s population at December 31, 2022.
- As at December 31, 2022, we had connected approximately 3.0 million households and businesses in B.C., Alberta and Eastern Quebec with fibre-optic cable, which provided these premises with immediate access to our fibre-optic infrastructure. This is up from over 2.7 million households and businesses at December 31, 2021.

Strategic imperative: Providing integrated solutions that differentiate TELUS from our competitors

Throughout 2021, we continued to invest in our leading-edge broadband technology, which has enabled the success of our internet, Optik TV offerings and business services, as well as our mobility solutions, and helped allow us to deploy our 5G technology in 2021.

- Our 4G LTE infrastructure covered 99% of Canada ’s population at December 31, 2021 and December 31, 2020.
- Over 2.7 million households and businesses in B.C., Alberta and Eastern Quebec were connected with fibre-optic cable, which provided these premises with immediate access to our fibre-optic infrastructure. This was up from approximately 2.5 million households and businesses at December 31, 2020.
- Our 5G network, launched in the second quarter of 2020, connected over 26.2 million Canadians, representing 70% of the population at December 31, 2021.

In February 2021, we launched TELUS Global Connect, enabling our customers to customize and manage IoT device connectivity on cellular networks around the globe. The launch of TELUS Global Connect is part of a growing relationship between TELUS and Eseye, a pioneer of IoT connectivity management solutions, providing businesses with seamless cellular IoT connectivity to 700 mobile networks across 190 countries.

In June 2021, we launched PureFibre X, with upload and download speeds of 2.5 Gbps. PureFibre X plans include the latest Wi-Fi 6, enabling better quality connectivity and connections throughout the home. By leveraging Wi-Fi 6 technology with our new PureFibre X, we can provide households with nearly limitless connectivity, enabling simultaneous 4K streaming, video conferencing, web surfing, gaming, smart home automation and smart home security.

In July 2021, we announced the launch of the TELUS Managed Cloud Security service, which supports an integrated cybersecurity strategy with unified controls and complete visibility across the customers’ infrastructure. Built in collaboration with cybersecurity leader Palo Alto Networks, TELUS Managed Cloud Security offers a comprehensive way to secure data wherever customers do business.

In September 2021, we announced a multi-year agreement with General Motors Canada (GM) that will connect GM ’s next-generation vehicles to our 5G network. We are collaborating with GM to enable high-performance wireless network capabilities that will meet the unique needs of an all-electric and autonomous vehicle future. The first GM vehicles with built-in connectivity to our 4G-LTE and 5G network are expected to be introduced with the 2025 model year.

Throughout 2022, we continued to invest in our leading-edge broadband technology, which has enabled the success of our internet, TV and security offerings and business services, as well as our mobility solutions, and helped us deploy our 5G technology in 2020.

- At December 31, 2022, our 4G LTE technology covered 99% of Canada ’s population and our LTE advanced technology covered over 96% of Canada’s population.

- Our 5G network connected over 30.8 million Canadians, representing approximately 83% of Canada ’s population at December 31, 2022.
- As at December 31, 2022, we had connected approximately 3.0 million households and businesses in B.C., Alberta and Eastern Quebec with fibre-optic cable, which provided these premises with immediate access to our fibre-optic infrastructure. This is up from over 2.7 million households and businesses at December 31, 2021.

In March 2022, we were recognized by Brand Finance as having the most valuable telecom brand in Canada, with our brand value growing by 23% to $10.1 billion, according to the Brand Finance Canada 100 report for 2022.

In May 2022, we were named the Most Trusted Telecom brand in Canada for the fourth consecutive year by Canadian consumers in the Gustavson Brand Trust Index presented by the Peter B. Gustavson School of Business at the University of Victoria.

Strategic imperative: Partnering, acquiring and divesting to accelerate the implementation of our strategy and focus our resources on core business

In the first quarter of 2021, we acquired a digitally enabled central dispensing pharmacy to make the pharmacy experience more personal, convenient and accessible, as well as easier for users to manage.

In July 2021, TI acquired Bangalore-based Playment, a leader in data annotation and computer vision tools and services specializing in 2D and 3D image, video and light detection and ranging (LiDAR). The acquisition followed TI’s purchase of Lionbridge AI in December 2020 and further expanded the company’s global leadership in scaled data annotation capabilities, enabling greater opportunities to enhance AI systems and provide more complex solutions to technology, large enterprise and existing hyperscaler clients. TI operates this division as TELUS International AI Data Solutions, with a global AI community of over one million annotators and linguists and one of the largest data annotation platforms of its kind globally.

In September 2021, we acquired the assets of Herdtrax Inc., a leading integrated online cattle record management software that allows users to capture data at birth and with every subsequent event through the animal's life. Herdtrax will continue to work to bridge information gaps through an animal's life, providing the ability to track and share attributes to help with management decisions made across the beef industry. Herdtrax was already integrated with Feedlot Health Management Services by TELUS Agriculture, allowing farmers to share information with buyers, helping optimize production efficiency and overall animal health by supporting data-based decision-making for feedlot and calf grower clients.

On September 22, 2021, we acquired 100% ownership of Blacksmith Applications Holdings Inc., a provider of management, optimization and analytics to food, beverage and consumer goods providers. The acquisition was complementary to, and was made with a view to growing, our existing smart data solutions business.

On December 6, 2021, we announced the disposition of our financial solutions business for $500 million. Net proceeds from the transaction were used to support strategic growth investments, including connecting more homes and businesses to our TELUS PureFibre network and advancing our 5G network build and investments to support enhancing new areas of growth, including our offerings to small and medium-sized businesses, as well as in TELUS Health and TELUS Agriculture & Consumer Goods. Proceeds were also used to support debt retirement.

During the first quarter of 2022, TI announced a collaboration with Automation Anywhere, a global leader in robotic process automation (RPA), to simplify the delivery and migration of automation solutions on Google Cloud. As a platinum preferred partner and managed services provider of Automation Anywhere, TI is enabling the end-to-end development of RPA solutions on Google Cloud to improve business tasks with more speed, accuracy and efficiency.

During the first quarter of 2022, we released the first version of our agriculture data exchange platform, which allows our customers to leverage connections to farm machinery, weather and other data sources utilizing a single sign-on. This securely streamlines customer access and storage of data in our cloud platform. The platform has since launched commercially and is serving our global clients daily.

In January 2022, we officially launched TELUS Health Virtual Pharmacy, a patient-focused service designed to improve medication management by ensuring timely delivery of prescriptions direct to a patient's home, providing unlimited access to virtual pharmacist consults, and offering tools to help manage dosing compliance. This virtual pharmacy service allows users to have

unlimited one-on-one video and phone consultations with pharmacists from the comfort of their home, while also providing them with tools to keep track of their family's medications through the service's online dashboard.

In March 2022, we acquired Sprout Wellness Solutions, a holistic digital health and wellness solution designed to educate, engage and inspire people to improve their health through behavioural change. The solution is available as part of the TELUS Health suite of services for Canadian employers to empower their employees, through their benefits plan, to live healthier lives.

During the second quarter of 2022, we launched our new trade promotion management, optimization and analytics (TPx) solution, and have begun transitioning customers onto our platform with plans to continue transitioning more of our current customers throughout the year. The TPx solution allows food merchants to maximize profitability while minimizing waste and inefficiencies.

In July 2022, we announced the opening of a new mental health clinic in downtown Montreal. In response to a high number of individuals waiting for mental health support in Quebec, the new clinic is accepting new clients and offering appointments and individualized programming with trained and compassionate psychologists, counsellors and life coaches.

In July 2022, TI officially opened its state-of-the-art site in Ballina, Ireland, which supports its ability to create, annotate and enhance data to enable better AI via human intelligence, further strengthening TI's global leadership in AI data solutions.

In August 2022, TI opened its new site in the emerging business district of Pavia, Iloilo in the Philippines. This is its eighth site in the Philippines and second site outside of Metro Manila.

In August 2022, we launched TELUS Health MyPet, a new virtual veterinary care service app that brings dog and cat owners virtual access to provincially licensed vets. TELUS Health MyPet vets provide care for anything from nutritional management and parasite control to behavioural challenges, and can prescribe certain medications. TELUS Health MyPet ensures that pet owners who live in remote areas, or whose pets do not travel well in vehicles, still have access to care without leaving the comfort of home. The initial launch was in B.C. with plans to expand into other provinces over time.

On September 1, 2022, we announced the completion of the acquisition of LifeWorks Inc., expanding the global footprint of TELUS Health, now supporting corporate clients in more than 160 countries, covering 68 million lives and growing worldwide. This acquisition will significantly accelerate our vision of employer-focused healthcare, increasing access to high-quality, proactive healthcare and mental wellness for employees by unifying digital-first solutions across the care continuum.

In November 2022, we announced a strategic initiative to provide TELUS Health 's full suite of total health and well-being solutions to all of Walmart Canada's more than 100,000 associates. This robust suite of health services will provide Walmart Canada associates and their families with confidential access to hundreds of health professionals from a variety of disciplines to support every step of their healthcare journey.

In December 2022, we announced a new collaboration with Desjardins Insurance that will bring TELUS Health 's leading health and well-being services to members and other eligible individuals from group insurance plans administered by Desjardins.

Strategic imperative: Focusing relentlessly on the growth markets of data, IP and wireless

TELUS technology solutions (TTech) service revenues increased by $685 million or 5.9% in 2021. Our main drivers of growth include: (i) increased internet and data service revenues, as well as smart food-chain technology and other fixed data services revenues, driven by higher revenue per customer resulting from internet speed upgrades, subscriber base growth, business acquisitions and expanded services; (ii) growth in our mobile and connected devices subscriber bases; and (iii) growth in health services revenues, as further described below.

TTech fixed data services revenues increased by $482 million or 12.2% in 2021. The increase was driven by: (i) increased internet and data service revenues, reflecting higher revenue per customer resulting from internet speed upgrades, larger allotted data internet rate plans and rate changes, in addition to a 6.2% increase in our internet subscriber base over the 12 months of 2021; (ii) increased revenues from smart food-chain technology, driven by business acquisitions; (iii) higher TV revenues, reflecting subscriber growth of 4.1% over the 12 months of 2021; and (iv) increased revenues from home and business security driven by expanded services and customer growth of 13.7% over the 12 months of 2021. This growth was partly offset by the ongoing decline in legacy data service revenues.

TTech mobile network revenue increased by $178 million or 3.0% in 2021, generated from increases in our mobile subscriber base, including growth of Internet of Things (IoT) connections, in addition to growth in monthly recurring charges reflecting a greater mix of high-value customer additions and selection of higher-tier plans. These impacts were partly offset by lower chargeable data usage revenue as customer continue to adopt larger data allotments in their rate plans, the impact of the competitive environment putting pressure on base rate plan prices, and lower roaming revenues as declines in the first quarter of 2021 exceeded modest roaming recoveries in the latter portion of 2021.

TTech health service revenues increased by $73 million or 16.3% in 2021, driven by: (i) business acquisitions; (ii) increased in-clinic services in our reopened TELUS Health Care Centres, whereas clinics were impacted by mandated lockdowns last year; (iii) higher revenues from the continued adoption of our virtual care solutions; and (iv) growth in health benefits management services with plan members resuming the use of elective health services.

Our digital and customer experience (DLCX) solutions operating revenues increased by $573 million or 33.0% in 2021, attributable in part to growth generated from our acquisitions, particularly within our tech and games clients. The remainder of the growth was organic, coming from growth in services provided to existing clients, as well as new clients added since the prior year.

TELUS consolidated service revenues increased by $1,258 million or 9.5% in 2021, which exemplified our commitment to a highly differentiated and potent asset mix geared towards high-growth, technology-oriented verticals. In addition, as announced on March 25, 2021, our advanced capital investments in our fibre build and 5G coverage, as well as other capital investments which enable us to support continuing subscriber growth, deliver on our digitization strategy and drive product enhancements, will bolster top-line revenue growth and enhance our strong competitive positioning.

TTech service revenues increased by $1,054 million or 8.6% in 2022. Our main drivers of growth include: (i) growth in health services revenues driven by business acquisitions, including our acquisition of LifeWorks on September 1, 2022, as well as organic growth; (ii) higher mobile network revenues, including growth in our mobile phone and connected devices subscriber bases, in addition to increased mobile phone ARPU; (iii) an increase in data service revenues, driven by internet and security subscriber growth, business acquisitions, higher revenue per internet customer and TV subscriber growth; and (iv) growth in agriculture and consumer goods services revenues driven by business acquisitions and organic contributions. These factors were partly offset by: (i) continued declines in fixed legacy voice and data services revenues; and (ii) lower TV revenues due to an increased mix of customers selecting smaller TV combination packages and technological substitution.

TTech fixed data services revenues increased by $216 million or 5.2% in 2022. The increase was driven by: (i) growth in internet and data service revenues, reflecting a 6.3% increase in our internet subscribers in 2022, in addition to higher revenue per customer as a result of internet speed upgrades, internet rate plans with larger allotted data amounts, and rate changes; (ii) business acquisitions; and (iii) increased revenues from home security driven by expanded services and customer growth of 21.6% in 2022. This growth was partially offset by: (i) the impact of the fourth quarter 2021 disposition of our financial solutions business; (ii) lower TV revenues, reflecting an increased mix of customers selecting smaller TV combination packages and technological substitution, largely moderated by subscriber growth of 4.7% over the 12 months of 2022; and (iii) the ongoing decline in legacy data service revenues.

TTech mobile network revenue increased by $383 million or 6.2% in 2022, generated from increases in our mobile subscriber base, including growth of IoT connections, supported by roaming improvements resulting from increased international travel volumes. These impacts were partly offset by (i) lower overage revenues as customers continue to adopt larger or unlimited data and voice allotments in their rate plans; (ii) the impact of the competitive environment putting pressure on base rate plan prices; and (iii) a greater uptake of family discounts and bundling credits.

TTech health service revenues increased by $392 million or 75.2% in 2022, driven by: (i) our acquisition of LifeWorks on September 1, 2022; (ii) higher revenues as a result of the continued adoption of our virtual solutions, inclusive of organic growth and business acquisitions; and (iii) growth in health benefits management services, with plan members continuing to increase their use of elective health services, as well as an increase in the number of lives covered, partly offset by rate changes associated with a contract renewal.

Our DLCX solutions operating revenues increased by $367 million or 15.9% in 2022, primarily attributable to growth in our tech and games clients, arising from additional services provided to existing clients and new clients added since the prior year. The strengthening of the U.S. dollar against the Canadian dollar resulted in a favourable foreign currency impact on our DLCX operating

results, partially offset by the weakening European euro and related unfavourable foreign currency impact on our European euro-denominated operating results.

TELUS consolidated service revenues increased by $1,421 million or 9.8% in 2022, which exemplified our commitment to a highly differentiated and potent asset mix geared towards high-growth, technology-oriented verticals. The completion of our $2.2 billion acquisition of LifeWorks on September 1, 2022 enabled continued innovation and market share growth through our solid financial backing, along with significant cross-selling synergies between our respective organizations, including TELUS International. In addition, our continued advanced capital investments in our fibre build and 5G coverage, as well as other capital investments which enable us to support continuing subscriber growth, deliver on our digitization strategy and drive product enhancements, will bolster top-line revenue growth and enhance our strong competitive positioning.

Strategic imperative: Going to market as one team under a common brand, executing a single strategy

Our team works together to implement our top corporate priority: putting customers first, as we strive to consistently deliver exceptional client experiences and become the most recommended company in the markets we serve. The Commission for Complaints for Telecom-television Services (CCTS) annual reports have indicated the successful results of this strategy.

In December 2021, the CCTS issued its annual report for the 12-month period ended July 31, 2021, and TELUS again received the fewest customer complaints among national carriers, while Koodo again received the fewest complaints among national flanker brands. Although total industry complaints accepted by the CCTS increased by 8.6% year-over-year, complaints involving TELUS increased at a lesser rate of 4.7%.

In 2011, we initiated our first set of long-term energy and greenhouse gas emission reduction goals and surpassed them in early 2019, ahead of our 2020 target. We released our new transformational climate action targets, including having our operations become net carbon neutral by 2030.

Throughout 2021, we continued to leverage our Connecting for Good programs to support marginalized Canadians through the global pandemic and also expanded program eligibility to support those who need it most.

- We welcomed close to 12,000 new households to our Internet for Good program in 2021, resulting in 106,000 low income family members, persons with disabilities and youth leaving foster care all benefiting from low-cost internet since the launch of the program in 2016.
- Our Mobility for Good program offers free or subsidized mobile phone rate plans and devices to all youth aging out of foster care and to low-income seniors across Canada receiving the guaranteed income supplement. We added 7,000 youth, seniors and other marginalized Canadians in 2021. Since we launched the program in 2017, more than 28,000 individuals have benefited.
    - In the fourth quarter of 2021, we launched Mobility for Good for Indigenous Women at Risk, a new program that provides free smartphones and data plans to Indigenous women who are at risk of or surviving violence, in partnership with Indigenous organizations in Alberta and B.C.
- We expanded our Tech for Good program nationally, in partnership with March of Dimes Canada, and continued to provide people with disabilities access to personalized one-on-one assessments, customized recommendations, training and support on mobile devices. Up to December 31, 2021, we have supported more than 4,600 Canadians with disabilities who require professional assistance to independently use or control their mobile device through the program and the TELUS Wireless Accessibility Discount.
- Our mobile health clinics, served 14 communities across Canada, supported 35,000 patient visits in 2021, resulting in close to 95,000 cumulative primary care visits since the inception of our Health for Good program in 2019. Most mobile clinics had also directly supported the COVID-19 crisis response, providing COVID-19 assessments since the start of the pandemic, and vaccines in 2021. Up to December 31, 2021, our mobile health clinics have administered more than 9,000 vaccinations.
- We continued to expand our Health for Good program presence with the launch of new clinics throughout the year:
    - In January 2021, we launched a new mobile clinic in Toronto with the Parkdale Queen West Community Health Centre. This clinic provides primary healthcare services for marginalized populations in Toronto's midwest neighbourhoods.
    - In January 2021, we also announced a new partnership and mobile clinic with Kilala Lelum Health Centre. This specially equipped mobile van provides primary healthcare and Indigenous Elder-led cultural care to residents of Vancouver's Downtown Eastside.

- In May 2021, we enhanced our presence in Victoria, B.C. with the signing of a new partnership agreement with Cool Aid Society, a well-established and highly regarded charity organization that provides primary and mental healthcare, affordable housing and other supports for the homeless in Victoria, Saanich and Langford.
- In October 2021, we expanded further with the launch of a new mobile clinic in the Niagara Region of Ontario. In collaboration with our partner, REACH Niagara, we are bringing primary care to marginalized and underserved people in the area, including migrant agricultural workers, new immigrants and refugees, while supporting the training of the next generation of healthcare workers.

We continued to help Canadians stay safe in our digital world through our TELUS Wise program in 2021. Over 105,000 Canadians participated in virtual TELUS Wise workshops and events in 2021, bringing our cumulative participation to over 450,000 Canadians since the program launched in 2013.

- Approximately 47,000 youth attendees at our TELUS Be Brave #EndBullying online event. This event was held in support of Pink Shirt Day on February 24, 2021, a day in which citizens were encouraged to wear pink to take a stand against bullying, in partnership with the Calgary Hitmen.
- In the third quarter of 2021, we hosted a Facebook Live streaming event on digital citizenship, with close to 20,000 Canadians participating in the event.
- The launch of TELUS Wise online basics helped those who were new to using technology learn basic, everyday digital literacy skills.

The TELUS Friendly Future Foundation and TELUS Community Boards directed support in 2021 to charitable initiatives helping at-risk youth and other marginalized populations. The Foundation marked its third year in 2021, committing more than $8.7 million in cash donations to 500 charitable organizations. The Foundation has contributed over $25 million in cash donations to our communities since its inception to the end of 2021, supported by the work of our TELUS Community Boards. Since 2005 to 2021, the TELUS Community Boards had invested $91 million in cash donations to 7,800 initiatives, providing resources and support for underserved citizens, especially young people, around the world.

Throughout 2021, the TELUS Pollinator Fund for Good invested nearly $20 million in debt and equity securities of 10 socially responsible and innovative startups, of which 40% were women-led and 50% were led by Indigenous or racialized founders. The Fund was recognized as a Clean50 Top Project for its contributions to clean capitalism in Canada. Canada's Clean50 offers recognition to Canada's leaders in sustainability for their contributions over the prior two years. The Fund was also confirmed as a global finalist for the social impact award in Reuters Events Responsible Business Awards.

In February 2021, we introduced our newest TELUS Resource Group, Reach, to advance diverse representation in decision making and to shine light on systemic issues that disproportionately and uniquely affect the Black community. Together with Reach, we will continue to amplify the voices of marginalized communities by providing resources, offering education, driving action, increasing communication and celebrating the heritage of Black team members, as we reach every team member, ensuring dialogue, partnership and growth.

In April 2021, we became the first national telecommunications company in Canada to set science-based greenhouse gas (GHG) emissions reduction targets approved by the Science Based Targets initiative (SBTi). The SBTi is a partnership between CDP, the United Nations Global Compact, the World Resources Institute and the World Wide Fund for Nature to mobilize companies to set science-based targets and boost their competitive advantage in the transition to a low-carbon economy.

Throughout May 2021, we evolved our 16-year legacy global volunteer movement, TELUS Days of Giving, to TELUS #FriendlyFuture Days. More than 55,000 TELUS employees, retirees, family and friends participated, helping to volunteer 1.3 million hours of giving by our TELUS team during the year.

In May 2021, we invested in the Black Innovation Fund, an early-stage venture fund focused on supporting Black-founded technology and technology-enabled businesses based in Canada. Building on our support of the Ryerson DMZ Black Innovation Program, the Black Innovation Fund will help raise the profile of minority entrepreneurs.

On June 14, 2021, we released our sustainability-linked bond framework, the first of its kind in Canada, that aligns our financing strategy with our ambitious goal of achieving operational net carbon neutrality across all of our global operations by 2030. The framework was developed in accordance with the International Capital Market Association's Sustainability-Linked Bond Principles

2020 (SLBP). Sustainalytics, a leading independent environmental, social and governance (ESG) research, ratings and analytics firm, reviewed the framework and is of the opinion that it aligns with the SLBP. Our 2.85% Sustainability-Linked Notes, Series CAF, which closed on June 28, 2021, were the first series of bonds in Canada offered under the framework.

In June 2021, we renewed our commitment to champion Canadian small businesses through our #StandWithOwners initiative, recognizing that small business owners have needed to pivot and innovate throughout the COVID-19 pandemic. In this second year, we doubled our commitment by investing $1 million to support small businesses with funding, localized advertising and mentorship as they move forward.

In July 2021, we invested in Radicle, a Calgary-based company that has developed a carbon credit platform for buyers and sellers of carbon credits.

In the fall of 2021, we donated 14,000 backpacks that were filled with essential school supplies to local schools across Canada to support students in need. Since 2006 to 2021, our annual Kits for Kids program donated 180,000 backpacks, creating a friendlier future as kids head back to school.

In September 2021, we launched our Reconciliation Commitment, which was developed in partnership with and in support of Indigenous Peoples across the country. Central to our Reconciliation Commitment is the desire to support the diverse needs of Indigenous Peoples in ways they want to be supported by TELUS. In this regard, we are proud to stand in solidarity with residential school survivors and their families through our $8 million commitment toward reconciliation in 2021. This included a $1 million gift to digitize, promote and distribute the Witness Blanket, as well as investments from the TELUS Pollinator Fund for Good, TELUS Community Boards and TELUS Friendly Future Foundation.

In November 2021, we released our 2021 Indigenous Reconciliation and Connectivity Report, an evolution from the annual connectivity report that shares inspiring stories of the transformative benefits that connectivity brings to newly connected Indigenous communities. The 2021 report also included our first-ever Indigenous reconciliation action plan, making us the first technology company in Canada to publicly commit to an Indigenous reconciliation action plan.

In November 2021, we committed $1 million (including $500,000 of in-kind support in health, network and community services) to support British Columbia following the unprecedented weather events and flooding that sent the province into a state of emergency.

Our renewable energy virtual power purchase agreement (VPPA) with the Brooks I Solar facility in Alberta saw production of over 20.5 GWh in 2021.

In November 2022, the CCTS issued its annual report for the 12-month period from August 1, 2021 to July 31, 2022, and TELUS again received the fewest customer complaints among national carriers, while Koodo® again received the fewest complaints among national flanker brands. Additionally, TELUS had the highest resolution rate of complaints of any national carrier at 89.7%.

Throughout 2022, as part of our unwavering commitment to put our customers and communities first, we enabled $6.6 million in community giving for humanitarian and emergency relief around the world through cash and in-kind contributions from TELUS, our team members and customers, as well as TELUS Friendly Future Foundation. Our global aid in 2022 included helping those impacted by Hurricane Fiona in Atlantic Canada, Hurricane Ian in Florida, the flooding in Pakistan, the humanitarian crisis in Ukraine and the unrest in Iran.

Throughout 2022, we continued to leverage our Connecting for Good ® programs to provide support for marginalized individuals. In line with our commitment to enable human connections and to bridge digital divides, we have provided support for 342,000 individuals since the launch of our programs.

- During the year, we welcomed 15,500 new households to our Internet for Good ® program. Since we launched the program in 2016, more than 46,500 households and close to 150,000 low-income family members and seniors, in-need persons with disabilities and youth leaving foster care have all benefited from subsidized internet.
    - In January and February 2022, we expanded Internet for Good to thousands of low-income seniors in B.C. and Alberta, as well as Eastern Quebec, providing them with the resources and connectivity they need to succeed.

- Our Mobility for Good program offers free or subsidized smartphones and mobile phone rate plans to all youth aging out of foster care and to qualifying low-income seniors across Canada. In 2022, we added over 10,800 youth, seniors and other marginalized Canadians to the program. Since we launched Mobility for Good in 2017, the program has provided support for 43,000 individuals.
    - To address the humanitarian crisis in Ukraine, with the backing of partner organizations supporting newcomers from Ukraine, the Mobility for Good program provided over 3,300 free SIM cards with $100 prepaid vouchers to recently arrived Ukrainians facing financial challenges in Canada.
    - In the fourth quarter of 2022, we expanded the Mobility for Good for Indigenous Women at Risk of, or Surviving Violence program to the province of Ontario in partnership with two Indigenous-led organizations, Native Women's Resource Centre of Toronto and Native Child and Family Services of Toronto. Since we launched the program in 2021, we have been able to provide support to nearly 1,000 women.
- Our Health for Good mobile health clinics, now serving 23 communities across Canada, supported more than 47,000 patient visits during the year. Since the program's inception, we have facilitated more than 143,000 patient visits, bringing primary and mental healthcare to individuals experiencing homelessness.
    - In the second quarter of 2022, we launched a new Health for Good mobile care clinic in Calgary, in partnership with The Alex.
- During the year, our Tech for Good program provided access to personalized one-on-one training, support and customized recommendations on mobile devices and related assistive technology and/or access to discounted mobile plans for nearly 1,800 Canadians living with disabilities. Since the program's inception, we have provided professional assistance for 6,500 Canadians living with disabilities to help them independently use or control their mobile device and/or the TELUS Wireless Accessibility Discount.

In 2022, TELUS Friendly Future Foundation and Canadian TELUS Community Boards directed their financial support to charitable initiatives that help youth and marginalized populations. During its 2022 fiscal year, the Foundation had a direct impact on the lives of more than one million youth by granting $10.6 million to 548 projects delivered by registered charities. Since its inception in 2018, the Foundation has provided nearly $36 million in cash donations to our communities, helping 13.7 million youth reach their full potential.

Our TELUS Community Boards entrust local leaders to make recommendations on the allocation of grants in their communities. These grants support registered charities that offer health, education or technology programs that help youth thrive.

- In the first quarter of 2022, we expanded our Community Boards in Western Canada. The TELUS Vancouver Community Board expanded to include Vancouver Coastal communities and was renamed the TELUS Vancouver and Coastal Community Board. The TELUS Thompson Okanagan Community Board expanded to include Dawson Creek, Fort St. John, Prince George, Quesnel, Cranbrook and surrounding communities and was renamed the TELUS Interior and Northern B.C. Community Board. The TELUS Manitoba Community Board expanded to include Saskatchewan and was renamed the TELUS Manitoba and Saskatchewan Community Board.
- In December 2022, we launched the TELUS North Carolina Community Board, which builds on the efforts of team members from TELUS Agriculture & Consumer Goods, who have been giving back across the state for over 20 years. The board will direct grants totalling more than US$1 million over the next four years to youth programs with a focus on health, education, the environment and technology.
- Since 2005, our 19 TELUS Community Boards worldwide have contributed $100 million in cash donations to more than 8,000 initiatives, providing resources and support for underserved citizens, especially young people, around the world.

We continued to help individuals stay safe in our digital world in 2022 through our TELUS Wise program. More than 112,000 individuals in Canada and around the world participated in virtual TELUS Wise workshops and events during 2022 to improve digital literacy and online safety, bringing the total number of participants to more than 563,000 since the program launched in 2013.

In May 2022, we received the BEST Award for excellence in employee learning and development from the Association for Talent Development for the 17th consecutive year, making us the only organization to receive this award 17 times.

Also in May 2022, driven by the passion and generosity of our TELUS team, we hosted our 17th annual TELUS Days of Giving across 20 countries. Overall, more than 65,000 team members, retirees, family and friends volunteered around the world, helping to drive 1.44 million hours of global volunteerism this year.

Since launching in 2020, TELUS Pollinator Fund for Good ™ has invested nearly $40 million in debt and equity securities of 26 socially responsible and innovative startups, of which 42% are led by women and 58% are led by Indigenous and racialized founders. In 2022 alone, the Fund closed investments in 13 new socially innovative for-profit startups that are transforming healthcare, caring for our planet, supporting responsible agriculture and enabling inclusive communities. In May 2022, the Fund was named as a finalist in Fast Company's 2022 World Changing Ideas Awards.

In July 2022, we celebrated the opening of TELUS Sky, our new state-of-the-art headquarters in downtown Calgary. TELUS Sky stands 60 storeys tall and contains 750,000 square feet of office and retail space, including 326 rental homes, and is built to Leadership in Energy and Environmental Design (LEED) platinum standards. With the completion of TELUS Sky, we occupied the largest LEED footprint in North America, including TELUS Garden Vancouver, TELUS Harbour Toronto, TELUS House Ottawa and Place TELUS Quebec.

In November 2022, we were recognized with two gold awards at Excellence Canada 's 2022 Canada Awards for Excellence, winning in the Healthy Workplace and Mental Health at Work categories. We are the only telecommunications company to be recognized in both categories in the same year, for our leadership and organizational commitment to mental health and wellbeing in the workplace.

The TELUS Indigenous Communities Fund was launched in November 2021 and offers grants for Indigenous-led social, health and community programs. Since its inception, the Fund has committed $300,000 in cash donations to 15 Indigenous led community programs supporting food security, cultural revitalization, health, mental health and well-being.

In November 2022, we released our fourth annual Indigenous Reconciliation and Connectivity Report, holding ourselves accountable to the actions laid out in our 2021 Indigenous Reconciliation Action Plan (IRAP) and detailing how we embed Reconciliation within our business, while sharing inspiring stories of connectivity and modern technology enabling transformative outcomes for Indigenous Peoples.

In addition to our network expansion into Indigenous communities, we continued to make meaningful progress towards our IRAP including by: establishing an Indigenous Advisory Council with four inaugural members; forming a three-year partnership with the Moose Hide Campaign; realizing a 300% increase over 2021 in Indigenous-supporting volunteerism; and digitizing the Witness Blanket to amplify the truths of Residential School Survivors with a $1 million commitment from TELUS and TELUS Friendly Future Foundation.

During 2022, we received recognition for our global leadership in sustainability, corporate citizenship, social purpose, and environmental and social reporting, including:

- In January 2022, we were included in the Corporate Knights 2022 Global 100 Most Sustainable Corporations in the World for the 10th time since inception of the recognition in 2005. Additionally, in June 2022, we were named to the Corporate Knights Best 50 Corporate Citizens in Canada for the 16th time and we improved our position on the list, ranking in the top 10.
- In September 2022, we won the Loyalty360 Best in Class Award for our corporate social responsibility and social impact program excellence.
- At the World Sustainability Awards 2022 held in Munich during the fourth quarter of 2022, we received the Sustainability Excellence Award for our global leadership and commitment to building a better, more sustainable future.
- We were recognized at the Global Good Awards 2022 in London, U.K., with a bronze award for Global Good Company of the Year.
- In December 2022, we were named to the Dow Jones Sustainability North America Index for the 22nd consecutive year.

We were recognized by Mediacorp Canada Inc. throughout 2022 by being named one of: Canada 's Top Employers for Young People (2022) in February, Canada's Best Diversity Employers (2022) in March, Canada 's Greenest Employers (2022) in April, and Canada's Top 100 Employers (2023) in November.

Throughout 2022, we led our national peers in consumer likelihood-to-recommend (L2R) for both the premium and flanker mobile tiers. Our L2R was also ahead of our largest Western Canadian cable TV competitor.

In 2022, we had four VPPAs with three solar facilities and one wind facility in Alberta. These facilities produced 77 GWh in the fourth quarter of 2022 and 246 GWh in 2022 in total.

Strategic imperative: Investing in internal capabilities to build a high-performance culture and efficient operation

Each year, we conduct a Pulsecheck engagement survey to gather confidential team member feedback about TELUS as a place to work in order to measure our progress in creating a high-performance culture. Following each survey, leaders share results with team members and use fair process to build and refine action plans focused on high-priority areas where improvement is required based on Pulsecheck results. In 2021, we achieved an engagement score of 84%, which is an encouraging accomplishment against the backdrop of the highly competitive and dynamic environment in which we work and reinforces the strength of the culture our team members have built together. In 2021, TELUS was the most engaged organization globally compared to organizations of our size and composition according to our survey provider, Kincentric. In 2022, we achieved an engagement score of 83%, which is an encouraging accomplishment against the backdrop of the highly competitive and dynamic environment in which we work and reinforces the strength of the culture our team members have built together. TELUS is the most engaged organization globally compared to organizations of our size and composition according to our survey provider, Kincentric.

5. DESCRIPTION OF BUSINESS

5.1 Who we are

TELUS is a dynamic, world-leading communications technology company with more than $20 billion in annual revenue and over 19 million customer connections spanning wireless, data, IP, voice, television, entertainment, video, and security. Our social purpose is to leverage our global-leading technology and compassion to drive social change and enable remarkable human outcomes. Our longstanding commitment to putting our customers first fuels every aspect of our business, making us a distinct leader in customer service excellence and loyalty. The numerous, sustained accolades TELUS has earned over the years from independent, industry-leading network insight firms showcase the strength and speed of TELUS' global-leading networks, reinforcing our commitment to provide Canadians with access to superior technology that connects us to the people, resources and information that make our lives better.

Operating in 32 countries around the world, TELUS International (TSX and NYSE: TIXT) is a leading digital customer experience innovator that designs, builds, and delivers next-generation solutions, including AI and content moderation, for global and disruptive brands across strategic industry verticals, including tech and games, communications and media, eCommerce and fintech, banking, financial services and insurance, healthcare, and others.

TELUS Health is a global healthcare leader, which provides employee and family primary and preventive healthcare and wellbeing solutions. Our TELUS team, along with our 100,000 health professionals, are leveraging the combination of TELUS' strong digital and data analytics capabilities with our unsurpassed client service to dramatically improve remedial, preventive and mental health outcomes covering more than 69 million lives, and growing, around the world. As the largest provider of digital solutions and digital insights of its kind, TELUS Agriculture & Consumer Goods enables efficient and sustainable production from seed to store, helping improve the safety and quality of food and other goods in a way that is traceable to end consumers.

In 2023, we generated $20.1 billion in operating revenue and other income and had approximately 19.3 million telecom subscriber connections. This included approximately 10.1 million mobile phone subscribers, 3.1 million connected device subscribers, 2.6 million internet subscribers, 1.4 million TV subscribers, 1.1 million residential voice subscribers, and 1.1 million security subscribers.

(a) Organization

Please see *Section 5 - Discussion of Operations* of our 2023 annual MD&A which is hereby incorporated by reference and describes our reporting segments: TTech; and Digitally-led customer experiences – TELUS International (DLCX).

(b) Our strategy

Please see *Section 2 - Core business and strategy* of our 2023 annual MD&A which is hereby incorporated by reference.

(c) Business overview

Please see *Section 4 - Capabilities* of our 2023 annual MD&A which is hereby incorporated by reference and which describes our principal markets, products and services and our distribution channels.

Our assets and resources, including employees, brand and distribution methods, tangible properties (such as our telecommunications networks and network facilities), intangible properties (such as brand and wireless spectrum licences) and an overview of foreign operations are discussed in *Section 4.2 - Operational resources* in the 2023 annual MD&A.

For revenue and other financial information on the two most recently completed financial years with respect to our mobile and fixed businesses, see *Section 5.4 TELUS technology solutions segment* and for DLCX please see *Section 5.5 Digitally-led customer experiences – TELUS International segment* in the 2023 annual MD&A.

An overview of the Canadian economic environment and the telecommunications industry can be found in Section 1.2 *The environment in which we operate* and Section 9 *General trends, outlook and assumptions, and regulatory developments and proceedings* in the 2023 annual MD&A. Seasonal trends that have impacted us are described in *Section 5.2 Summary of consolidated quarterly results, trends and fourth quarter recap* and in Section 5.4 *TELUS technology solutions segment* in the 2023 annual MD&A.

(d) Competitive environment

Please see *Sections 4.1 - Principal markets addressed and competition* and *10.4 - Competitive environment* of our 2023 annual MD&A which is hereby incorporated by reference.

(e) Corporate social responsibility and environment

We are committed to following sustainable and responsible business practices and to making decisions that balance economic growth with enabling positive social and environmental outcomes. More information about our approach to sustainability and our social purpose can be found in our annual Sustainability and ESG Report at https://www.telus.com/en/social-impact.

(f) Employee relations

Please see *Section 4.2 - Operational resources* of our 2023 annual MD&A which is hereby incorporated by reference.

5.2 Task Force on Climate-related Financial Disclosures: report on climate-related risks and opportunities

We understand there can be direct or indirect financial impacts on our operations from climate-related risks and opportunities and we aim to provide transparency on how these risks and opportunities affect our strategy and operations. We disclose below relevant climate-related information in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations published in June 2017. Concurrent with the release of its 2023 status report on October 12, 2023, the TCFD has fulfilled its remit and disbanded. The Financial Stability Board (FSB) has asked the IFRS Foundation to take over the monitoring of the progress of companies' climate-related disclosures, which were recently incorporated into the International Sustainability Standards Board (ISSB) Standards.

This disclosure is structured into four sections as per TCFD guidance: Governance; Strategy; Risk management; and Metrics and Targets. The disclosure provides a comprehensive view into how we understand and manage the risks and opportunities associated with climate change at TELUS.

(a) Governance

We have a long-standing foundation of sustainability governance which supports our commitment to environmental stewardship and responsible corporate citizenship.

Board oversight of climate-related risks and opportunities

Our Board of Directors (Board) is responsible for the stewardship of the Company, which includes oversight of enterprise risk management. At our quarterly board meetings, our Board reviews reports and engages in discussions on corporate strategies, progress and targets, in addition to emerging risks and opportunities for innovation such as how technology can assist in responding to climate-related extreme weather events.

The Corporate Governance Committee (CGC) of our Board reviews and monitors, on behalf of the Board, the Company ’s approach, planning and reporting on sustainability and environmental, social and governance (ESG) matters; and reviews and recommends to the Board for approval the Company’s annual sustainability and ESG report and other related disclosures. Our Sustainability and Environment and Enterprise Risk Management teams provide quarterly reports to the CGC. These reports contain pertinent information regarding our environmental and climate-related risks and related compliance activities. The CGC also oversees climate-related opportunities as they arise or are otherwise identified and discussed during quarterly CGC meetings.

In 2022, we considered the role of our Board committees in overseeing climate and sustainability issues and commitments, resulting in clarifications to the Audit Committee’s role in oversight of climate-related financial disclosure. The Audit Committee ’s terms of reference were updated to include the review of metrics regarding climate-related risks, sustainability and environmental disclosure in financial reporting, while the Corporate Governance Committee remains responsible for reviewing and monitoring TELUS’ overall approach, planning and reporting on ESG and sustainability matters.

Our Board succession planning process involves an ongoing assessment of Board member skills which helps the CGC and the Board identify any gaps in the skills and competencies considered most relevant for the Company. As part of this process, Board members are asked to identify their experience or education as it relates to sustainability, environment and climate risk management.

Management oversight of climate-related risks and opportunities

Our Chief Executive Officer and Executive Team are responsible for the execution of the strategic direction of our sustainability programs, which includes assessing and managing climate-related risk and mitigation as well as identifying climate-related opportunities.

Our Sustainability and Environment Team reports to our Senior Vice President & Treasurer, who is responsible for the development and governance of our sustainability strategy.

The Sustainability and Environment Team seeks to assess climate-related risks and opportunities by integrating sustainability considerations and implementing projects across the business, delivering in-house training and awareness on sustainability, and managing our Environmental Management System (EMS), which is ISO 14001:2015 certified in Canada. This process includes benchmarking through formal and informal materiality assessments, data and scenario analysis, considering internal and external stakeholder input and reviewing the regulatory environment in which we operate.

As we work to mitigate the climate impacts of our own operations, we also integrate climate considerations throughout our product development and innovation processes across our business including in emerging areas such as TELUS Health and TELUS Agriculture & Consumer Goods. Consideration of relevant climate risks and opportunities is required for all material investment decisions for enhancing our current products and developing new ones to align with our low-carbon future.

Additionally, we link our sustainability performance to compensation through our corporate scorecard, which affects the company-wide performance bonus structure. The social capitalism index within the scorecard contains metrics which measure our performance in reducing greenhouse gas (GHG) emissions as well as social impact metrics. In addition, our Sustainability and Environment team’s performance bonus structure is linked more broadly to our 2025 and 2030 environmental goals.

(b) Strategy

Climate-related risks identified over the short, medium, and long-term.

Each year, we identify, and are exposed to, both climate-related physical risks as well as risks associated with transitioning to a low-carbon future. Climate-related physical risks are those resulting from the increasing severity and frequency of extreme weather events,

rising global temperatures, and other chronic climate changes, in our operations, our supply chain, and in our communities. We identify transition risks as those related to climate change, including the impact of changes in policy or implementation of lower-emission technology.

Some of the physical and transitional climate risks we have identified that may impact us in the short-term (one to five years), include, but are not limited to: carbon regulation including carbon pricing impacting our operations and value chain; increased energy demand and its environmental and financial impacts; and growing customer and other stakeholder demand for low-carbon solutions.

Some of the physical and transitional climate risks we have identified that may impact us in the medium to long-term (more than five years), include, but are not limited to: direct and indirect supply chain disruptions, including price increases; reliability and resiliency of critical infrastructure; and financial impacts resulting from not achieving climate-related goals such as those included in our Sustainability-Linked Bonds.

Climate-related opportunities identified over the short, medium, and long term.

With world-class networks, a customers first approach and shareholder-friendly initiatives, we aim to improve the lives of Canadians and our communities while providing robust shareholder returns. Our corporate strategy enables us to respond nimbly to opportunities, including those consistent with adapting to rising climate risks and transitioning to a low-carbon economy. Furthermore, our Sustainability and Environment team regularly seeks opportunities to invest in climate technologies, implement trials and seek out new, financially sound opportunities to reduce our GHG impact.

Our business investments connect our country's dispersed population digitally, and as a result, attract customers who are looking to reduce their carbon footprint. In addition, we continue to focus on investments in network optimization, infrastructure upgrades, real estate space reduction and lighting retrofits to drive future savings and absolute energy reductions.

The following are examples of climate-related opportunities that we are currently pursuing:

- We have a corporate-wide goal to effectively procure 100% of our electricity requirements from renewable or low-emitting sources by 2025 and, in an effort to reach that goal, we have signed four VPPAs with wind and solar energy developers in Alberta for over 167 MW of renewable energy capacity.
- We have built a broadband network that enables our customers to live and work in locations of their choosing while minimizing their travel-related environmental footprint and optimizing productivity.
- For over a decade, TELUS Health has been working with health authorities, community partners and stakeholders to build a more sustainable healthcare system leveraging the power of technology. TELUS Health offers healthcare products that allow customers to connect virtually with healthcare practitioners, which improves efficiency of services offered, limits physical travel-related climate impacts, and increases accessibility to prevention and wellness services for those who seek it.
- TELUS Agriculture & Consumer Goods solutions help solve for inefficiencies in the way food and consumer goods are produced, distributed and consumed. Through digital solutions and data insights we are delivering global supply chain connectivity, improved safety, sustainability, quality and efficiency for production processes in a manner that is traceable and clear to the end consumer.
- We continue to expand our Work Styles program that allows over 90% of our domestic team members to work from home, reducing the emissions associated with commuting.

In addition to enhancing the opportunities stated above, we continue to develop low-carbon, nature-based and climate friendly solutions for our customers and communities, enabled by our networks and technology, in the medium to long term (over five years). For example, through our TELUS Ventures and Pollinator for Good funds, we are investing in responsible startups driving social and environmental impact to make the world a better place.

Scenario Analysis

We conduct scenario analyses to better understand the resilience of our corporate strategy in different climate scenarios. Performing and disclosing the outcome of the various scenarios help us determine how our operations can prepare and help mitigate changes in climate, as new climate regulations, technologies and other impacts emerge and evolve. At the same time, these analyses also help us identify new opportunities for our business and help us inform our stakeholders about how our organization is positioning itself in light of these risks and opportunities.

We last undertook a comprehensive qualitative scenario analysis assessment of our direct operations (excludes our upstream and downstream activities) with an independent third party in 2022, to better align with TCFD recommendations. We broke down the assessment between transitional climate risks and opportunities assessment and physical climate risks assessment.

1) *Transitional climate risks and opportunities assessment*

The following steps were taken in 2022 to short-list, prioritize and assess the transition risks and opportunities to which we may be susceptible in different warming scenarios in the future:

1) Longlist identification – First, we collated a comprehensive list of risks and opportunities based on our business operations, peer analysis, internal knowledge capacity and emerging trends. This resulted in a long-list of 21 transition risks and opportunities which were assessed to delineate potential impacts (financial, reputational and market) on our business.

2) Prioritization – Those 21 transition risks and opportunities were assessed against three parameters:

   (i) Likelihood – the probability of each risk or opportunity occurring
   - Occurring now or is almost certain to occur
     - Risk is inherent to the industry due to external influences
     - Precise understanding of where and when event would occur
   - Likely to occur in the next 18 months
     - High level understanding of where and when event would occur
   - Unlikely to occur within the next 18 months
     - High level understanding of where and when event would occur

   (ii) Consequences – the magnitude of the impact if the event were to happen
   - High financial impact
     - Risk: potential regulatory fines or prolonged provincial media coverage affecting brand/reputation
     - Opportunity: high positive impact on brand/reputation
   - Medium financial impact
     - Risk: potential external reporting requirements, breach of contract or regional media coverage affecting brand/reputation
     - Opportunity: medium positive impact on brand/reputation
   - Low financial impact
     - Risk: potential internal reporting requirements, breach of company policy or local media coverage affecting brand/reputation
     - Opportunity: low positive impact on brand/reputation

   (iii) Velocity – the speed of the impact.

   This resulted in an overall risk rating for each of the 21 transition risks and opportunities that was broadly classified into low, medium and high to indicate materiality. These estimates are adjusted for inflation throughout.

3) Initial quantitative assessment – Next, we evaluated the quantitative impact of one of the identified risks noted above, which was carbon pricing, since data was readily available for this risk. This was assessed in the two climate scenarios and time horizons and fed into the qualitative assessment. The climate scenarios chosen for this step were the Bank of Canada scenarios which outline the risk outcomes that would impact the Canadian economy and financial system and were most applicable to us given that our operations are mostly in Canada. The Bank of Canada derived their country-level scenarios from the Network for Greening the Financial System (NGFS) models, and ensured they are well-aligned with NGFS scenarios. The Bank of Canada's 2019 Policies and Net Zero 2050 (1.5 ° Celsius) were considered to provide the widest range of possible climate outcomes. We then updated the 2019 Policies scenario to include carbon pricing data from the Pan Canadian Approach to Carbon Pollution Pricing, giving us the business as usual (BAU) policies scenario.

These are the parameters that were used to conduct the quantitative assessment.

Select credible transition pathways	Climate model	Transition pathways	Description	Rationale
	Bank of Canada	2019 Policies	A scenario consistent with 2019 climate policies which are already in place or announced.	Establish the baseline to quantify transition risks from the changing carbon price in dollar amount.
		Net-zero 2050 (1.5° Celsius)	An ambitious immediate policy action scenario to limit average global warming to 1.5° Celsius that includes current net-zero commitments by some countries.	Enable the exploration of an ambitious transition scenario piloted by the Bank of Canada and Office of the Superintendent of Financial Institutions to assess climate transition risk.

The financial impact of carbon pricing risk was estimated in 2022 by multiplying the projected carbon price with projected amount of emissions for the two scenarios. Carbon price in the Net Zero scenario is projected to be much higher than the current policies scenario. By meeting our emission reduction targets, we may be able to reduce our carbon price risk significantly in both the short and long term. The results of this analysis allowed us to determine the likelihood and consequence ratings in the qualitative assessment.

4) Qualitative assessment: The short-listed risks and opportunities (from step 2 above) were assessed against the two climate scenarios to evaluate their overall impact on our operations in the medium-term (2030) and long-term (2050). The Bank of Canada climate scenarios BAU policies; Net Zero 1.5° Celsius were used for the qualitative assessment.
    - The two climate scenarios were chosen to provide appropriate diversity to future outcomes.
    - Key parameters such as policy changes, technology developments and availability, energy mix, commodity market dynamics, etc. were discerned to help define development pathways and trends over the assessed timeframe.
    - The trends were studied against the shortlist to evaluate how they are likely to evolve in the future and the implications for us.

Please note that these scenarios are a tool to envision a future of two divergent climate scenarios, so that we can outline plausible risks and opportunities, and plan for resilience. They are not future predictions.

2030 Risks					
Sub-Category	Description	Scenario	Likelihood	Consequence	Risk Rating
Policy and legal	Increased and/or uncertain carbon prices, including the indirect impact of carbon costs	BAU policies	This scenario includes the Pan Canadian Approach to Carbon Pollution Pricing, therefore the likelihood is high.	The price used in the Pan-Canadian Approach to Carbon Pollution Pricing for 2030 is $170 per tonne. If our emissions stay constant, a medium financial impact could be expected. However, the financial impact of the carbon price would be indirect through increased costs of goods and services as we are not directly regulated by the pricing mechanism.	Medium
		Net Zero	This scenario shows that the likelihood of a carbon price being implemented is high.	The estimated carbon price from the net zero scenario is higher than in the BAU policies scenario, however our	Medium

				analysis showed that this could still result in a medium financial impact. As noted earlier, the financial impact of the carbon price would be indirect as we are not directly regulated by the pricing mechanism.	
Markets	Price and supply shocks in the energy and commodities markets	BAU policies	There is a high likelihood of oil, gas and electricity increasing in price due to the continued demand for conventional fuels and commodities influenced by limited-supply-growing-demand dynamics and limited incentives to more sustainable alternatives.	A medium financial impact could be expected as fuel prices are expected to increase, however, this price rise is mitigated by the VPPAs secured and efficiency measures implemented by us.	Medium
		Net Zero	There is a high likelihood of the energy and commodities market being affected by economic headwinds from addressing carbon emissions (carbon tax). Market prices may also evolve on the back of policies and growing investments in low carbon technology.	A medium financial impact could be expected (greater than in the BAU policies scenario), which could be a result of fuel supply volatility or high carbon tax outlay, increasing fuel prices. However, this price rise is mitigated by our VPPAs and efficiency measures.	Medium
Reputation	Diminished reputation with investors as a result of lower ESG ratings	BAU policies	Likelihood is medium as rating frameworks exist in the market which intend to highlight and acknowledge best ESG management practices and are unlikely to significantly increase in the short-term.	Although we already have good reporting practices, the increase in expectations could result in a low level of additional costs and impact to reputation.	Low
		Net Zero			Low

2030 Opportunities					
Markets	Investment in renewable energy	BAU policies	Significant market drivers, such as policies and regulations emerge to support renewable adoption. Meanwhile electricity prices are expected to increase moderately, therefore the likelihood of having positive impacts from entering our VPPAs at a low initial price is considered medium.	By entering into the market at an early stage, we have been able to enter into VPPAs at a low price. As electricity prices are projected to continue increasing moderately over the short-term, we may be able to maintain positive cash flow from the VPPA price change, potentially resulting in a medium financial impact. However, further modelling would be required to fully understand the extent of this opportunity.	Medium
		Net Zero	Policies are expected to support renewable energy uptake. There is a high likelihood that	By entering into the market at an early stage, we have been able to enter into VPPAs at a	Medium

			the cost of renewable power could increase mildly in the short term as supply starts to catch up with demand and electricity prices are expected to increase more than the BAU scenario as more demand is expected.	low price. As electricity prices are projected to continue increasing moderately over the short term, we may be able to maintain positive cash flow from the VPPA price delta, potentially resulting in a medium financial impact. In this scenario, demand for VPPAs is likely to be higher, and therefore the price delta would be lower. However, further modelling would be required to fully understand the extent of this opportunity.	
Markets	Shifting consumer preferences for our services as a result of our good reputation in climate performance	BAU policies	Consumer ESG awareness is expected to increase, as governments and markets continue to push for climate action. However, in the short term it is likely that consumer preferences would be more focused on receiving low cost, high value services and products, therefore the likelihood of this opportunity occurring is medium.	We have the opportunity to meet customers' demand, which could positively impact market share, bottom-line, and market perception. However, this may result in a low increase in consumer base, revenues and market share in the short term.	Low
		Net Zero			Low

2050 Risks					
Sub-Category	Description	Scenario	Likelihood	Consequence	Risk Rating
Policy and legal	Increased and/or uncertain carbon prices, including the indirect impact of carbon costs	BAU policies	The BAU policies scenario includes the Pan Canadian Approach to Carbon Pollution Pricing. Although it has not been specified whether there will be a carbon price after 2030, we assume that there will be and the impact will be high.	The price used ($170 per tonne) is the one included in the Pan-Canadian Approach to Carbon Pollution Pricing for 2030 and in our analysis we have kept this value consistent until 2050. If our emissions stay constant, a medium financial impact could be expected. However, the financial impact of the carbon price would be indirect through increased costs of goods and services as we are not directly regulated by the pricing mechanism.	Medium
		Net Zero	The likelihood of there being a carbon price in Canada under the net zero scenario is still high in 2050 as a price is still included in the model.	Between 2030 and 2050, carbon prices are estimated to double, which would have a high magnitude financial impact. As noted earlier, the financial impact of the carbon price would be indirect as we	High

				are not directly regulated by the pricing mechanism.	

Markets	Price and supply shocks in the energy and commodities markets	BAU policies	There is a high likelihood of the energy and commodities market (particularly oil and gas) increasing in price. However, the cost of electricity is likely to decrease from 2030 and going forward, according to the model in both scenarios.	An overall lower financial impact could be expected as a result of the projected decrease in electricity costs in this scenario, given our consumption. This decrease is slightly offset by the projected increase in the cost of oil and gas in 2050.	Low
		Net Zero	There is a medium likelihood of the energy and commodities market being affected by decreased demand for fuels, resulting in lower fuel prices for us, as well as decreased cost for electricity.	A low financial impact could be expected driven by the projected decrease in electricity costs, given our consumption.	Low
Reputation	Diminished reputation with investors as a result of lower ESG ratings	BAU policies	Likelihood is medium given rating frameworks exist in the market which intend to highlight and acknowledge best ESG management practices and are unlikely to significantly increase in the long-term.	Although we already have good reporting practices, the increase in expectations from investors and stakeholders could result in additional costs and a medium impact to reputation.	Medium
		Net Zero	Investors are highly likely to put more weight on these ratings in the future to evaluate their portfolio risk and opportunities. Additionally, other stakeholders can utilize them to analyze engagement opportunities.	Although we already have good reporting practices, the expectations of investors and stakeholders could increase in this scenario, resulting in a medium financial and reputational impact.	Medium
2050 Opportunities					
Markets	Investment in renewable energy	BAU policies	The rising costs of renewable power are expected to slow down due to more market and policy support for renewable energy uptake. Therefore, the likelihood of having a positive return from entering VPPAs early is considered high.	As electricity prices are expected to decrease in the long term, the delta between newly signed VPPAs and market electricity prices may decline over time, therefore the positive financial impact is expected to decrease accordingly, but likely having low impact.	Low
		Net Zero	Rapid electrification of industries coupled with the federal net zero commitments results in renewable energy or low carbon power as the market norm by 2050. This means electricity prices will come down lower than the BAU scenario towards 2050 with medium likelihood.	As electricity prices are projected to come down in the long term in this scenario, we may experience lower positive cash flow as the change in the retail price of energy and price within the VPPA may reduce. New VPPA contracts signed near 2050 may lead to higher positive cash flow due to stabilized/decreased	Low

				technology costs with cumulative impact likely low.	

Markets	Shifting consumer preferences for our services as a result of our good reputation in climate performance	BAU policies	With medium likelihood, consumer awareness and business scrutiny is likely to evolve in the long-term. However, this scrutiny would primarily be addressed by delivering consistent business performance and quality in addition to maintaining a focus on climate performance.	We have the opportunity to meet customers' demand, which could positively impact market share, bottom-line, and market perception, likely resulting in medium impact.	Medium
		Net Zero	It is highly likely that stakeholder expectations and awareness will be centered around achieving 2050 net zero commitments and therefore consumer preferences are likely to align significantly towards sustainability, better management and accountability, and transparent business practices.	A positive impact on our reputation and brand would occur as a result of good company sustainability and climate performance. An increase in consumer base and revenues is also possible, which could result in a moderate increase in revenues.	Medium

2) *Physical climate risk assessment*

The scenario analysis conducted in 2022 also involved a physical climate risk assessment which was focused on our assets. The scope of this assessment involved the determination of what to include as our key assets. The starting point was an assessment of over 21,000 assets, along with information on whether that asset was leased or owned, its location (address and coordinates), property usage code and square footage. Then the list was reduced by asset category and certain assets were assessed for criticality by considering a number of different factors, e.g. whether it's a 5G wireless core site. Next, we assessed asset value, such as the value of the building/asset, the value of the contents and the potential business interruption value. As a result of this scoping, 149 assets were included in the physical climate risk assessment, which included all of our critical sites.

Our approach to the quantitative assessment can be broken down into our considering the likelihood of the risk occurring, the consequence of the impact, and using the results from these two assessments to qualitatively assess the relative impact magnitude:

Likelihood: The likelihood of a risk occurring was assessed using the S&P TruCost Physical Risk data. This data provides a physical risk point-in-time exposure score to climate hazards relative to global conditions, independent of the characteristics of the asset present at a given location. This data was developed in order to provide companies with a data set to help understand physical risk exposure at the portfolio level, and to prioritize the assets within the portfolio.

- Inputs:
  - Asset location data
  - Climate scenario data which provides an exposure score

Consequence: relates back to the importance of the asset and the level of impact that would be felt if the asset was put out of commission.

- Inputs:
  - Asset value and cost of business interruption
  - Hazard type

Resulting risk rating: comprised of the likelihood of the risks occurring and the resulting consequences of the event

- Output: A qualitative risk score for each asset for each hazard (very low, low, medium, high or very high)

S&P TruCost Physical Risk Data has four built-in scenarios, aligning with different levels of warming. These scenarios are built using the combined Shared Socio-economic Pathways (SSPs) and Representative Concentration Pathways (RCPs) pathways that the Intergovernmental Panel on Climate Change (IPCC) used in the latest Sixth Assessment Report (AR6). For this assessment we used SSP1 - 2.6 and SSP5 - 8.5 to provide us with a low and high climate change scenario.

- Low Climate Change Scenario (SSP1 - 2.6): Aggressive mitigation scenario in which total greenhouse gas emissions reduce to net zero by 2050, resulting in global average temperatures rising by 1.3 to 2.4 ° Celsius by 2100, consistent with the goals of the Paris Agreement.
- High Climate Change Scenario (SSP5 - 8.5): Low mitigation scenario in which total greenhouse gas emissions triple by 2075 and global average temperatures rise by 3.3 to 5.7 ° Celsius by 2100.

The following table shows the results of our physical climate risk assessment and indicates that flooding and extreme heat are high priority hazards for us. In addition, wildfires are also a higher risk category as it rated with a higher “low” score than the other hazards that rated low.

	Likelihood					Overall Risk Rating			
Hazard	Low Climate Change Scenario		High Climate Change Scenario		Consequence Rating	Low Climate Change Scenario		High Climate Change Scenario	
	2030	2050	2030	2050		2030	2050	2030	2050
Extreme Cold	Medium	Medium	Medium	Medium	Very Low	Very Low	Very Low	Very Low	Very Low
Flood	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Extreme Heat	Medium	Medium	Medium	High	Medium	Medium	Medium	Medium	Medium
Sea Level Rise	Very Low	Very Low	Very Low	Very Low	Medium	Very Low	Very Low	Very Low	Very Low
Water Stress	Low	Low	Low	Low	Very Low	Very Low	Very Low	Very Low	Very Low
Wildfire	Very Low	Low	Very Low	Low	Medium	Very Low	Low	Very Low	Low
Tropical Cyclone	Very Low	Very Low	Very Low	Very Low	Medium	Very Low	Very Low	Very Low	Very Low

(c) Risk management

Process for identifying climate-related risk

Effective risk management supports our foundation for sustainability leadership. We define business risk as the degree of exposure associated with the achievement of key strategic objectives in relation to the effectiveness and efficiency of operations; reliability and integrity of financial reporting; compliance with laws and regulations, policies, procedures and contracts; and, safeguarding of assets within an ethical organizational culture.

We assess and manage climate risks as part of a broader enterprise risk management program. Climate-related physical risks as well as risks associated with transitioning to a low-carbon environment are integrated within our Enterprise Risk Management (ERM) framework, which solicits and incorporates the expertise and insight of team members from all areas and levels of the organization, including our Board. Our enterprise risks arise primarily from our business environment, and risk identification and assessment drives our strategies and business objectives. Climate risks, as well as all other risks in our ERM Risk Register, are reviewed each quarter and are assessed for their perceived impacts in the short, medium and long-term.

We also maintain an enterprise-wide, award-winning business continuity management program that is aligned with our corporate priorities, including prioritizing the safety of our team members, minimizing the impacts of threats to our facilities, business operations and supply chain, maintaining service to our customers and keeping our communities connected. Ongoing risk-based optimization of our disaster recovery capabilities for our IT and telecommunication network assets is a key focus for preventing outages and limiting their impact on our operations and customers.

Process for managing climate-related risk

We mitigate all risk types, including climate, through contract terms, contingency planning and other risk response strategies, as appropriate. We strive to avoid taking on undue risk whenever possible and work to align risks with business strategies, objectives, values and risk tolerances. Residual exposure for certain risks are mitigated through insurance coverage, where we judge this to be efficient and commercially viable. Our specific strategy for managing climate-related risks includes three key components:

- Mitigation: focusing on reducing energy use and carbon dioxide equivalent (CO_2e) emissions
- Adaptation: focusing on business continuity planning and readiness for the potential physical risks of a changing climate on our operations
- Innovation: helping customers realize their climate change goals through product and service solutions such as video-conferencing.

Severe weather risk is a primary aspect of our climate-related risk management framework and is categorized as either having team member impacts, facility impacts or service delivery impacts. These risks are categorized and reported to the Audit Committee of the Board on a quarterly basis where such risks may impact regions in which we operate.

Mitigation initiatives to address severe weather threats have been an increasing focus and we have operationalized enhanced processes with respect to severe weather monitoring, notification of key stakeholders, and incident management, in addition to updating climate incident playbooks that leverage learnings from prior events. These measures occur in both short-term and long-term planning.

Short-term climate risk mitigation

On a weekly basis, our Corporate Business Continuity Office (CBCO) publishes a severe weather outlook for all operating jurisdictions to highlight severe weather events which could pose a threat to our operations, complemented by daily severe weather threat monitoring and notifications for key internal stakeholders.

The CBCO also hosts biannual seasonal preparedness workshops to create awareness and enhance our preparedness for anticipated seasonal threats. The workshops focus on upcoming seasonal trends, potential threats, and reviewing lessons learned from past incidents.

We maintain a property risk governance program that systematically identifies, evaluates, manages and monitors property related risks at critical network facilities. This program also assists in the identification of natural catastrophic hazards.

Long-term climate risk mitigation

We conduct flood and seismic studies every five to seven years to identify the most vulnerable sites and assist in possible future mitigation strategies. We also support various municipalities on climate change adaptation initiatives by representing the telecommunications industry in advising how the changing risk landscape, as a result of climate change, could affect the delivery of our services to citizens, businesses and communities.

Our ISO 14001:2015 certified EMS, used to identify and control the environmental impacts associated with our operations, is audited annually to assess compliance with standard applicable regulatory requirements.

(d) Metrics and Targets

Metrics used to identify climate-related risks and opportunities

We assess climate-related risks and opportunities by tracking and disclosing our GHG emissions and energy consumption. Our most significant sources of GHG emissions and energy consumption consist of direct energy and indirect energy for owned and leased real estate properties in Canada, cell tower sites, vehicle fleet, and remote generator fuel that are within our operational control. Annual disclosure of our Scope 1, Scope 2 and Scope 3 GHG emissions, as well as data and performance details, can be found in our annual Sustainability and ESG Report and ESG Data Sheet. Scope 1 and 2 emissions are independently assured on a limited basis.

Climate-related targets

We established the following targets in 2020:

- Effectively procure 100% of our electricity requirements from renewable or low-emitting sources by 2025.
- Achieve operational net carbon neutrality by 2030.
- Reduce our energy intensity by 50% from 2019 levels by 2030.
- Commit to set Science-based Targets in 2021.

In 2021, the Science-based Target initiative (SBTi) approved our Science-based Targets, which include the following:

- Reduce absolute Scope 1 and 2 GHG emissions by 46% from 2019 levels by 2030.
- Reduce absolute Scope 3 GHG emissions from business travel and employee commuting by 46% from 2019 levels by 2030.
- Reduce Scope 3 GHG emissions from purchased goods and services, capital goods and the use of sold products by 75% per million dollars of revenue from 2019 levels by 2030.

In 2023, we submitted our commitment to reach net-zero GHG emissions across the value chain to SBTi. As part of our effort to accelerate this transition, we have also:

- Resubmitted our Scope 1 and 2 target with an increased level of ambition (75% from 2019 levels by 2033).
- Set an additional Scope 3 target for supplier engagement (pending external validation by SBTi).

In addition to these targets, the TELUS Environmental Policy keeps us focused on building an environmentally friendly future by collaborating across the Company to:

- Monitor, measure and reduce our overall GHG emissions.
- Improve our energy intensity as we grow our business.
- Minimize spills and halocarbon releases.
- Enhance our Environmental Management System.
- Align with green building certifications, such as LEED, within our real estate development projects.

5.3 Risk factors

Please see *Section 10 - Risks and risk management* of our 2023 annual MD&A which is hereby incorporated by reference.

5.4 Regulation

Please see *Sections 9.4 - Communications industry regulatory developments and proceedings and 10.3 - Regulatory matters* of our 2023 annual MD&A which is hereby incorporated by reference.

6. DIVIDENDS AND DISTRIBUTIONS

The dividends per Common Share declared with respect to each quarter by TELUS, during the three-year period ended December 31, 2023, are shown below:

Quarter ended [1]	2023	2022	2021
March 31	$0.3511	$ 0.3274	$ 0.3112
June 30	$0.3636	$ 0.3386	$ 0.3162
September 30	$0.3636	$ 0.3386	$ 0.3162
December 31	$0.3761	$ 0.3511	$ 0.3274
Total	**$1.4544**	**$ 1.3557**	**$ 1.2710**

1 Paid on or about the first business day of the next month.

Our shareholders received a total of $1.4544 per share in declared dividends in 2023, an increase of 7.3% from 2022. Our Board reviews the dividend rate quarterly. Our quarterly dividend rate will depend on an ongoing assessment of free cash flow generation and financial indicators including leverage, dividend yield and payout ratio. On February 8, 2024, a first quarter dividend of $0.3761 per share was declared, payable on April 1, 2024, to shareholders of record at the close of business on March 11, 2024. The first quarter dividend for 2024 reflects a cumulative increase of $0.025 per share from the $0.3511 per share dividend paid in April 2023, consistent with our multi-year dividend growth program.

We first announced our dividend growth program in May 2011. In May 2022, we announced our intention to target ongoing semi-annual dividend increases, with the annual increase in the range of 7 to 10% from 2023 through to the end of 2025, thereby extending the policy first announced in May 2011. Notwithstanding this target, dividend decisions will continue to be subject to our Board's assessment and the determination of our financial position and outlook on a quarterly basis. Effective January 1, 2020, our long-term dividend payout ratio target guideline is calculated as 60% to 75% of prospective free cash flow. See *Section 7.5 - Liquidity and capital resource measures* of our 2023 annual MD&A which is hereby incorporated by reference. Based on dividends announced as of February 9, 2024, and 1.47 billion TELUS Corporation Common Shares outstanding at December 31, 2023, dividend declarations would total approximately $2.2 billion in 2024, before taking into account any Common Shares purchased and cancelled under any normal course issuer bid that we may implement. There can be no assurance that we will maintain a dividend growth program through 2025.

7. DESCRIPTION OF CAPITAL STRUCTURE

7.1 General description of capital structure

The authorized capital of TELUS consists of 6,000,000,000 shares, divided into: (1) 4,000,000,000 Common Shares without par value; (2) 1,000,000,000 First Preferred shares without par value, issuable in series and; (3) 1,000,000,000 Second Preferred shares without par value, issuable in series. The Common Shares are listed for trading on the Toronto Stock Exchange (TSX) and the New York Stock Exchange (NYSE).

Common Shares

Subject to the prior rights of the holders of First Preferred shares and Second Preferred shares, the Common Shares are entitled to participate with respect to the payment of dividends as declared by the Board and the distribution of assets of TELUS on the liquidation, dissolution or winding up of TELUS.

The holders of the Common Shares are entitled to receive notice of, attend, be heard and vote at any general meeting of the shareholders of TELUS on the basis of one vote per Common Share held. Holders of Common Shares are entitled to vote by a separate resolution for each director rather than a slate.

The Common Shares are subject to constraints on transfer to ensure our ongoing compliance with the Canadian ownership and control requirements of the Telecommunications Act and the Direction to the CRTC *(Ineligibility of Non-Canadians)* under the Broadcasting Act as noted in *Constraints – Canadian ownership and control requirements* .

Please see *Sections 9.4 - Communications industry regulatory developments and proceedings* and *10.3 - Regulatory matters* of our 2023 annual MD&A which is hereby incorporated by reference.

First Preferred shares

The First Preferred shares may be issued from time to time in one or more series, each series comprising the number of shares, and having attached thereto the designation, rights, privileges, restrictions and conditions which the Board determines by resolution and subject to filing an amendment to the Notice of Articles and Articles of TELUS. No series of First Preferred shares may have attached thereto the right to vote at any general meeting of TELUS or the right to be convertible into or exchangeable for Common Shares. Except as required by law, the holders of the First Preferred shares as a class are not entitled to receive notice of, attend or vote at any meeting of the shareholders of TELUS. The First Preferred shares rank prior to the Second Preferred shares and Common Shares with respect to priority in payment of dividends and in the distribution of assets in the event of liquidation, dissolution or winding up of TELUS.

As of February 9, 2024, there are no First Preferred shares outstanding.

Second Preferred shares

The Second Preferred shares may be issued from time to time in one or more series, each series comprising the number of shares, and having attached thereto the designation, rights, privileges, restrictions and conditions, which the Board determines by resolution and subject to filing an amendment to the Notice of Articles and Articles of TELUS. No series of Second Preferred shares may have attached thereto the right to vote at any general meeting of TELUS or the right to be convertible into or exchangeable for Common Shares. Except as required by law, the holders of the Second Preferred shares as a class are not entitled to receive notice of, attend or vote at any meeting of the shareholders of TELUS. The Second Preferred shares rank, subject to the prior rights of the holders of the First Preferred shares, prior to the Common Shares with respect to priority in payment of dividends and in the distribution of assets in the event of liquidation, dissolution or winding up of TELUS.

As of February 9, 2024, there are no Second Preferred shares outstanding.

Shareholder rights plan

TELUS has had a shareholder rights plan (Rights Plan) in place since March 2000. Our current Rights Plan was adopted by the Board on March 13, 2019 (Effective Date) and ratified and confirmed by the shareholders at our annual meeting on May 9, 2019, and reconfirmed by the shareholders at our annual meeting on May 6, 2022.

Under the current Rights Plan, TELUS issued one right (Right) in respect of each Common Share outstanding as at the Effective Date. The Rights Plan has a term of just over nine years, subject to shareholder confirmation every three years (in 2022 and 2025). Each Right, other than those held by an Acquiring Person (as defined in the Rights Plan) and certain of its related parties, entitles the holder in certain circumstances following the acquisition by an Acquiring Person of 20% or more of the Common Shares of TELUS (otherwise than through the "Permitted Bid" requirements of the Rights Plan) to purchase from TELUS $320 worth of Common Shares for $160 (i.e. at a 50% discount) respectively. For further details, please refer to the Rights Plan, a copy of which is available on SEDAR+ at sedarplus.ca on EDGAR at www.sec.gov as an exhibit to TELUS' registration statement on Form 8-A filed with the U.S. Securities and Exchange Commission on May 10, 2019 (Commission File No. 001-15144) or available from TELUS' Corporate Governance office, 7th Floor, 510 West Georgia Street, Vancouver, British Columbia, V6B 0M3.

Normal course issuer bid and shelf prospectus

Please see *Section 4.3 - Liquidity and capital resources* of our 2023 annual MD&A which is hereby incorporated by reference.

7.2 Constraints

Canadian ownership and control requirements

Certain subsidiaries of TELUS Corporation are Canadian carriers, holders of radio authorizations and holders of broadcasting licences, and are required by the *Telecommunications Act* (Canada) (Telecommunications Act) and the *Direction to the CRTC (Ineligibility of Non-Canadians)* issued pursuant to the *Broadcasting Act* (Canada) (Broadcasting Act) to be Canadian-owned and controlled. Under the Telecommunications Act, a Canadian carrier, such as TCI is considered to be Canadian-owned and controlled if:

(i) not less than 80% of the members of its board of directors are individual Canadians;
(ii) Canadians beneficially own not less than 80% of its voting interests; and
(iii) it is not otherwise controlled in fact by persons who are not Canadians.

Substantially the same rules apply in relation to broadcasting undertakings but an additional requirement set out in the *Direction to the CRTC (Ineligibility of Non-Canadians)* is that the chief executive officer of a company that is a licensed broadcasting undertaking must be a Canadian citizen or a permanent resident of Canada. When levels of non-Canadian ownership exceed 20 per cent, an independent programming committee must be appointed to make all programming decisions relating to the licensed broadcasting undertaking.

TELUS Corporation has filed with the CRTC the requisite documentation affirming TCI 's status as a Canadian carrier. We further intend that TCI will remain controlled by TELUS Corporation and that it will remain "Canadian" for the purposes of Canadian ownership requirements.

The *Canadian Telecommunications Common Carrier Ownership and Control Regulations* (Ownership and Control Regulations), made pursuant to the Telecommunications Act, further provide that in order for a company that holds shares in a carrier (carrier holding corporation) to be considered Canadian, not less than 66-2/3% of the issued and outstanding voting shares of that company must be beneficially owned by Canadians and that such company must not otherwise be controlled in fact by non-Canadians. To the best of our knowledge, Canadians beneficially own and control in the aggregate not less than 66-2/3% of the issued and outstanding Common Shares of TELUS Corporation and TELUS Corporation is not otherwise controlled in fact by non-Canadians. For the purposes of these regulations, "Canadian" means among other things:

(i) a Canadian citizen who is ordinarily resident in Canada;
(ii) a permanent resident of Canada who is ordinarily resident in Canada and has been so for not more than one year after the date he or she was eligible to apply for Canadian citizenship;
(iii) a corporation with not less than 66-2/3% of the issued and outstanding voting shares of which are beneficially owned and controlled by Canadians and which is not otherwise controlled in fact by non-Canadians; or
(iv) a pension fund society the majority of whose members of its board of directors are individual Canadians, and that is established under applicable federal legislation or any provincial legislation relating to the establishment of pension fund societies.

The *Direction to the CRTC (Ineligibility of Non-Canadians)* provides a similar definition of "Canadian" but also includes a "qualified corporation" which can be a subsidiary corporation whose parent corporation or its directors do not exercise control or influence over any programming decisions of the subsidiary corporation where

(a) Canadians beneficially own and control less than 80% of the issued and outstanding voting shares of the parent corporation and less than 80% of the votes,
(b) the chief executive officer is a non-Canadian, or
(c) less than 80% of the directors of the parent corporation are Canadian.

On August 10, 2017, in response to levels of foreign ownership of shares exceeding 20% and in order to meet the requirements of a "qualified corporation" in accordance with the *Direction to the CRTC (Ineligibility of Non-Canadians)*, the Board appointed an independent programming committee to make all programming decisions relating to its licensed broadcasting undertakings.

The Ownership and Control Regulations provide Canadian carriers and carrier holding corporations, such as TELUS Corporation, with the time and ability to rectify ineligibility resulting from insufficient Canadian ownership of voting interests. Under the Ownership and Control Regulations, such corporations may refuse the subscription, issuance, transfer or purchase of voting interests, if necessary, to ensure that they and their subsidiaries remain eligible under such legislation. For such purposes, in particular but without limitation, a company may, in accordance with the provisions contained in the Ownership and Control Regulations:

(i) refuse to accept any subscription for voting shares;
(ii) refuse to allow any transfer of voting shares to be recorded in its share register;
(iii) suspend the rights of a holder of voting shares to vote at a meeting of its shareholders; and
(iv) sell, repurchase or redeem excess voting shares.

To ensure that TELUS Corporation remains Canadian and that any subsidiary of TELUS Corporation, including TCI, is and continues to be eligible to operate as a Canadian carrier under the Telecommunications Act, to be issued radio authorizations under the *Radiocommunication Act* (Canada) (Radiocommunication Act), or to be issued broadcasting licences under the Broadcasting Act, provisions substantially similar to the foregoing have been incorporated into the Articles of TELUS Corporation permitting its directors to make determinations to effect any of the foregoing actions.

In addition, TELUS has systems in place to monitor the level of Canadian ownership of its Common Shares. For registered shareholders and shares trading on the TSX, a reservation and declaration system requires non-Canadian purchasers of Common Shares to obtain a reservation number from our transfer agent and registrar, Computershare Trust Company and to declare whether or not the purchaser is a Canadian or non-Canadian. For Common Shares trading on the NYSE, non-Canadian ownership is monitored by utilizing the Depository Trust & Clearing Corporation's SEG-100 Account program. All TELUS Common Shares held by non-Canadians must be transferred to this account (no reservation application is required).

The *Telecommunications Act* was amended in June 2012 to remove foreign ownership restrictions for telecommunications common carriers that hold less than a 10% share of the total Canadian telecommunications services revenues. This change was made to enable non-Canadian owned entities to start up or acquire Canadian carriers that hold less than a 10% share of total Canadian telecommunications services revenues. However, given that TELUS and its affiliates exceed this 10% threshold, we remain subject to the pre-existing Canadian ownership and control restrictions outlined above. Canadian ownership requirements for licensees under the Broadcasting Act remain unchanged.

7.3 Ratings

The following information relating to our credit ratings is provided as it relates to our financing costs, liquidity and operations. Additional information relating to credit ratings is contained in *Section 7.5 - Liquidity and capital resource measures* to *Section 7.8 - Credit ratings* in the 2023 annual MD&A.

Credit ratings are important to our borrowing costs and ability to obtain short-term and long-term financing and the cost of such financing. Credit ratings are intended to provide investors with an independent measure of the credit quality of an issue of securities and are indicators of the likelihood of payment and of the capacity of a company to meet its financial commitment on the rated obligation in accordance with the terms of the rated obligation. A reduction in the current rating on our debt by rating agencies, particularly a downgrade below investment grade ratings or a negative change in ratings outlook which could result in a rating below investment grade could adversely affect our cost of financing and our access to sources of liquidity and capital. We believe our investment grade credit ratings, coupled with our efforts to maintain constructive relationships with banks, investors and credit rating agencies, continue to provide TELUS with reasonable access to capital markets. In addition, credit ratings may be important to customers or counterparties when we compete in certain markets and when we seek to engage in certain transactions including transactions involving over-the-counter derivatives. As at December 31, 2023, TCI is a party to an agreement expiring in December 2024, with an arm's-length securitization trust associated with a major Schedule I bank, under which TCI is able to sell an interest in certain trade receivables up to a maximum of $600 million. TCI is required to maintain at least a BB credit rating by DBRS Ltd. (DBRS) or the securitization trust may require the sale program to be wound down.

The rating agencies regularly evaluate TELUS and TCI, and their ratings of our long-term and short-term debt are based on a number of factors, including our financial strength as well as factors not entirely within our control, including conditions affecting the telecommunications industry generally, and the wider state of the economy. The Company's credit ratings are outlined in the chart below. Credit ratings are not recommendations to purchase, hold or sell securities and do not address the market price or suitability of a specific security for a particular investor. In addition, real or anticipated changes in the rating assigned to a security will generally affect the market value of that security. There can be no assurance that a rating will remain in effect for any given period of time or that a rating will not be revised or withdrawn entirely by a rating agency in the future.

Credit rating summary	DBRS Ltd.	Standard & Poor's Rating Services	Moody's Investor Services	Fitch Ratings
TELUS Corporation				
Notes	BBB	BBB	Baa2	BBB
Commercial paper	R-2 (mid)	A-2	P-2	—
TELUS Communications Inc.				
Debentures	BBB	BBB	—	BBB

Institution	Rating
DBRS	The DBRS long-term rating scale provides an opinion on the risk of default. That is, the risk that an issuer will fail to satisfy its financial obligations in accordance with the terms under which an obligation has been issued. Ratings are based on quantitative and qualitative considerations relevant to the issuer, and the relative ranking of claims. All rating categories, other than "AAA" and "D", also contain subcategories "(high)" and "(low)". The absence of either a "(high)" or "(low)" designation indicates the rating is in the middle of the category. A "BBB" rating denotes adequate credit quality. The capacity for the payment of financial obligations is considered acceptable. May be vulnerable to future events. A DBRS rating trend provides guidance with respect to an opinion regarding the outlook for a rating. The rating trend indicates the direction a rating may move if present circumstances continue unless addressed. A positive or negative trend represents an indication that there is a greater likelihood that the rating could change in the future than is the case if a stable trend was assigned. Assignment of a positive or negative trend are resolved typically within a twelve-month period.
S&P	A S&P issue credit rating is a forward-looking opinion about the creditworthiness of an obligor with respect to a specific financial obligation, a specific class of financial obligations, or a specific financial program (including ratings on medium-term note programs and commercial paper programs). It takes into consideration the creditworthiness of guarantors, insurers, or other forms of credit enhancement on the obligation and takes into account the currency in which the obligation is denominated. The opinion reflects S&P's view of the obligor's capacity and willingness to meet its financial commitments as they come due, and may assess terms, such as collateral security and subordination, which could affect ultimate payment in the event of default. An obligation rated "BBB" exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation. The ratings from "AA" to "CCC" may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories. A S&P rating outlook indicates an opinion regarding the potential direction of a long-term credit rating over the intermediate term (ranging six months to two years). A positive outlook indicates a rating may be raised, and a negative outlook indicates a rating may be lowered. A stable outlook is assigned when the ratings are not likely to be changed, and a developing outlook is assigned when rating may be raised or lowered.
Moody's	Moody's long-term ratings are assigned to issuers or obligations with an original maturity of one year or more and reflect both on the likelihood of a default on contractually promised payments and the expected financial loss suffered in the event of default. Obligations rated "Baa" are judged to be medium-grade and subject to moderate credit risk and as such may possess certain speculative characteristics. Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from "Aa" through "Caa". The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category. A Moody's rating outlook is an opinion regarding the likely rating direction over the medium term. A stable outlook indicates a low likelihood of a rating change over the medium term. A negative, positive or developing outlook indicates a higher likelihood of a rating change over the medium term.

Institution	Rating
Fitch	Rated entities in a number of sectors, including financial and non-financial corporations, sovereigns and insurance companies are generally assigned issuer default ratings (IDRs). IDRs opine on an entity's relative vulnerability to default on financial obligations. The "threshold" default risk addressed by the IDR is generally that of the financial obligations whose non-payment would best reflect the uncured failure of that entity. As such, IDRs also address relative vulnerability to bankruptcy, administrative receivership or similar concepts, although the agency recognizes that issuers may also make pre-emptive and therefore voluntary use of such mechanisms. In aggregate, IDRs provide an ordinal ranking of issuers based on the agency's view of their relative vulnerability to default, rather than a prediction of a specific percentage likelihood of default. "BBB" ratings indicate that expectations of default risk are currently low. The capacity for payment of financial commitments is considered adequate but adverse business or economic conditions are more likely to impair this capacity. The modifiers "+" or "-" may be appended to a rating to denote relative status within major rating categories. Such suffixes are not added to the "AAA" Long-Term IDR category, or to Long-Term IDR categories below "B". Ratings may also have a directional Watch or Outlook assigned, which can signify the trajectory of the credit profile. A Fitch rating outlook is an opinion on the direction a rating is likely to move over a one- to two-year period. A positive rating outlook indicates an upward trend on the rating scale, and a negative rating outlook signals a negative trend on the rating scale. Ratings with stable outlooks can be raised or lowered without a prior revision to the outlook. Evolving outlooks may be described when there is conflicting elements of both positive and negative trends.

As of February 6, 2024, DBRS, S&P, Moody 's and Fitch rate TELUS as BBB (or equivalent) with a stable outlook. As is common practice, during the last two years, each of the mentioned credit rating agencies charged TELUS for their rating services which include annual surveillance fees covering our outstanding long-term and short-term debt securities, in addition to one-time rating fees for certain agencies when debt is initially issued. We reasonably expect that such payments will continue to be made for rating services in the future.

8. MARKET FOR SECURITIES

8.1 Trading Price and Volume

Our Common Shares are listed on the TSX under the symbol "T" and on the NYSE under the symbol "TU". Monthly share prices and volumes for 2023 are listed below:

	TSX – Common Shares			NYSE – Common Shares		
Month	**High ($)**	**Low ($)**	**Volume**	**High ($U.S.)**	**Low ($U.S.)**	**Volume**
January	28.87	26.00	47,323,262	21.56	19.02	28,410,890
February	29.00	26.66	57,858,948	21.82	19.76	31,333,695
March	27.60	26.14	54,045,807	20.27	19.03	37,068,852
April	28.95	26.67	39,978,785	21.34	19.83	26,545,075
May	28.85	25.63	44,531,509	21.28	18.89	29,267,977
June	26.03	25.05	49,090,508	19.59	18.86	32,139,709
July	26.09	23.28	53,802,519	19.66	17.60	41,007,039
August	24.18	22.28	59,516,869	17.87	16.68	35,051,240
September	24.04	21.81	56,305,417	17.70	16.11	30,822,422
October	23.07	21.16	48,247,652	16.93	15.47	44,342,415
November	24.62	22.42	48,190,657	17.97	16.14	35,793,582
December	25.94	23.19	64,997,918	19.14	17.43	43,133,157

8.2 Prior Sales

In 2023, we undertook debt offerings consisting of a $500 million Sustainability-Linked Bond and a $1.75 billion, three-tranche bond offering which included a Sustainability-Linked Bond. These offerings increased our weighted average cost of long-term debt from 4.03% to 4.33% and brought our average term to maturity from 12.1 years to 11.3 years.

Please refer to TELUS Corporation ’s 2023 year-end audited consolidated financial statements – *Note 26(b)* TELUS Corporation senior notes for details on our past debt offerings.

In addition, in the ordinary course of business, the Company has the capability to issue commercial paper with maturities of less than 12 months. As at December 31, 2023, the Company had $1.0 billion of commercial paper outstanding, all of which was denominated in U.S. dollars (US$0.8 billion).

9. DIRECTORS AND OFFICERS

9.1 Name, occupation and security holding

Directors

The names, municipalities of residence and principal occupations of the directors of TELUS as at February 9, 2024, as well as the date each such person became a director of TELUS and committee membership are as set out below. Currently, there are 13 directors on the Board. Each was elected at TELUS’ annual general meeting (AGM) on May 4, 2023. Each director ’s term of office will expire

immediately before the election of directors at the upcoming AGM on May 9, 2024. Nominees for re-election will be included in the Information Circular for the 2024 AGM.

Directors of TELUS Name and municipality of residence)	Director since	Principal occupation
Raymond T. Chan [2, 4 – Chair] Vancouver, B.C.	2013	Corporate Director
Hazel Claxton [1, 2] Toronto, Ontario	2021	Corporate Director
Lisa de Wilde [3 - Chair, 2] Oakville, Ontario	2015	Bell Media Professor of Media Management, Schulich School of Business, York University
Victor Dodig Toronto, Ontario	2022	President and Chief Executive Officer, CIBC group of companies
Darren Entwistle Vancouver, B.C.	2000	President and Chief Executive Officer, TELUS Corporation
Thomas E. Flynn [1, 4] Toronto, Ontario	2020	Corporate Director
Mary Jo Haddad [2 – Chair, 3] Niagara-on-the-Lake, Ontario	2014	Founder and President, MJH & Associates (strategic leadership and healthcare advisory services)
Christine Magee [2, 4] Toronto, Ontario	2018	Co-Founder and Chair, Sleep Country Canada
John Manley Ottawa, Ontario	2012	Chair, TELUS Corporation; Chair, Jefferies Securities, Inc.; and Senior Business Advisor at Bennett Jones LLP
David Mowat [1 – Chair] Vancouver, B.C.	2016	Corporate Director
Marc Parent [2, 4] Montreal, Quebec	2017	President and Chief Executive Officer, CAE Inc.
Denise Pickett [1, 3] Toronto, Ontario	2018	President, Global Services Group, American Express
W. Sean Willy [1, 3] Saskatoon, Saskatchewan	2021	President and Chief Executive Officer of Des Nedhe Development, the economic development entity for English River First Nation

1 Member of Audit Committee
2 Member of People. Culture and Compensation Committee
3 Member of Corporate Governance Committee
4 Member of Pension Committee

All of the directors of TELUS have held the principal occupations set forth above or executive positions with the same companies or firms referred to, or with affiliates or predecessors thereof, for the past five years except as follows: Ray Chan was Chair of Baytex Energy Corp. from 2014 to 2018 and Lead Independent Director from 2018 to 2019; Lisa de Wilde was CEO of the Ontario Educational Communications Authority (TVO) from 2005 to 2019; Thomas Flynn was CFO of BMO Financial Group from March 2011 to December 2020.

Executive officers

The name, municipality of residence and principal occupations of each of the executive officers of TELUS, as of February 9, 2024, are as follows:

Executive Officers of TELUS

(Name and municipality of residence)	**Position held with TELUS**
Darren Entwistle Vancouver, B.C.	President and Chief Executive Officer
Doug French Whitby, Ontario	Executive Vice President and Chief Financial Officer
Navin Arora Calgary, Alberta	Executive Vice President and President, Business Solutions
Tony Geheran Vancouver, B.C.	Executive Vice President and Chief Operations Officer
Gopi Chande West Vancouver, B.C.	Senior Vice President and Treasurer
Zainul Mawji Edmonton, Alberta	Executive Vice President and President, Consumer Solutions
Sandy McIntosh Toronto, Ontario	Executive Vice President, People and Culture and Chief Human Resources Officer
Andrea Wood Toronto, Ontario	Executive Vice President and Chief Legal and Governance Officer

All of the executive officers of TELUS have held their present positions or other positions with the Company during the past five years or more.

TELUS shares held by directors and executive officers

As at February 7, 2024, the directors and executive officers of TELUS, as a group, beneficially owned, directly or indirectly, or exercised control or direction over 1,845,065 Common Shares, which represented approximately 0.12% of the outstanding Common Shares.

9.2 Cease trade orders, bankruptcies, penalties or sanctions

For the 10 years ended February 9, 2024, other than as disclosed below we are not aware that any current director or executive officer of TELUS had been a director or executive officer of any issuer which, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt or made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets. On December 1, 2022, the Court of King's Bench for Saskatchewan issued an Order approving a Proposal filed with the Office of the Superintendent of Bankruptcy on October 21, 2022 and as accepted by requisite majorities of the creditors of Tron Construction & Mining Inc. (TCMI) and Tron Construction & Mining Limited Partnership (TCMLP), a 100% First Nation owned business. W. Sean Willy is the President and CEO of Des Nedhe Development Corporation, which, among other portfolio investments, owns TCMLP. In connection with such ownership, Mr. Willy is the Chair of TCMI.

For the 10 years ended February 9, 2024, we are not aware that any current director or executive officer of TELUS had been a director, chief executive officer or chief financial officer of any issuer which was the subject of a cease trade order, an order similar to a cease trade order or an order that denied such issuer access to any exemption under securities legislation, and that was in effect for a

period of more than 30 consecutive days, (in each such case, an "Order") while that person was acting in that capacity, or was subject to such an Order issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and resulted from an event that occurred while that person was acting in that capacity.

10. LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Legal proceedings are described in *Section 10.18 - Litigation and legal matters* in the 2023 annual MD&A and in the Company's December 31, 2023, consolidated financial statements *Note 29(a) Claims and lawsuits*.

From time to time, in the ordinary course of business, the Company and its subsidiaries are assessed fees or fines by securities regulatory authorities in relation to administrative matters, including late filing or reporting fees, which may be considered penalties or sanctions pursuant to Canadian securities regulations but which are not, individually or in the aggregate, material to the Company. In addition, the Company and its subsidiaries are subject to numerous regulatory authorities around the world, and fees, administrative penalties, settlement agreements and sanctions may be categorized differently by each regulator. However, during the most recently completed financial year, the Company is not aware of any material (i) penalties or sanctions imposed against us by a court relating to securities legislation or by a securities regulatory authority; (ii) penalties or sanctions imposed by a court or regulatory body against us that would likely be considered important to a reasonable investor in making an investment decision; or (iii) settlement agreements entered into by us before a court relating to securities legislation or with a securities regulatory authority.

11. INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

To the best of our knowledge, there were no directors or executive officers, or any associate or affiliate of a director or executive officer with a material interest in any transaction within the three most recently completed financial years or during the current financial year that has materially affected or is reasonably expected to materially affect us.

12. TRANSFER AGENT AND REGISTRAR

Our transfer agent and registrar is Computershare Trust Company of Canada. Computershare maintains the Company's registers at 800, 324 - 8th Avenue SW, Calgary, Alberta T2P 2Z3.

13. MATERIAL CONTRACTS

TCI is a party to a three-year agreement (expiry December 31, 2024) with an arm's-length securitization trust associated with a major Schedule I bank, under which TCI is able to sell an interest in certain of its trade receivables up to a maximum of $600 million. TCI is required to maintain at least a BB credit rating by DBRS Ltd. or the securitization trust may require the sale program to be wound down. The necessary credit rating was exceeded during its term through to the date hereof.

TELUS holds a five-year unsecured $2.75 billion credit facility (2018 Credit Facility) with a syndicate of financial institutions. On July 14, 2023, a third amendment agreement was entered into which extended the maturity date from April 2026 to July 2028. The 2018 Credit Facility may be used for general corporate purposes including the backstop of commercial paper.

On July 12, 2022, TELUS entered into an unsecured non-revolving $1.9 billion bank credit facility, maturing July 9, 2024, with a syndicate of financial institutions, which is to be used for general corporate purposes. Subsequently, the size of the facility, upon our request, was reduced to $1.15 billion.

TELUS has also entered into material contracts in connection with the following financings in 2023:

- On March 28, 2023, TELUS issued $500 million aggregate principal amount of 4.95% Sustainability-Linked Notes, Series CAJ, due March 28, 2033.
- On September 8, 2023, TELUS issued $850 million aggregate principal amount of 5.75% Sustainability-Linked Notes, Series CAK, due September 8, 2033; $500 million aggregate principal amount of 5.60% Notes, Series CAM, due September 9, 2030; and $400 million aggregate principal amount of 5.95% Notes, Series CAL, due September 8, 2053.

The applicable trust indenture and supplemental indenture documents in relation to these notes have been filed on SEDAR+ at www.sedarplus.ca and on EDGAR at www.sec.gov. The terms of the indenture are fully described in our final short form base shelf

prospectus dated August 8, 2022 filed on SEDAR+. The terms of the various notes issued in 2023 and the applicable supplemental indentures are as set forth in the shelf prospectus supplements dated March 23, 2023 and September 5, 2023, filed on SEDAR+. The base shelf prospectus dated August 8, 2022 has been filed as part of a registration statement on Form F-10 filed with the U.S. Securities and Exchange Commission (Commission File No. 333-266633).

14. INTERESTS OF EXPERT

Deloitte LLP, is the auditor of the Company and is independent of the Company within the meaning of the Rules of Professional Conduct of the Chartered Professional Accountants of British Columbia and within the meaning of the Securities Act of 1933, as amended and the applicable rules and regulations thereunder adopted by the Securities and Exchange Commission and the Public Company Accounting Oversight Board (United States).

15. AUDIT COMMITTEE

The Audit Committee of the Company supports the Board in fulfilling its oversight responsibilities regarding the integrity of our accounting and financial reporting, internal controls and disclosure controls, legal and regulatory compliance, ethics policy and timeliness of filings with regulatory authorities, the independence and performance of our external and internal auditors, the management of our risk, credit worthiness, treasury plans and financial policy and whistleblower and complaint procedures. A copy of the Audit Committee's Terms of Reference is attached as Appendix A to this AIF.

The current members of the Audit Committee are David Mowat (Chair), Hazel Claxton, Tom Flynn, Denise Pickett and W. Sean Willy. Each member of the Audit Committee is independent and financially literate within the meaning of Multilateral Instrument 52-110 "Audit Committees" and the Board has determined that David Mowat is the audit committee financial expert and has the required accounting or related financial management expertise. The following lists the relevant education and experience of the members of TELUS' Audit Committee that is relevant to their role on the committee.

David Mowat is the Chair of the Audit Committee. He is the former President and CEO of ATB Financial, a position he held from June 2007 to June 2018. Prior to that, he was the CEO of Vancouver City Savings Credit Union from 2000 until 2007. In 2015, he was named chair of the Alberta Royalty Review panel. He is currently a director of the Laurentian Bank Group. David holds a Bachelor of Commerce from the University of British Columbia and the ICD.D designation from the Institute of Corporate Directors. In 2015, he received an Honorary Bachelor of Business Administration from the Southern Alberta Institute of Technology and in 2017 he received an honorary doctorate of laws from the University of Alberta.

Hazel Claxton is the former Executive Vice-President and Chief Human Resources Officer of Morneau Shepell Inc. (renamed LifeWorks Inc.), a position she held from 2013 to 2018. Prior to that, Hazel spent 29 years at PwC Canada where she held several leadership roles including Canadian Leadership Group member, Human Capital leader, and Partner within the Corporate Advisory and Restructuring Group, an area she practiced in for 20 years. Hazel currently sits on the boards of Bank of Montreal, Allied Properties REIT, University Pension Plan Ontario, and Unity Health Toronto. Previously, she was on the boards of Queen's University, St. Michael 's Hospital, and the Shaw Festival Theatre. Hazel holds a Bachelor of Commerce (Honours) from Queen's University and the ICD.D designation from the Institute of Corporate Directors. She is a Chartered Professional Accountant.

Tom Flynn is the former Vice-Chair of BMO Financial Group. Prior to 2021 he was an executive officer and served as Bank of Montreal's Chief Financial Officer from 2011 to 2020 and Chief Risk Officer from 2008 to 2011. Previously, Tom held other leadership positions, including Executive Vice-President Finance and Treasurer, and Head of the Financial Services Corporate and Investment Banking Group in BMO Capital Markets. Tom is a Director of Ontario Health and was previously Chair of the Board of Sunnybrook Health Sciences Centre, Holland Bloorview Kids Rehabilitation Hospital and Symcor Inc. He obtained his MBA and his Bachelor of Arts (Honours) in Business Administration from the Ivey School of Business at Western University, is a Chartered Professional Accountant and a Fellow of CPA Ontario, and holds the ICD.D designation from the Institute of Corporate Directors.

Denise Pickett is the President, Global Services Group of American Express, a position she has held since September 2019. From 1992 to the present, Denise has held a series of progressively senior roles throughout American Express. She was Country Manager for American Express Canada and President and CEO of Amex Bank of Canada. Denise subsequently relocated to the United States where most recently she served as the President of American Express OPEN, the small business division, followed by the President of U.S. Consumer Services and most recently as American Express' Chief Risk Officer. Denise holds an MBA in marketing from the Schulich School of Business at York University and a Bachelor of Science (Honours) from the University of Toronto.

W. Sean Willy is President and Chief Executive Officer of Des Nedhe Development, the economic development entity for English River First Nation, which includes a broad portfolio of businesses and investments that range from construction and mining to retail and communications, a role he has held since August 2017, and prior thereto he was a Vice-President of Des Nedhe Development since June 2016. From 2010 to 2016, Sean was the Director of Corporate Responsibility for Cameco Corporation, a publicly traded uranium producer. Sean is an experienced business executive, with a 25-year history of creating, developing and leading inclusive practices in the resource sector and building opportunities with Indigenous communities. In his career, Sean has developed and implemented progressive and innovative Indigenous inclusion and value-added corporate social responsibility strategies for two leading resource companies, Rio Tinto and Cameco Corporation. Sean has always worked to ensure Indigenous Peoples are seen as full partners in long-term relationships, and this has led to Sean building partnerships in Australia, the United States and throughout Canada. Sean is currently on the Board of GreenFirst Forest Products Inc. In the past, he has served as Chair of the Mining Association of Canada's Indigenous Affairs Committee, Co-Chair of the Canadian Council for Aboriginal Business, Chair of the successful Northern Career Quest and a board member of Indigenous Works. Sean holds a Bachelor of Commerce from the Edwards School of Business of the University of Saskatchewan.

Audit, audit-related and non-audit services

All requests for non-prohibited audit, audit-related and non-audit services provided by our external auditor and its affiliates to us are required to be pre-approved by our Audit Committee. To enable this, we have implemented a process by which all requests for services involving the external auditor are routed for review by the VP Risk Management and Chief Internal Auditor to validate that the requested service is a non-prohibited service and to verify that there is a compelling business reason for the request. If the request passes this review, it is then forwarded to the Chief Financial Officer for further review. Pending the Chief Financial Officer's affirmation, the request is then presented to the Audit Committee for its review, evaluation and pre-approval or denial at its next scheduled quarterly meeting. If the timing of the request is urgent, it is provided to the Audit Committee Chair for his or her review, evaluation and pre-approval or denial on behalf of the Audit Committee (with the full committee's review at the next scheduled

quarterly meeting). Throughout the year, the Audit Committee monitors the actual versus approved expenditure for each of the approved requests.

The following table is a summary of billings by Deloitte LLP (Deloitte), as external auditor of TELUS, during each of the years ended December 31, 2023 and 2022.

	Year ended December 31, 2023		Year ended December 31, 2022	
Type of work	**$ millions**	**%**	**$ millions**	**%**
Audit fees [1]	4.096	32.7	3.125	27.4
Audit-related fees [2]	7.978	63.6	7.230	63.3
Tax fees [3]	0.463	3.7	0.870	7.6
All other fees [4]	—	0.0	0.192	1.7
Total	**12.537**	**100.0**	**11.417**	**100.0**

1 Includes fees for services rendered by Deloitte in relation to the audit and review of our financial statements.
2 Includes fees for audits in relation to our statutory and regulatory filings, audits and reviews of subsidiaries including TELUS International, pension-related audits, customer required reviews and translation services rendered by Deloitte in relation to the audit or review of our financial statements that were not part of audit fees.
3 Relates to tax compliance, tax advice and tax planning.
4 Includes fees for services rendered by Deloitte that were not in relation to the audit or review of our financial statements, such proxy circular assurance work (2022), Data Analytics Maturity Assessment and Benchmarking (2022) and other Specified Procedures (2022).

16. ADDITIONAL INFORMATION

Additional information relating to TELUS may be found on SEDAR+ at sedarplus.ca and EDGAR at sec.gov. Additional information regarding directors' and officers' remuneration, and securities authorized for issuance under equity compensation plans, will be contained in TELUS' information circular for the annual meeting to be held on May 9, 2024. Additional financial information is provided in the Company's consolidated financial statements and MD&A for the year ended December 31, 2023. All of the above information can also be found at telus.com. Additional information about our TELUS International (Cda) Inc. subsidiary, including discussion of its business and results, can be found in its public filings available on SEDAR+ at sedarplus.ca and EDGAR at sec.gov.

APPENDIX A: TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

The Board has established an Audit Committee (the "Committee") to assist the Board in fulfilling its oversight responsibilities regarding the integrity of the Company's accounting and financial reporting, the Company 's internal controls and disclosure controls, the Company's legal and regulatory compliance, the Company 's Code of Ethics and Conduct and timeliness of filings with regulatory authorities, the independence and performance of the Company's external and internal auditors, the identification and management of the Company's risks, the Company 's credit worthiness, treasury plans and financial policy and the Company's whistleblower and complaint procedures.

1. MEMBERSHIP

1.1 The Committee will have a minimum of three members, including the chair of the Committee. The Board, upon the recommendation of the Corporate Governance Committee, will appoint and remove the members of the Committee by a majority vote. The members will sit on the Committee at the pleasure of the Board.
1.2 The Board, upon the recommendation of the Corporate Governance Committee, will appoint the chair of the Committee from the Committee's members by a majority vote. The chair of the Committee will hold such position at the pleasure of the Board.
1.3 All members of the Committee will be Independent Directors.
1.4 All members of the Committee will be financially literate, as defined in accordance with applicable securities laws and standards of the stock exchanges on which the Company's securities are listed.
1.5 At least one member of the Committee will be an audit committee financial expert, as defined in accordance with applicable securities laws, and at least one member of the Committee will have accounting or related financial management expertise, as defined in accordance with applicable securities laws.

2. MEETINGS

2.1 The Committee will meet at least once each quarter and otherwise as necessary. Any member of the Committee may call meetings of the Committee.
2.2 All directors of the Company, including management directors, may attend meetings of the Committee provided, however, that no director is entitled to vote at such meetings and is not counted as part of the quorum for the Committee if they are not a member of the Committee.
2.3 Notwithstanding section 2.2 above, the Committee will, as a regular feature of each regularly scheduled meeting, hold an in-camera session with the external auditors and separately with the internal auditors, and an in-camera session without management or management directors present. The Committee may, however, hold other in-camera sessions with such members of management present as the Committee deems appropriate.
2.4 The Chief Legal and Governance Officer or their nominee will act as secretary to the Committee.
2.5 The Committee will report to the Board on its meetings and each member of the Board will have access to the minutes of the Committee's meetings and meeting materials, regardless of whether the director is a member of the Committee.
2.6 The external auditors of the Company will receive notice of every meeting of the Committee and may request a meeting of the Committee be called by notifying the chair of the Committee of such request.

3. QUORUM

The quorum necessary for the transaction of business at Committee meetings will be a majority of the members of the Committee. A quorum once established is maintained even if members of the Committee leave the meeting prior to conclusion.

4. DUTIES

The Board hereby delegates to the Committee the following duties to be performed by the Committee on behalf of and for the Board:

4.1 Financial Reporting

Prior to public disclosure, the Committee will review and recommend to the Board, and where applicable, to the boards of the Company's subsidiaries which are reporting issuers, for approval:

(a) the annual audited consolidated financial statements and interim unaudited consolidated financial statements of the Company and those of its subsidiaries that are reporting issuers, as defined in accordance with applicable securities laws;
(b) the interim and annual management's discussion and analysis of financial condition and results of operations ("MD&A") of the Company and those of its subsidiaries that are reporting issuers, as defined in accordance with applicable securities laws;
(c) earnings press releases and earnings guidance, if any; and
(d) all other material financial public disclosure documents of the Company and those of its subsidiaries that are reporting issuers, including prospectuses, press releases with financial results, annual information form and any metrics regarding climate related risks, sustainability, and environmental disclosure in financial reporting, including but not limited to, disclosure made under the Task Force on Climate-related Financial Disclosures framework established by the Financial Stability Board.

4.2 External Auditors

The external auditors will report directly to the Committee and the Committee will:

(a) appoint the external auditors, subject to the approval of the shareholders, and determine the compensation of the external auditors;
(b) conduct an annual review of the external auditors;
(c) oversee the work of the external auditors and review and approve the annual audit plan of the external auditors, including the scope of the audit to be performed and the degree of coordination between the plans of the external and internal auditors;
(d) discuss with the internal auditors, the external auditors and management, the adequacy and effectiveness of the disclosure controls and internal controls over financial reporting of the Company and elicit recommendations for the improvement of such controls or particular areas where new or more detailed controls or procedures are desirable. Particular emphasis will be given to the adequacy of internal controls to prevent, identify or detect fraud, or any payments, transactions or procedures that might be deemed illegal or otherwise improper;
(e) meet regularly with the external auditors without management present and ask the external auditors to report any significant disagreements with management regarding financial reporting, the resolution of such disagreements and any restrictions imposed by management on the scope and extent of the audit examinations conducted by the external auditors;
(f) pre-approve all audit, audit-related and non-audit services to be provided to the Company or any of its subsidiaries, by the external auditors (and its affiliates), in accordance with applicable securities laws. The Committee may also delegate the pre-approval of audit, audit-related and non-audit services to any one member of the Committee, provided, however, a report is made to the Committee on any pre-approval of such services at the Committee's first scheduled meeting following the pre-approval;
(g) annually review the qualifications, expertise and resources and the overall performance of the external audit team and, if necessary, recommend to the Board the termination of the external auditors or the rotation of the audit partner in charge;
(h) at least annually, obtain and review a report by the external auditors describing: the firm's internal quality-control procedures; any material issues raised by the most recent internal quality control review, or peer review of the firm, or by any inquiry or investigation by governmental or professional authorities, within the preceding five years, respecting one or more independent audits carried out by the firm, and any steps taken to deal with such issues; and all relationships between the external auditors and the Company;
(i) annually, or more frequently as appropriate, assess and confirm the independence, objectivity and professional skepticism of the external auditors and require the external auditors to deliver an annual report to the Committee regarding its independence, such report to include disclosure regarding all engagements (and fees related thereto) by the Company and relationships which may impact the objectivity and independence of the external auditors;
(j) require the external auditors to deliver an annual engagement letter to the Committee;
(k) review post-audit or management letters, containing recommendations of the external auditors and management 's response;
(l) review reports of the external auditors; and
(m) pre-approve the hiring of employees and former employees of current and former auditors in accordance with applicable securities laws and the Company's policies.

4.3 Internal Auditors

The internal auditors will report functionally to the Committee, and administratively to the Company 's Chief Financial Officer ("CFO"), and the Committee will:

(a) review and approve management 's appointment, termination or replacement of the Chief Internal Auditor;
(b) review and consider the annual performance objectives, performance evaluation and compensation treatment of the Chief Internal Auditor;
(c) oversee the work of the internal auditors including reviewing and approving the annual internal audit plan and updates thereto;
(d) review the report of the internal auditors on the status of significant internal audit findings, recommendations and management's responses and review any other reports of the internal auditors;
(e) annually review the scope of responsibilities and effectiveness of the internal audit team, its reporting relationships, activities, organizational structure and resources, its independence from management, its credentials and its working relationship with the external auditors; and
(f) review and approve the internal audit charter and updates thereto at a minimum of every five years (or sooner if required).

The internal auditors will report quarterly to the Committee on the results of internal audit activities and will also have direct access to the chair of the Committee when the internal auditors determine it is necessary.

4.4 Whistleblower, Ethics and Internal Controls Processes

The Committee will ensure that the Company has in place adequate procedures for:

(a) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal controls or auditing matters; and
(b) the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters.

The CEO, CFO, or the Chief Internal Auditor will report to the Committee, and the Committee will review such reports, on any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls. Where the CEO, CFO and/or the Chief Internal Auditor are named in a complaint, the Director of Ethics will speak directly with the chair of the Committee.

The Committee will review:

(c) at least once every two years, and recommend to the Board for approval, together with the People, Culture and Compensation Committee, the Code of Ethics and Conduct and material changes thereto; and
(d) quarterly reports on ethics breaches including any pertaining to internal controls over financial reporting or fraud involving management or other employees who have a role in the Company's internal controls over financial reporting.

The Chief Internal Auditor will report to the Committee, and the Committee will consider such reports, on the results of the investigation of whistleblower, ethics and internal controls complaints.

4.5 Accounting and Financial Management

The Committee will review:

(a) with management and the external auditors, the Company 's major accounting policies, including the impact of alternative accounting policies and key management estimates, risks and judgments that could materially affect the financial results and whether they should be disclosed in the MD&A;
(b) emerging accounting issues and their potential impact on the Company 's financial reporting;
(c) significant judgments, assumptions and estimates made by management in preparing financial statements;
(d) the evaluation by either the internal or external auditors of management 's internal control systems, and management 's responses to any identified weaknesses;

(e) the evaluation by management of the adequacy and effectiveness in the design and operation of the Company ’s disclosure controls and internal controls for financial reporting;
(f) audits designed to report on management ’s representations on the effectiveness and efficiency of selected projects, processes, programs or departments;
(g) management’s approach for safeguarding corporate assets, data and information systems, the adequacy of staffing of key financial functions and their plans for improvements; and
(h) internal interim and post implementation reviews of major capital projects.

4.6 Credit Worthiness, Treasury Plans and Financial Policy

The Committee will review with management:

(a) the Company’s financial policies and compliance with such policies;
(b) the credit worthiness of the Company;
(c) the liquidity of the Company; and
(d) important treasury matters including financing plans.

4.7 Legal/Regulatory Matters

The Committee will review:

(a) with management, the external auditors and legal counsel, any litigation, claim or other contingency, including any tax assessment, that could have a material effect upon the financial position or operating results of the Company;
(b) annually, management’s relationships with regulators, and the accuracy and timeliness of filings with regulatory authorities;
(c) quarterly reports from the Chief Legal and Governance Officer on compliance with laws and regulations;
(d) quarterly reports from the Vice-President, Chief Data and Trust Officer (“Chief Compliance Officer”) on legal, privacy and regulatory compliance activities; and
(e) the anti-bribery and corruption policy and recommend to the Board for approval any material changes thereto.

4.8 Risk Management

The Committee will:

(a) consider reports on the annual enterprise risk assessment and updates thereto;
(b) except to the extent that responsibility is reserved to the Board or delegated to another Board committee, review management’s implementation of risk policies and procedures, and assess the appropriateness and comprehensiveness of those policies and procedures;
(c) consider reports on security (including cybersecurity);
(d) consider reports on financial risk management including derivative exposure and policies;
(e) consider reports on tax risk management and governance;
(f) consider reports on business continuity, disaster recovery planning and external threat/hazard monitoring for the Company, including climate-related physical and transitional risks; and
(g) review other risk management matters from time to time as the Committee may consider suitable or the Board may specifically direct.

4.9 Other

The Committee will review:

(a) compliance with the Executive Expense Policy of the expenses of the Board and the CEO;
(b) significant related party transactions and actual and potential conflicts of interest relating thereto to verify their propriety and that disclosure is appropriate;
(c) the disclosure policy of the Company and recommend any material changes thereto to the Board for approval; and evaluate, at least once annually, the adequacy of these terms of reference and the Committee’s performance, and report its evaluation and any recommendations for change to the Corporate Governance Committee; and

(d) at least once every two years, the Company's aircraft policy.

The Committee will also have such other duties and responsibilities as are delegated to it and review such other matters as, from time to time, are referred to it by the Board.

5. AUTHORITY

The Committee, in fulfilling its mandate, will have the authority to:

(a) engage and set compensation for independent counsel and other advisors;
(b) communicate directly with the CFO, internal and external auditors, Chief Compliance Officer, Chief Legal and Governance Officer and any other member of management the Committee deems appropriate;
(c) delegate tasks to Committee members or subcommittees of the Committee; and
(d) access appropriate funding as determined by the Committee to carry out its duties.

Exhibit 99.4

Audited Consolidated Financial Statements as at and for the years ended December 31, 2023 and 2022 and Management's Discussion and Analysis

[previously filed on SEDAR]

TELUS CORPORATION

CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2023

report of management on internal control over financial reporting

Management of TELUS Corporation (TELUS, or the Company) is responsible for establishing and maintaining adequate internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting.

TELUS' President and Chief Executive Officer and Executive Vice-president and Chief Financial Officer have assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2023, in accordance with the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Internal control over financial reporting is a process designed by, or under the supervision of, the President and Chief Executive Officer and the Executive Vice-president and Chief Financial Officer and effected by the Board of Directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis. Also, projections of any evaluation of the effectiveness of internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Based on the assessment referenced in the preceding paragraph, management has determined that the Company's internal control over financial reporting is effective as of December 31, 2023. In connection with this assessment, no material weaknesses in the Company's internal control over financial reporting were identified by management as of December 31, 2023.

The Company acquired WillowTree on January 3, 2023, as set out in *Note 18(b)* of the consolidated financial statements, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2023, WillowTree's internal control over financial reporting associated with 1%, 1%, 3% and 5% of the Company's consolidated current assets, consolidated current liabilities, consolidated non-current assets and consolidated non-current liabilities, respectively, and total revenue of $254 million and net loss of $127 million included in the Consolidated financial statements of the Company as of and for the year ended December 31, 2023.

Deloitte LLP, an Independent Registered Public Accounting Firm, audited the Company's Consolidated financial statements for the year ended December 31, 2023, and as stated in the Report of Independent Registered Public Accounting Firm, they have expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2023.

/s/ "Doug French"	/s/ "Darren Entwistle"
Doug French Executive Vice-president and Chief Financial Officer February 9, 2024	Darren Entwistle President and Chief Executive Officer February 9, 2024

report of independent registered public accounting firm

To the Shareholders and the Board of Directors of TELUS Corporation

Opinion on the Financial Statements
We have audited the accompanying consolidated statements of financial position of TELUS Corporation and subsidiaries (the Company) as at December 31, 2023 and 2022, the related consolidated statements of income and other comprehensive income, changes in owners' equity, and cash flows, for each of the two years in the period ended December 31, 2023, and the related notes (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2023 and 2022, and its financial performance and its cash flows for each of the two years in the period ended December 31, 2023, in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 9, 2024, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion
These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter
The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of Intangible Assets Acquired in Business Acquisitions – Refer to Note 1(b) and 18(b) to the financial statements

Critical Audit Matter Description
On January 3, 2023, the Company acquired 86% of the equity of WillowTree and recognized the assets acquired and the liabilities assumed at fair value including intangible assets related to customer relationships and other ("intangible assets").

While there are several estimates and assumptions that are required to determine the fair value of the intangible assets, the estimates and assumptions with the highest degree of subjectivity are forecasted revenue growth, forecasted profit margins, discount rate, and customer attrition rate. As a result, performing audit procedures required a high degree of auditor judgment and an increased extent of audit effort, including the involvement of fair value specialists.

How the Critical Audit Matter Was Addressed in the Audit
Our audit procedures related to the forecasted revenue growth, forecasted profit margins, discount rate and customer attrition rate used to determine the fair value of the intangible assets included the following, among others:

- Evaluated the effectiveness of controls over management's determination of forecasted revenue growth, forecasted profit margins, discount rate and customer attrition rate used to value intangible assets.
- Evaluated the reasonableness of management's forecasts of revenue growth and profit margins by comparing the forecasts to historical results, third-party industry forecasts, and comparable entities.
- With the assistance of fair value specialists, evaluated the reasonableness of the discount rate and customer attrition rate by testing the source information underlying the determination of the rates and developing a range of independent estimates and comparing those to the discount rate and customer attrition rate selected by management.

/s/ "Deloitte LLP"

Chartered Professional Accountants
Vancouver, Canada
February 9, 2024

We have served as the Company's auditor since 2002.



report of independent registered public accounting firm

To the Shareholders and the Board of Directors of TELUS Corporation

Opinion on Internal Control over Financial Reporting
We have audited the internal control over financial reporting of TELUS Corporation and subsidiaries (the Company) as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as at and for the year ended December 31, 2023, of the Company and our report dated February 9, 2024, expressed an unqualified opinion on those financial statements.

As described in the report of management on internal control over financial reporting, management excluded from its assessment the internal control over financial reporting at WillowTree, which was acquired on January 3, 2023, and whose financial statements constitute 1%, 1%, 3% and 5% of the Company's consolidated current assets, consolidated current liabilities, consolidated non-current assets and consolidated non-current liabilities, respectively, and total revenue of $254 million and net loss of $127 million included in the consolidated financial statements of the Company as at and for the year ended December 31, 2023. Accordingly, our audit did not include the internal control over financial reporting at WillowTree.

Basis for Opinion
The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying report of management on internal control over financial reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting
A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ "Deloitte LLP"

Chartered Professional Accountants
Vancouver, Canada
February 9, 2024

consolidated statements of income and other comprehensive income

Years ended December 31 (millions except per share amounts)	*Note*	**2023**	2022
OPERATING REVENUES			
Service		**$ 17,508**	$ 15,956
Equipment		**2,497**	2,336
Operating revenues (arising from contracts with customers)	*6*	**20,005**	18,292
Other income	*7*	**111**	120
Operating revenues and other income		**20,116**	18,412
OPERATING EXPENSES			
Goods and services purchased	*16*	**7,537**	7,107
Employee benefits expense	*8, 16*	**6,148**	4,899
Depreciation	*17*	**2,514**	2,226
Amortization of intangible assets	*18*	**1,555**	1,226
		17,754	15,458
OPERATING INCOME		**2,362**	2,954
Financing costs	*9*	**1,273**	632
INCOME BEFORE INCOME TAXES		**1,089**	2,322
Income taxes	*10*	**222**	604
NET INCOME		**867**	1,718
OTHER COMPREHENSIVE INCOME (LOSS)	*11*		
Items that may subsequently be reclassified to income			
Change in unrealized fair value of derivatives designated as cash flow hedges		**(137)**	(101)
Foreign currency translation adjustment arising from translating financial statements of foreign operations		**(30)**	41
		(167)	(60)
Items never subsequently reclassified to income			
Change in measurement of investment financial assets		**(12)**	7
Employee defined benefit plan re-measurements		**1**	132
		(11)	139
		(178)	79
COMPREHENSIVE INCOME		**$ 689**	$ 1,797
NET INCOME ATTRIBUTABLE TO:			
Common Shares		**$ 841**	$ 1,615
Non-controlling interests		**26**	103
		$ 867	$ 1,718
COMPREHENSIVE INCOME ATTRIBUTABLE TO:			
Common Shares		**$ 688**	$ 1,654
Non-controlling interests		**1**	143
		$ 689	$ 1,797
NET INCOME PER COMMON SHARE	*12*		
Basic		**$ 0.58**	$ 1.16
Diluted		**$ 0.58**	$ 1.15
TOTAL WEIGHTED AVERAGE COMMON SHARES OUTSTANDING			
Basic		**1,451**	1,396
Diluted		**1,457**	1,403

The accompanying notes are an integral part of these consolidated financial statements.

consolidated statements of financial position

As at December 31 (millions)	Note	2023	2022
ASSETS			
Current assets			
Cash and temporary investments, net		**$ 864**	$ 974
Accounts receivable	6(b)	**3,597**	3,316
Income and other taxes receivable		**205**	124
Inventories	1(l)	**484**	537
Contract assets	6(c)	**445**	441
Prepaid expenses	20	**682**	617
Current derivative assets	4(h)	**36**	83
		6,313	6,092
Non-current assets			
Property, plant and equipment, net	17	**17,248**	17,084
Intangible assets, net	18	**19,721**	19,239
Goodwill, net	18	**10,058**	9,131
Contract assets	6(c)	**303**	320
Other long-term assets	20	**2,493**	2,203
		49,823	47,977
		$ 56,136	$ 54,069
LIABILITIES AND OWNERS' EQUITY			
Current liabilities			
Short-term borrowings	22	**$ 104**	$ 104
Accounts payable and accrued liabilities	23	**3,391**	3,952
Income and other taxes payable		**126**	112
Dividends payable	13	**550**	502
Advance billings and customer deposits	24	**971**	891
Provisions	25	**317**	166
Current maturities of long-term debt	26	**3,994**	2,541
Current derivative liabilities	4(h)	**25**	18
		9,478	8,286
Non-current liabilities			
Provisions	25	**744**	538
Long-term debt	26	**23,355**	22,496
Other long-term liabilities	27	**867**	636
Deferred income taxes	10	**4,390**	4,455
		29,356	28,125
Liabilities		**38,834**	36,411
Owners' equity			
Common equity	28	**16,112**	16,569
Non-controlling interests		**1,190**	1,089
		17,302	17,658
		$ 56,136	$ 54,069
Contingent liabilities	29		

The accompanying notes are an integral part of these consolidated financial statements.

Approved by the Directors:

/s/ "David L. Mowat"

David L. Mowat
Director

/s/ "John P. Manley"

John P. Manley
Director

consolidated statements of changes in owners' equity

(millions)	Note	Common equity						Non-controlling interests	Total
		Equity contributed				Accumulated other comprehensive income			
		Common Shares *(Note 28)*							
		Number of shares	Share capital	Contributed surplus	Retained earnings		Total		
Balance as at January 1, 2022		1,370	$ 9,644	$ 1,013	$ 4,256	$ 203	$ 15,116	$ 943	$ 16,059
Net income		—	—	—	1,615	—	1,615	103	1,718
Other comprehensive income (loss)	*11*	—	—	—	132	(93)	39	40	79
Dividends	*13*	—	—	—	(1,899)	—	(1,899)	—	(1,899)
Dividends reinvested and optional cash payments	*13(b), 14(c)*	23	660	—	—	—	660	—	660
Equity accounted share-based compensation		4	103	18	—	—	121	12	133
Issue of Common Shares in business combination		34	992	—	—	—	992	—	992
Change in ownership interests of subsidiaries	*28(c)*	—	—	(75)	—	—	(75)	(9)	(84)
Balance as at December 31, 2022		1,431	11,399	956	4,104	110	16,569	1,089	17,658
Net income		**—**	**—**	**—**	**841**	**—**	**841**	**26**	**867**
Other comprehensive income (loss)	*11*	**—**	**—**	**—**	**1**	**(154)**	**(153)**	**(25)**	**(178)**
Dividends	*13*	**—**	**—**	**—**	**(2,111)**	**—**	**(2,111)**	**—**	**(2,111)**
Dividends reinvested and optional cash payments	*13(b), 14(c)*	**30**	**749**	**—**	**—**	**—**	**749**	**—**	**749**
Equity accounted share-based compensation	*14(b)*	**4**	**99**	**5**	**—**	**—**	**104**	**—**	**104**
Issue of Common Shares in business combination	*18(b)*	**1**	**23**	**—**	**—**	**—**	**23**	**—**	**23**
Change in ownership interests of subsidiaries	*25, 28(c)*	**2**	**54**	**36**	**—**	**—**	**90**	**100**	**190**
Balance as at December 31, 2023		**1,468**	**$ 12,324**	**$ 997**	**$ 2,835**	**$ (44)**	**$ 16,112**	**$ 1,190**	**$ 17,302**

The accompanying notes are an integral part of these consolidated financial statements.

consolidated statements of cash flows

Years ended December 31 (millions)	*Note*	**2023**	2022
OPERATING ACTIVITIES			
Net income		**$ 867**	$ 1,718
Adjustments to reconcile net income to cash provided by operating activities:			
Depreciation and amortization		**4,069**	3,452
Deferred income taxes	*10*	**(140)**	31
Share-based compensation expense, net	*14(a)*	**117**	122
Net employee defined benefit plans expense	*15(a)*	**72**	101
Employer contributions to employee defined benefit plans	*15(a)*	**(28)**	(44)
Non-current contract assets		**17**	(21)
Non-current unbilled customer finance receivables	*20*	**(66)**	(26)
Unrealized changes in virtual power purchase agreements forward element	*9*	**—**	(193)
Loss from equity accounted investments	*7, 21*	**26**	7
Other		**(109)**	(143)
Net change in non-cash operating working capital	*31(a)*	**(326)**	(193)
Cash provided by operating activities		**4,499**	4,811
INVESTING ACTIVITIES			
Cash payments for capital assets, excluding spectrum licences	*31(a)*	**(3,182)**	(3,647)
Cash payments for spectrum licences	*18(a)*	**(29)**	—
Cash payments for acquisitions, net	*18(b)*	**(1,289)**	(1,547)
Advances to, and investment in, real estate joint ventures and associates	*21*	**(138)**	(21)
Real estate joint venture receipts	*21*	**10**	5
Proceeds on disposition		**12**	16
Investment in portfolio investments and other		**(132)**	(214)
Cash used by investing activities		**(4,748)**	(5,408)
FINANCING ACTIVITIES	*31(b)*		
Dividends paid to holders of Common Shares	*13(a)*	**(1,315)**	(1,188)
Issue (repayment) of short-term borrowings, net		**(2)**	(17)
Long-term debt issued	*26*	**9,223**	10,271
Redemptions and repayment of long-term debt	*26*	**(7,690)**	(8,049)
Shares of subsidiary purchased from non-controlling interests, net	*28(c)*	**(57)**	(123)
Other		**(20)**	(46)
Cash provided by financing activities		**139**	848
CASH POSITION			
Increase (decrease) in cash and temporary investments, net		**(110)**	251
Cash and temporary investments, net, beginning of period		**974**	723
Cash and temporary investments, net, end of period		**$ 864**	$ 974
SUPPLEMENTAL DISCLOSURE OF OPERATING CASH FLOWS			
Interest paid		**$ (1,196)**	$ (816)
Interest received		**$ 23**	$ 17
Income taxes paid, net		**$ (389)**	$ (519)

The accompanying notes are an integral part of these consolidated financial statements.

DECEMBER 31, 2023

TELUS Corporation is one of Canada's largest telecommunications companies, providing a wide range of technology solutions, which include: mobile and fixed voice and data telecommunications services and products; healthcare services, software and technology solutions (including employee and family assistance programs and benefits administration); agriculture and consumer goods services (software, data management and data analytics-driven smart-food chain and consumer goods technologies); and digitally-led customer experiences. Data services include: internet protocol; television; hosting, managed information technology and cloud-based services; and home and business security.

TELUS Corporation was incorporated under the *Company Act* (British Columbia) on October 26, 1998, under the name BCT.TELUS Communications Inc. (BCT). On January 31, 1999, pursuant to a court-approved plan of arrangement under the *Canada Business Corporations Act* among BCT, BC TELECOM Inc. and the former Alberta-based TELUS Corporation (TC), BCT acquired all of the shares of BC TELECOM Inc. and TC in exchange for Common Shares and Non-Voting Shares of BCT, and BC TELECOM Inc. was dissolved. On May 3, 2000, BCT changed its name to TELUS Corporation and in February 2005, TELUS Corporation transitioned under the *Business Corporations Act* (British Columbia), successor to the *Company Act* (British Columbia). TELUS Corporation maintains its registered office at Floor 7, 510 West Georgia Street, Vancouver, British Columbia, V6B 0M3.

The terms "TELUS", "we", "us", "our" or "ourselves" refer to TELUS Corporation and, where the context of the narrative permits or requires, its subsidiaries. Our principal subsidiaries are: TELUS Communications Inc., in which, as at December 31, 2023, we have a 100% equity interest; and TELUS International (Cda) Inc., in which, as at December 31, 2023, we have a 56.0% equity interest, as discussed further in *Note 28(c)*, and which completed its initial public offering in February 2021. Although it has not had any effect on our current determination of which of our subsidiaries are our principal subsidiaries, we also made a material business acquisition during the year ended December 31, 2023, as set out in *Note 18(b)*.

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1 summary of significant accounting policies

Our consolidated financial statements are expressed in Canadian dollars. The generally accepted accounting principles that we apply are International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS-IASB), and Canadian generally accepted accounting principles.

Generally accepted accounting principles require that we disclose the accounting policies we have selected in those instances in which we have been obligated to choose from among various accounting policies that comply with generally accepted accounting principles. In certain other instances, including those in which no selection among policies is allowed, we are also required to disclose how we have applied certain accounting policies. In the selection and application of accounting policies, we consider, among other factors, the fundamental qualitative characteristics of useful financial information, namely relevance and faithful representation. In our assessment, the accounting policy disclosures we are required to make are not all equally significant for us, as set out in the accompanying table; their relative significance for us will evolve over time, as we do.

These consolidated financial statements for each of the years ended December 31, 2023 and 2022, were authorized by our Board of Directors for issue on February 9, 2024.

	Accounting policy requiring a more significant choice among policies and/or a more significant application of judgment	
Accounting policy	Yes	No
General application		
(a) Consolidation		X
(b) Use of estimates and judgments	X	
(c) Financial instruments – recognition and measurement		X
(d) Hedge accounting		X
Results of operations focused		
(e) Revenue recognition	X	
(f) Depreciation, amortization and impairment	X	
(g) Translation of foreign currencies		X
(h) Income and other taxes	X	
(i) Share-based compensation		X
(j) Employee future benefit plans	X	
Financial position focused		
(k) Cash and temporary investments, net		X
(l) Inventories		X
(m) Property, plant and equipment; intangible assets	X	
(n) Investments		X

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

(a) Consolidation

Our consolidated financial statements include our accounts and the accounts of all of our subsidiaries, of which the principal ones are: TELUS Communications Inc. and TELUS International (Cda) Inc. TELUS Communications Inc. includes substantially all of our mobile and fixed operations, excluding the digitally-led customer experience and digital enablement transformation provided through the customer care and business services business of TELUS International (Cda) Inc.

Our financing arrangements and those of our wholly owned subsidiaries do not impose restrictions on inter-corporate dividends.

On a continuing basis, we review our corporate organization and effect changes as appropriate so as to enhance the value of TELUS Corporation. This process can, and does, affect which of our subsidiaries are considered principal subsidiaries at any particular point in time.

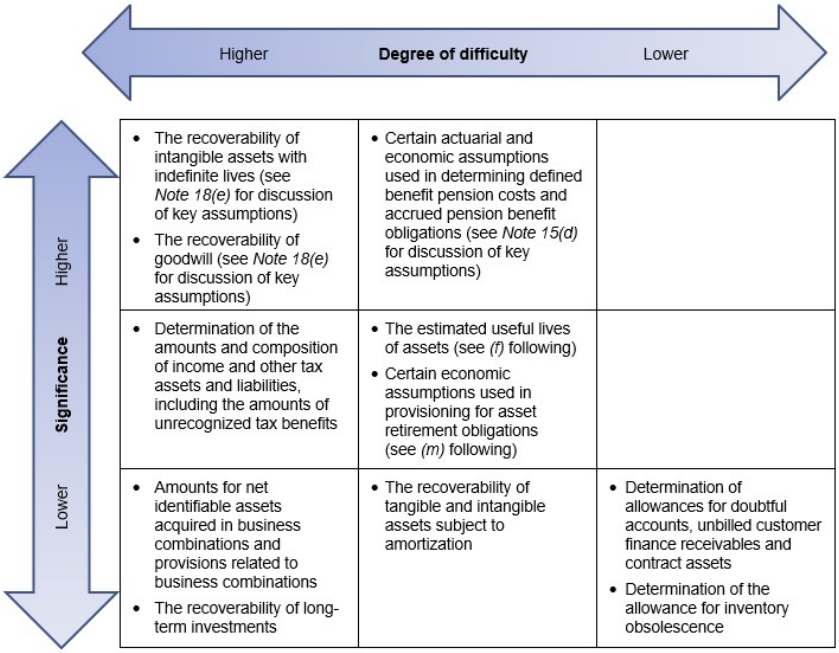
(b) Use of estimates and judgments

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates, assumptions and judgments that affect: the reported amounts of assets and liabilities at the date of the financial statements; the disclosure of contingent assets and liabilities at the date of the financial statements; and the reported amounts and classification of revenue and expense during the reporting period. Actual results could differ from those estimates.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

Estimates

Examples of the significant estimates and assumptions that we make, and their relative significance and degree of difficulty, are set out in the graphic below.



Judgements

Examples of our significant judgments, apart from those involving estimation, include the following:

- Assessments about whether line items are sufficiently material to warrant separate presentation in the primary financial statements and, if not, whether they are sufficiently material to warrant separate presentation in the notes to the financial statements. In the normal course, we make changes to our assessments regarding materiality for presentation so that they reflect current economic conditions. Due consideration is given to the view that it is reasonable to expect differing opinions of what is, and is not, material.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

- In respect of revenue-generating transactions, we must make judgments that affect the timing of the recognition of revenue, as set out following:
  - We have millions of multi-year contracts with our customers and we must make judgments about when we have satisfied our performance obligations to our customers, either over a period of time or at a point in time. Service revenues are recognized based on customers' access to, or usage of, our telecommunications infrastructure; we believe this method faithfully depicts the transfer of the services, and thus the revenues are recognized as the services are made available and/or rendered. We consider our performance obligations arising from the sale of equipment to have been satisfied when the equipment has been delivered to, and accepted by, the end-user customers (see *(e)* following).
  - Principally in the context of revenue-generating transactions involving mobile handsets, we must make judgments as to whether third-party re-sellers that deliver equipment to our customers are acting in the transactions as principals or as our agents. Upon due consideration of the relevant indicators, we have concluded that considering the re-sellers to be acting, solely for accounting purposes, as our agents is more representative of the economic substance of the transactions, as we are the primary obligor to the end-user customers. The effect of this judgment is that no equipment revenue is recognized upon the transfer of inventory to third-party re-sellers.
  - We compensate third-party re-sellers and our employees for generating revenues, and we must make judgments as to whether such sales-based compensation amounts are costs incurred to obtain contracts with customers that should be capitalized (see *Note 20*). We believe that compensation amounts tangentially attributable to obtaining a contract with a customer, because the amount of such compensation could be affected in ways other than by simply obtaining that contract, should be expensed as incurred; compensation amounts directly attributable to obtaining a contract with a customer should be capitalized and subsequently amortized on a systematic basis, consistent with the satisfaction of our associated performance obligations.

    We must also exercise judgment in the capitalization of costs incurred to fulfill revenue-generating contracts with customers. Such fulfilment costs are those incurred to set up, activate or otherwise implement services involving access to, or usage of, our telecommunications infrastructure that would not otherwise be capitalized as property, plant, equipment and/or intangible assets (see *Note 20*).

- The decision to depreciate and amortize any property, plant, equipment (including right-of-use lease assets) and intangible assets that are subject to amortization on a straight-line basis, as we believe that this method reflects the consumption of resources related to the economic lifespan of those assets more faithfully than an accelerated method and is more representative of the economic substance of the underlying use of those assets.
- The preparation of financial statements in accordance with generally accepted accounting principles requires management to make judgments which affect the financial statement disclosure of information regularly reviewed by our chief operating decision-maker that is used to make resource allocation decisions and to assess performance (segment information, *Note 5*).

  A significant judgment we have historically made is the distinction between the operations and cash flows of our business units (which extends to allocations of both direct and indirect expenses and capital expenditures). It is often difficult and impractical to objectively and clearly distinguish between the operations and cash flows of our business units, and the assets from which those cash flows arise. This impracticality is evidence of the interdependence of our business units. As our business continues to evolve, new cash-generating units may also develop.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

- The view that our spectrum licences granted by Innovation, Science and Economic Development Canada (including spectrum licences that have been subordinated to us) will likely be renewed; that we intend to renew them; that we believe we have the financial and operational ability to renew them; and thus, that they have indefinite lives, as discussed further in *Note 18(e)*.
- In connection with the annual impairment testing of intangible assets with indefinite lives and goodwill, there may be instances in which we must exercise judgment in allocating our net assets (including shared corporate and administrative assets) to our cash-generating units when determining their carrying amounts.
- In respect of claims and lawsuits, as discussed further in *Note 29(a)*, the determination of whether an item is a contingent liability or whether an outflow of resources is probable and thus is to be accounted for as a provision.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

(c) Financial instruments – recognition and measurement

In respect of the recognition and measurement of financial instruments, we have adopted the following policies:

- Regular-way purchases or sales of financial assets or financial liabilities (purchases or sales that require actual delivery of financial assets or financial liabilities) are recognized on the settlement date. We have selected this method, as the benefits of using the trade date method were not expected to exceed the costs of selecting and implementing that method.
- Transaction costs, other than in respect of items held for trading, are added to the initial fair value of the acquired financial asset or financial liability. We have selected this method, as we believe that it results in a better matching of the transaction costs with the periods in which we benefit from those costs.
- A contract to receive renewable energy credits and the associated virtual power purchase agreement (which we enter into as part of our commitment to reduce our carbon footprint) are distinct units of account. We have selected this method, as we believe the receipt of the renewable energy credits is an executory contract and the virtual power purchase agreement meets the definition of a derivative.

(d) Hedge accounting

General

We apply hedge accounting to the financial instruments used to establish designated currency hedging relationships for certain U.S. dollar-denominated future purchase commitments and debt repayments, as set out in *Note 4(a)* and *(d)*.

Hedge accounting

The purpose of hedge accounting, in respect of our designated hedging relationships, is to ensure that counterbalancing gains and losses are recognized in the same periods. We have chosen to apply hedge accounting, as we believe that it more faithfully depicts the economic substance of the underlying transactions.

In order to apply hedge accounting, there must be a high correlation (indicating effectiveness) in the offsetting changes in the risk-associated values of the financial instruments (the hedging items) used to establish the designated hedging relationships and all, or a part, of the asset, liability or transaction having an identified risk exposure that we have taken steps to modify (the hedged items). We assess the anticipated effectiveness of designated hedging relationships at inception and their actual effectiveness for each reporting period thereafter. We consider a designated hedging relationship to be effective if the following critical terms match between the hedging item and the hedged item: the notional amount of the hedging item and the principal amount of the hedged item; maturity dates; payment dates; and interest rate index (if, and as, applicable). As set out in *Note 4(i)*, any ineffectiveness, such as would result from a difference between the notional amount of the hedging item and the principal amount of the hedged item, or from a previously effective designated hedging relationship becoming ineffective, is reflected in the Consolidated statements of income and other comprehensive income as Financing costs if in respect of long-term debt and as Goods and services purchased if in respect of U.S. dollar-denominated future purchase commitments.

Hedging assets and liabilities

In the application of hedge accounting, an amount (the hedge value) is recorded in the Consolidated statements of financial position in respect of the fair value of the hedging items. The net difference, if any, between the amounts recognized in the determination of net income and the amounts necessary to reflect the fair value of the designated cash flow hedging items recorded in the Consolidated statements of financial position is recognized as a component of Other comprehensive income, as set out in *Note 11*.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

(e) Revenue recognition

General

We earn the majority of our TELUS technology solutions service revenues from access to, and usage of, our telecommunications infrastructure, including:

- Mobile network (voice and data);
- Fixed data services (which include: internet protocol; television; hosting, managed information technology and cloud-based services; and home and business security);
- Fixed voice services; and
- Health services.

The majority of the balance of our TELUS technology solutions revenues (mobile equipment and other service; fixed equipment and other service; agriculture and consumer goods services (which include: software, data management and data analytics-driven smart-food chain and consumer goods technologies)) arises from providing services and products facilitating access to, and usage of, telecommunications infrastructure. Service revenues from our digitally-led customer experiences – TELUS International segment arise from the provision of digital customer experience solutions, including artificial intelligence and content management solutions.

We offer complete and integrated solutions to meet our customers' needs. These solutions may involve deliveries of multiple services and products (our performance obligations) that occur at different points in time and/or over different periods of time; as referred to in *(b)*, this is a significant judgment for us. As required, the performance obligations of these multiple-element arrangements are identified and the transaction price for the entire multiple-element arrangement is determined and allocated among the performance obligations based upon our relative stand-alone selling prices for each of them; our relevant revenue recognition policies are then applied, so that revenue is recognized when, or as, we satisfy the performance obligations. To the extent that variable consideration is included in determining the minimum transaction price, it is constrained to the "minimum spend" amount required in a contract with a customer. Service revenues arising from contracts with customers typically have variable consideration, because customers have the ongoing ability to both add and remove features and services, and because customer usage of our telecommunications infrastructure may exceed the base amounts provided for in their contracts.

For the purposes of IFRS 15, *Revenue from Contracts with Customers*, our contracts with customers are not considered to have a significant financing component. With the exception of both equipment-related upfront payments that may be required under the terms of contracts with customers and in-store "cash and carry" sales of equipment and accessories, payments are typically due 30 days from the billing date. Billings are typically rendered on a monthly basis.

Multiple contracts with a single customer are normally accounted for as separate arrangements. When we enter into multiple contracts with a customer in a short period of time, the contracts are reviewed as a group to ensure that, as with multiple-element arrangements, their relative transaction prices are appropriate.

Lease accounting is applied to an accounting unit if it conveys to a customer the right to use a specific asset but does not convey the risks and/or benefits of ownership.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

Our revenues are recorded net of any value-added and/or sales taxes billed to the customer concurrent with a revenue-generating transaction.

We use the following revenue accounting practical expedients provided for in IFRS 15, *Revenue from Contracts with Customers*:

- No adjustment of the contracted amount of consideration for the effects of financing components when, at the inception of a contract, we expect that the effect of the financing component is not significant at the individual contract level.
- No deferral of contract acquisition costs when the amortization period for such costs would be one year or less.
- When estimating minimum transaction prices allocated to any remaining unfulfilled, or partially unfulfilled, performance obligations, exclusion of amounts arising from contracts originally expected to have a duration of one year or less, as well as amounts arising from contracts under which we may recognize and bill revenue in an amount that corresponds directly with our completed performance obligations.

Contract assets

Many of our multiple-element arrangements arise from bundling the sale of equipment (*e.g.* a mobile handset) with a contracted service period. Although the customer receives the equipment at contract inception and the revenue from the associated completed performance obligation is recognized at that time, the customer's payment for the equipment will effectively be received rateably over the contracted service period to the extent it is not received as a lump-sum amount at contract inception. The difference between the equipment revenue recognized and the associated amount cumulatively billed to the customer is recognized on the Consolidated statements of financial position as a contract asset and/or an unbilled customer finance receivable, depending upon the form of the contract.

Contract assets may also arise when we give consideration to a customer. When we receive no identifiable, separable benefit for consideration given to a customer, the amount of the consideration is recognized as a reduction of revenue rather than as an expense. Such amounts are included in the determination of transaction prices for allocation purposes in multiple-element arrangements.

- Some forms of consideration given to a customer, effectively at contract inception, such as rebates (including prepaid non-bank cards) and/or equipment, are considered to be performance obligations in a multiple-element arrangement. Although the performance obligation is satisfied at contract inception, the customer's payment associated with the performance obligation will effectively be received rateably over the associated contracted service period. The difference between the revenue arising from the satisfied performance obligation and the associated amount cumulatively billed to the customer is recognized on the Consolidated statements of financial position as a contract asset.
- Other forms of consideration given to a customer, either at contract inception or over a period of time, such as discounts (including prepaid bank cards), may result in us receiving no identifiable, separable benefit and thus are not considered performance obligations. Such consideration is recognized as a reduction of revenue rateably over the term of the contract. The difference between the consideration provided and the associated amount recognized as a reduction of revenue is recognized on the Consolidated statements of financial position as a contract asset.

Contract liabilities

Advance billings are recorded when billing occurs prior to our provision of the associated services; such advance billings are recognized as revenue in the period in which the services and/or equipment are provided (see *Note 24*). Similarly, and as appropriate, upfront customer activation and connection fees are deferred and recognized over the average expected term of the customer relationship.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

Costs of contract acquisition and contract fulfilment

Costs of contract acquisition (typically commissions) and costs of contract fulfilment are capitalized and recognized as an expense, generally over the life of the contract on a systematic and rational basis consistent with the pattern of the transfer of goods or services to which the contract asset relates. The amortization of such costs is included in the Consolidated statements of income and other comprehensive income as a component of Goods and services purchased, with the exception of amounts paid to our employees, which are included as Employee benefits expense.

The total cost of mobile equipment sold to customers and advertising and promotion costs related to initial customer acquisition are expensed as incurred; the cost of equipment we own that is situated at customers' premises and associated installation costs are capitalized as incurred. Costs of advertising production, advertising airtime and advertising space are expensed as incurred.

Voice and data

We recognize revenues on an accrual basis and include an estimate of revenues earned but unbilled. Mobile and fixed service revenues are recognized based upon access to, and usage of, our telecommunications infrastructure and upon contract fees.

Advance billings are recorded when billing occurs prior to our provision of the associated services; such advance billings are recognized as revenue in the period in which the services are provided. Similarly, and as appropriate, upfront customer activation and connection fees are deferred and recognized over the average expected term of the customer relationship.

We use the liability method of accounting for the amounts of our quality of service rate rebates that arise from the jurisdiction of the Canadian Radio-television and Telecommunications Commission (CRTC).

Other and mobile equipment

We recognize product revenues, including amounts related to mobile handsets sold to re-sellers and customer premises equipment, when the products are both delivered to, and accepted by, the end-user customers, irrespective of which supply channel delivers the product. With respect to mobile handsets sold to re-sellers, we consider ourselves to be the principal and primary obligor to the end-user customers. Revenues from operating leases of equipment are recognized on a systematic and rational basis (normally a straight-line basis) over the term of the lease. We recognize revenues that arise from employee and family assistance programs and from software solutions (including benefits administration) in the accounting period in which they are provided.

We recognize revenues that arise from our provision of digital customer experience solutions, including artificial intelligence and content management solutions, in the accounting period in which they are provided, typically on a per-productive hour or per-transaction basis.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

(f) Depreciation, amortization and impairment

Depreciation and amortization

Property, plant and equipment (including right-of-use lease assets) are depreciated on a straight-line basis over their estimated useful lives (lease terms for right-of-use lease assets), as determined by a continuing program of asset life studies. Depreciation includes amortization of leasehold improvements, which are normally amortized over the lesser of their expected average service lives or the terms of the associated leases. Intangible assets with finite lives (intangible assets subject to amortization) are amortized on a straight-line basis over their estimated useful lives, which are reviewed at least annually and adjusted as appropriate. As referred to in *(b)*, the use of a straight-line basis of depreciation and amortization is a significant judgment for us.

Estimated useful lives for the majority of our property, plant and equipment (including right-of-use lease assets) and intangible assets subject to depreciation and amortization are as follows:

	Estimated useful lives
Property, plant and equipment (including right-of-use lease assets) subject to depreciation	
Network assets	
Outside plant	17 to 40 years
Inside plant	4 to 25 years
Mobile site equipment	5 to 7 years
Real estate right-of-use lease assets	5 to 20 years
Balance of depreciable property, plant and equipment and right-of-use lease assets	3 to 40 years
Intangible assets subject to amortization	
Customer contracts and related customer relationships	4 to 15 years
Fixed subscriber base	25 years
Software	3 to 10 years
Access to rights-of-way, crowdsource assets and other	5 to 30 years

Impairment – general

Impairment testing compares the carrying values of the assets or cash-generating units being tested with their recoverable amounts (the recoverable amount being the greater of an asset's or a cash-generating unit's value in use or its fair value less costs of disposal); as referred to in *(b)*, this is a significant estimate for us. Impairment losses are immediately recognized to the extent that the carrying value of an asset or a cash-generating unit exceeds its recoverable amount. Should the recoverable amounts for impaired assets or cash-generating units subsequently increase, the impairment losses previously recognized (other than in respect of goodwill) may be reversed to the extent that the reversal is not a result of "unwinding of the discount" and that the resulting carrying values do not exceed the carrying values which would have been the result if no impairment losses had been recognized previously.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

Impairment – property, plant and equipment; intangible assets subject to amortization

The continuing program of asset life studies considers such factors as the timing of technological obsolescence, competitive pressures, future infrastructure utilization plans, and climate; these considerations could also indicate that the carrying value of an asset may not be recoverable, in which case an impairment loss is recognized.

Impairment – intangible assets with indefinite lives; goodwill

The carrying values of intangible assets with indefinite lives and goodwill are periodically tested for impairment. The frequency of impairment testing is generally the reciprocal of the stability of any relevant events and circumstances, but intangible assets with indefinite lives and goodwill must, at a minimum, be tested annually; we have selected December as the time of our annual test.

We assess our intangible assets with indefinite lives by comparing the recoverable amounts of our cash-generating units to their carrying values (including the intangible assets with indefinite lives allocated to a cash-generating unit, but excluding any goodwill allocated to a cash-generating unit). To the extent that the carrying value of a cash-generating unit (including the intangible assets with indefinite lives allocated to the cash-generating unit, but excluding any goodwill allocated to the cash-generating unit) exceeds its recoverable amount, the excess amount would be recorded as a reduction of the carrying value of intangible assets with indefinite lives.

Subsequent to assessing intangible assets with indefinite lives, we assess goodwill by comparing the recoverable amounts of our cash-generating units (or group of cash-generating units) to their carrying values (including the intangible assets with indefinite lives and any goodwill allocated to a cash-generating unit or group of cash-generating units). To the extent that the carrying value of a cash-generating unit (including the intangible assets with indefinite lives and the goodwill allocated to the cash-generating unit) exceeds its recoverable amount, the excess amount would first be recorded as a reduction of the carrying value of goodwill and any remainder would be recorded as a reduction of the carrying values of the assets of the cash-generating unit on a pro-rated basis.

(g) Translation of foreign currencies

Trade transactions completed in foreign currencies are translated into Canadian dollars at the rates of exchange prevailing at the time of the transactions. Monetary assets and liabilities denominated in foreign currencies are translated into Canadian dollars at the rate of exchange in effect at the statement of financial position date, with any resulting gain or loss recorded in the Consolidated statements of income and other comprehensive income as a component of Financing costs, as set out in *Note 9*. Hedge accounting is applied in specific instances, as discussed further in *(d)* preceding.

Certain of our subsidiaries and associates do not have the Canadian dollar as their functional currency. Foreign exchange gains and losses arising from translation of the accounts of these subsidiaries and associates into Canadian dollars are reported as a component of other comprehensive income, as set out in *Note 11*.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

(h) Income and other taxes

We follow the liability method of accounting for income taxes; as referred to in *(b)*, this is a significant estimate for us. Under this method, current income taxes are recognized for the estimated income taxes payable for the current year. Deferred income tax assets and liabilities are recognized for temporary differences between the tax and accounting bases of assets and liabilities, and also for any benefits of losses and Investment Tax Credits available to be carried forward to future years for tax purposes that are more likely than not to be realized. The amounts recognized in respect of deferred income tax assets and liabilities are based upon the expected timing of the reversal of temporary differences or the usage of tax losses and the application of the substantively enacted tax rates at the time of reversal or usage.

We account for any changes in substantively enacted income tax rates affecting deferred income tax assets and liabilities in full in the period in which the changes are substantively enacted. We account for changes in the estimates of tax balances for prior years as estimate revisions in the period in which changes in the estimates arise; we have selected this approach, as its emphasis on the statement of financial position is more consistent with the liability method of accounting for income taxes.

Our operations are complex and the related domestic and foreign tax interpretations, regulations, legislation and jurisprudence are continually changing. As a result, there are usually some tax matters in question that result in uncertain tax positions. We recognize the income tax benefit of an uncertain tax position only when it is more likely than not that the ultimate determination of the tax treatment of the position will result in that benefit being realized; however, this does not mean that tax authorities cannot challenge these positions. We accrue an amount for interest charges on current tax liabilities that have not been funded, which would include interest and penalties arising from uncertain tax positions. We include such charges in the Consolidated statements of income and other comprehensive income as a component of Financing costs.

Our research and development activities may be eligible to earn Investment Tax Credits, for which the determination of eligibility is a complex matter. We recognize Investment Tax Credits only when there is reasonable assurance that the ultimate determination of the eligibility of our research and development activities will result in the Investment Tax Credits being received, at which time they are accounted for using the cost reduction method, whereby such credits are deducted from the expenditures or assets to which they relate, as set out in *Note 10(c)*.

(i) Share-based compensation

General

When share-based compensation vests in its entirety at one future point in time (cliff-vesting), we recognize the expense on a straight-line basis over the vesting period. When share-based compensation vests in tranches (graded-vesting), we recognize the expense using the accelerated attribution method. An estimate of forfeitures during the vesting period is made at the date of grant of such share-based compensation; this estimate is adjusted to reflect actual experience.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

Restricted share units

In respect of restricted share units with neither an equity settlement feature nor market performance conditions, as set out in *Note 14(b)*, we accrue a liability equal to the product of the number of vesting restricted share units multiplied by the fair market value of the corresponding Common Shares at the end of the reporting period. Similarly, we accrue a liability for the notional subset of our restricted share units without an equity settlement feature and with market performance conditions, using a fair value determined from a Monte Carlo simulation. Restricted share units that have an equity settlement feature are accounted for as equity instruments. The expense for restricted share units that do not ultimately vest is reversed against the expense that was previously recorded in their respect.

Share option awards

A fair value for share option awards is determined at the date of grant and is recognized in the financial statements. Proceeds from the exercise of share option awards are credited to share capital, as are the recognized grant-date fair values of the share option awards exercised.

Share option awards that have a net-equity settlement feature, as set out in *Note 14(d)*, are accounted for as equity instruments. We have selected the equity instrument fair value method of accounting for the net-equity settlement feature, as it is consistent with the accounting treatment applied to the associated share option awards.

(j) Employee future benefit plans

Defined benefit plans

We accrue amounts for our obligations under employee defined benefit plans and the related costs, net of plan assets. The cost of pensions and other retirement benefits earned by employees is actuarially determined using the accrued benefit method pro-rated on service and management's best estimates of both salary escalation and the retirement ages of employees. In the determination of net income, net interest for each plan, which is the product of the plan's surplus (deficit) multiplied by the discount rate, is included as a component of Financing costs, as set out in *Note 9*.

An amount reflecting the effect of differences between the discount rate and the actual rate of return on plan assets is included as a component of employee defined benefit plan re-measurements within Other comprehensive income, as set out in *Note 11* and *Note 15*. We determine the maximum economic benefit available from the plans' assets on the basis of reductions in future contributions to the plans.

On an annual basis, at a minimum, the defined benefit plan key assumptions are assessed and revised as appropriate; as referred to in *(b)*, these are significant estimates for us.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

Defined contribution plans

We use defined contribution accounting for the Telecommunication Workers Pension Plan and the British Columbia Public Service Pension Plan, which cover certain of our employees and provide defined benefits to their members. In the absence of any regulations governing the calculation of the share of the underlying financial position and plan performance attributable to each employer-participant, and in the absence of contractual agreements between the plans and the employer-participants related to the financing of any shortfall (or distribution of any surplus), we account for these plans as defined contribution plans, in accordance with International Accounting Standard 19, *Employee Benefits*.

(k) Cash and temporary investments, net

Cash and temporary investments, which may include investments in money market instruments that are purchased three months or less from maturity, are presented net of outstanding items, including cheques written but not cleared by the related banks as at the statement of financial position date. Cash and temporary investments, net, is classified as a liability in the statement of financial position when the total amount of all cheques written but not cleared by the related banks exceeds the amount of cash and temporary investments. When cash and temporary investments, net, is classified as a liability, this may also include overdraft amounts drawn on our bilateral bank facilities, which revolve daily and are discussed further in *Note 22*.

(l) Inventories

Our inventories primarily consist of mobile handsets, parts and accessories totalling $369 million as at December 31, 2023 (2022 – $414 million), and communications equipment held for resale. Inventories are valued at the lower of cost and net realizable value, with cost being determined on an average cost basis. Costs of goods sold for the year ended December 31, 2023, totalled $2.4 billion (2022 – $2.3 billion).

(m) Property, plant and equipment; intangible assets

General

Property, plant and equipment and intangible assets are recorded at historical cost, which for self-constructed property, plant and equipment includes materials, direct labour and applicable overhead costs. For internally developed internal-use software, the historical cost recorded includes materials, direct labour and direct labour-related costs. Where property, plant and equipment construction projects are of sufficient size and duration, an amount is capitalized for the cost of funds used to finance construction, as set out in *Note 9*. The rate for calculating the capitalized financing cost is based on the weighted average cost of borrowing that we experience during the reporting period.

When we sell property, plant and/or equipment, the net book value is netted against the sale proceeds and the difference, as set out in *Note 7*, is included in the Consolidated statements of income and other comprehensive income as a component of Other income.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

Asset retirement obligations

Provisions for liabilities, as set out in *Note 25*, are recognized for statutory, contractual or legal obligations, normally when incurred, associated with the retirement of property, plant and equipment (primarily certain items of outside plant and mobile site equipment) when those obligations result from the acquisition, construction, development and/or normal operation of the assets; as referred to in *(b)*, this is a significant estimate for us. The obligations are measured initially at fair value, which is determined using present value methodology, and the resulting costs are capitalized as a part of the carrying value of the related asset. In subsequent periods, the provisions for these liabilities are adjusted for the accretion of discount, for any changes in the market-based discount rate and for any changes in the amount or timing of the underlying future cash flows. The capitalized asset retirement cost is depreciated on the same basis as the related asset and the discount accretion, as set out in *Note 9*, is included in the Consolidated statements of income and other comprehensive income as a component of Financing costs.

(n) Investments

We account for our investments in companies over which we have significant influence, as discussed further in *Note 21*, using the equity method of accounting, whereby the investments are initially recorded at cost and subsequently adjusted to recognize our share of earnings or losses of the investee companies and any earnings distributions received. The excess of the cost of an equity investment over its underlying book value at the initial date of investment, except for goodwill, is amortized over the estimated useful lives of the underlying assets to which the excess cost is attributed; subsequent investments in associates do not attribute excess cost.

Similarly, we account for our interests in the real estate joint ventures, as discussed further in *Note 21*, using the equity method of accounting. Unrealized gains and losses resulting from transactions with (including contributions to) the real estate joint ventures are deferred in proportion to our remaining interest in the real estate joint ventures.

We account for our other long-term investments at their fair values unless they are investment securities that do not have either quoted market prices in an active market or other clear and objective evidence of fair value. When we do not account for our other long-term investments at their fair values, we use the cost basis of accounting, whereby the investments are initially recorded at cost, and earnings from those investments are recognized only to the extent received or receivable. When there is a significant or prolonged decline in the value of an investment that is classified as one of our other long-term investments, its carrying value is adjusted to its estimated fair value.

Denotes accounting policy requiring, for us, a more significant choice among accounting policies and/or a more significant application of judgment.

2 accounting policy developments

(a) Initial application of standards, interpretations and amendments to standards and interpretations in the reporting period

- In February 2021, the International Accounting Standards Board issued narrow-scope amendments to IAS 1, *Presentation of Financial Statements*, IFRS Practice Statement 2, *Making Materiality Judgements*, and IAS 8*, Accounting Policies, Changes in Accounting Estimates and Errors*. The amendments are effective for annual periods beginning on or after January 1, 2023, although earlier application was permitted. The amendments require the disclosure of material accounting policy information rather than disclosing significant accounting policies, and clarify how to distinguish changes in accounting policies from changes in accounting estimates. Our financial disclosure is currently not materially affected by the application of the amendments.
- In May 2021, the International Accounting Standards Board issued targeted amendments to IAS 12, *Income Taxes*. The amendments are effective for annual periods beginning on or after January 1, 2023, although earlier application was permitted. With a view to reducing diversity in reporting, the amendments clarify that companies are required to recognize deferred taxes on transactions where both assets and liabilities are recognized, such as with leases and asset retirement (decommissioning) obligations. Our financial performance and disclosure are currently not materially affected by the application of the amendments.
- In May 2023, the International Accounting Standards Board issued *International Tax Reform – Pillar Two Model Rules (Amendments to IAS 12)*, which amended IAS 12, *Income Taxes*. The amendments provide, and we use, temporary relief from accounting for deferred income taxes arising from the Organisation for Economic Co-operation and Development's Pillar Two model rules (such rules ensuring that large multinational corporations would be subject to a minimum 15% income tax rate in every jurisdiction in which they operate). As different jurisdictions are expected to implement the OECD rules at different speeds and at different points in time, the amendments are intended to help ensure consistency within, and comparability across, financial statements. The amendments are effective for annual reporting periods beginning on or after January 1, 2023. We are currently assessing the impacts of the amended standard, but do not expect that our financial disclosure will be materially affected by the application of the amendments.

(b) Standards, interpretations and amendments to standards and interpretations in the reporting period not yet effective and not yet applied

- In May 2023, the International Accounting Standards Board issued *Supplier Finance Arrangements*, which amended IAS 7, *Statement of Cash Flows* and IFRS 7, *Financial Instruments: Disclosures*, and requires additional quantitative and qualitative disclosure about supplier finance arrangements. The amendments are effective for annual reporting periods beginning on or after January 1, 2024, although earlier application is permitted; comparative prior-period information is not required in the year of initial application. We are currently assessing the impacts of the amended standards, but do not expect that our financial disclosure, set out in *Note 23*, will be materially affected by the application of the amendments.

3 capital structure financial policies

General

Our objective when managing financial capital is to maintain a flexible capital structure that optimizes the cost and availability of capital at an acceptable level of risk. In our definition of financial capital, we include:

- Common equity (excluding accumulated other comprehensive income);
- Non-controlling interests;
- Long-term debt (including long-term credit facilities, commercial paper backstopped by long-term credit facilities and any hedging assets or liabilities associated with long-term debt items, net of amounts recognized in accumulated other comprehensive income);
- Cash and temporary investments;
- Short-term borrowings (including those arising from securitized receivables); and
- Other long-term debts (including those arising from securitized receivables).

We manage our financial capital structure and make adjustments to it in light of changes in economic conditions and the risk characteristics of our business. In order to maintain or adjust our financial capital structure, we may:

- Adjust the amount of dividends paid to holders of Common Shares;
- Purchase Common Shares for cancellation pursuant to normal course issuer bids;
- Issue new shares (including Common Shares and TELUS International (Cda) Inc. subordinate voting shares);
- Issue new debt, issue new debt to replace existing debt with different characteristics;
- Increase or decrease the amount of receivables sold to an arm's-length securitization trust; and/or
- Enter into a new arm's-length securitization trust to replace an existing arm's-length securitization trust with different characteristics.

During 2023, our financial objectives, which are reviewed annually, were unchanged from 2022. We believe that our financial objectives support our long-term strategy.

We monitor financial capital utilizing a number of measures, including: net debt to earnings before interest, income taxes, depreciation and amortization (EBITDA*) – excluding restructuring and other costs ratio; coverage ratios; and dividend payout ratios.

* EBITDA is not a standardized financial measure under IFRS-IASB and might not be comparable to similar measures disclosed by other issuers; we define EBITDA as operating revenues and other income less goods and services purchased and employee benefits expense. We report EBITDA because it is a key measure that management uses to evaluate the performance of our business, and it is also utilized to determine compliance with certain debt covenants.

Debt and coverage ratios

Net debt to EBITDA – excluding restructuring and other costs is calculated as net debt at the end of the period, divided by 12-month trailing EBITDA – excluding restructuring and other costs. Historically, this measure is substantially similar to the leverage ratio covenant in our credit facilities. Net debt and EBITDA – excluding restructuring and other costs are measures that do not have any standardized meanings prescribed by IFRS-IASB and are therefore unlikely to be comparable to similar measures presented by other issuers. The calculation of these measures is set out in the following table. Net debt is one component of a ratio used to determine compliance with certain debt covenants.

As at, or for the 12-month periods ended, December 31 ($ in millions)	Objective	**2023**	2022
Components of debt and coverage ratios			
Net debt [1]		**$ 26,494**	$ 24,152
EBITDA – excluding restructuring and other costs [2]		**$ 7,148**	$ 6,646
Net interest cost [3] (*Note 9*)		**$ 1,272**	$ 847
Debt ratio			
Net debt to EBITDA – excluding restructuring and other costs	2.20 – 2.70 [4]	**3.71**	3.63
Coverage ratios			
Earnings coverage [5]		**1.9**	3.6
EBITDA – excluding restructuring and other costs interest coverage [6]		**5.6**	7.8

1 Net debt and total managed capitalization are calculated as follows:

As at December 31	*Note*	**2023**	2022
Long-term debt	*26*	**$ 27,349**	$ 25,037
Debt issuance costs netted against long-term debt		**118**	118
Derivative (assets) liabilities used to manage interest rate and currency risks associated with U.S. dollar-denominated long-term debt, net		**13**	(80)
Accumulated other comprehensive income amounts arising from financial instruments used to manage interest rate and currency risks associated with U.S. dollar-denominated long-term debt – excluding tax effects		**(226)**	(53)
Cash and temporary investments, net		**(864)**	(974)
Short-term borrowings	*22*	**104**	104
Net debt		**26,494**	24,152
Common equity		**16,112**	16,569
Non-controlling interests		**1,190**	1,089
Less : accumulated other comprehensive income amounts included above in common equity and non-controlling interests		**46**	(133)
Total managed capitalization		**$ 43,842**	$ 41,677

2 EBITDA – excluding restructuring and other costs is calculated as follows:

Years ended December 31	*Note*	**2023**	2022
EBITDA	*5*	**$ 6,431**	$ 6,406
Restructuring and other costs	*16*	**717**	240
EBITDA – excluding restructuring and other costs		**$ 7,148**	$ 6,646

3 Net interest cost is defined as financing costs, excluding employee defined benefit plans net interest, unrealized changes in virtual power purchase agreements forward element, recoveries on long-term debt prepayment premium and repayment of debt, calculated on a 12-month trailing basis (expenses recorded for long-term debt prepayment premium, if any, are included in net interest cost) (see *Note 9*).

4 Our long-term objective range for this ratio is 2.20 – 2.70 times. The ratio as at December 31, 2023, is outside the long-term objective range. We may permit, and have permitted, this ratio to go outside the objective range (for long-term investment opportunities), but we will endeavour to return this ratio to within the objective range in the medium term (following the spectrum auctions in 2021 and 2023, and the spectrum auction upcoming in 2024), as we believe that this range supports our long-term strategy. We are in compliance with the leverage ratio covenant in our credit facilities, which states that we may not permit our net debt to operating cash flow ratio to exceed 4.25:1.00 (see *Note 26(d)*); the calculation of the debt ratio is substantially similar to the calculation of the leverage ratio covenant in our credit facilities.

5 Earnings coverage is defined in Canadian Securities Administrators National Instrument 41-101 as net income before borrowing costs and income tax expense, divided by borrowing costs (interest on long-term debt; interest on short-term borrowings and other; long-term debt prepayment premium), and adding back capitalized interest, all such amounts excluding those attributable to non-controlling interests.

6 EBITDA – excluding restructuring and other costs interest coverage is defined as EBITDA – excluding restructuring and other costs, divided by net interest cost. This measure is substantially similar to the coverage ratio covenant in our credit facilities.

Net debt to EBITDA – excluding restructuring and other costs was 3.71 times as at December 31, 2023, compared to 3.63 times one year earlier. The effect of the increase, primarily due to business acquisitions, in net debt levels (which were already elevated in the current and comparative periods due to our spectrum acquisitions) exceeded the effect of growth in EBITDA – excluding restructuring and other costs.

The earnings coverage ratio for the twelve-month period ended December 31, 2023, was 1.9 times, down from 3.6 times one year earlier. A decrease in income before borrowing costs and income taxes lowered the ratio by 0.9 and an increase in borrowing costs lowered the ratio by 0.8. The EBITDA – excluding restructuring and other costs interest coverage ratio for the twelve-month period ended December 31, 2023, was 5.6 times, down from 7.8 times one year earlier. Growth in EBITDA – excluding restructuring and other costs increased the ratio by 0.6 and an increase of $425 million in net interest costs decreased the ratio by 2.8.

TELUS Corporation Common Share dividend payout ratio

So as to be consistent with the way we manage our business, our TELUS Corporation Common Share dividend payout ratio is presented as a historical measure calculated as the sum of the dividends declared in the most recent four quarters for TELUS Corporation Common Shares, as recorded in the financial statements, net of dividend reinvestment plan effects (see *Note 13*), divided by the sum of free cash flow* amounts for the most recent four quarters for interim reporting periods (divided by annual free cash flow if the reported amount is in respect of a fiscal year). The historical measure for the twelve-month period ended December 31, 2023, is presented for illustrative purposes in evaluating our target guideline.

For the 12-month periods ended December 31	Objective	**2023**	2022
Determined using most comparable IFRS-IASB measures			
Ratio of TELUS Corporation Common Share dividends declared to cash provided by operating activities - less capital expenditures		**126 %**	142 %
Determined using management measures			
TELUS Corporation Common Share dividend payout ratio – net of dividend reinvestment plan effects	60%–75% [1]	**77 %**	95 %

1 Our objective range for the TELUS Corporation Common Share dividend payout ratio is 60%-75% of free cash flow on a prospective basis.

* Free cash flow is not a standardized financial measure under IFRS-IASB and might not be comparable to similar measures presented by other issuers; we define free cash flow as EBITDA (operating revenues and other income less goods and services purchased and employee benefits expense) excluding items that we consider to be of limited predictive value, including certain working capital changes (such as trade receivables and trade payables), proceeds from divested assets, and other sources and uses of cash, as found in the consolidated statements of cash flows. We have issued guidance on, and report, free cash flow because it is a key performance measure that management and investors use to evaluate the performance of our business.

For the 12-month periods ended December 31 (millions)	2023	2022
TELUS Corporation Common Share dividends declared	**$ 2,111**	$ 1,899
Amount of TELUS Corporation Common Share dividends declared reinvested in TELUS Corporation Common Shares	**(755)**	(686)
TELUS Corporation Common Share dividends declared - net of dividend reinvestment plan effects	**$ 1,356**	$ 1,213

Our calculation of free cash flow, and its reconciliation to cash provided by operating activities, is as follows:

For the 12-month periods ended December 31 (millions)	*Note*	2023	2022
EBITDA	*5*	**$ 6,431**	$ 6,406
Restructuring and other costs, net of disbursements		**206**	69
Effects of contract asset, acquisition and fulfilment and TELUS Easy Payment device financing		**(143)**	(95)
Effect of lease principal	*31(b)*	**(538)**	(495)
Items from the Consolidated statements of cash flows:			
Share-based compensation, net	*14*	**117**	122
Net employee defined benefit plans expense	*15*	**72**	101
Employer contributions to employee defined benefit plans		**(28)**	(44)
Loss from equity accounted investments and other		**26**	—
Interest paid		**(1,196)**	(816)
Interest received		**23**	17
Capital expenditures	*5*	**(2,822)**	(3,472)
Free cash flow before income taxes		**2,148**	1,793
Income taxes paid, net of refunds		**(389)**	(519)
Free cash flow		**1,759**	1,274
Add (deduct):			
Capital expenditures	*5*	**2,822**	3,472
Effect of lease principal		**538**	495
Net change in non-cash operating working capital not included in preceding line items and other individually immaterial items included in net income neither providing nor using cash		**(620)**	(430)
Cash provided by operating activities		**$ 4,499**	$ 4,811

4 financial instruments

(a) Risks – overview

Our financial instruments, their accounting classification and the nature of certain risks to which they may be exposed are set out in the following table.

		Risks				
				Market risks		
Financial instrument	Accounting classification	Credit	Liquidity	Currency	Interest rate	Other price
Measured at amortized cost						
Accounts receivable	AC [1]	X		X		
Contract assets	AC [1]	X				
Construction credit facilities advances to real estate joint venture	AC [1]				X	
Short-term borrowings	AC [1]		X	X	X	
Accounts payable	AC [1]		X	X		
Provisions (including restructuring accounts payable)	AC [1]		X	X		X
Long-term debt	AC [1]		X	X	X	
Measured at fair value						
Cash and temporary investments	FVTPL [2]	X		X	X	
Long-term investments (not subject to significant influence) [3]	FVTPL/FVOCI [3]			X		X
Foreign exchange derivatives [4]	FVTPL [2]	X	X	X		
Virtual power purchase agreements [4]	FVTPL [2]					X

1 For accounting recognition and measurement purposes, classified as amortized cost (AC).

2 For accounting recognition and measurement purposes, classified as fair value through net income (FVTPL). *Unrealized* changes in the fair values of financial instruments are included in net income unless the instrument is part of a cash flow hedging relationship. The effective portions of *unrealized* changes in the fair values of financial instruments held for hedging are included in other comprehensive income.

3 Long-term investments over which we do not have significant influence are measured at fair value if those fair values can be reliably measured. For accounting recognition and measurement purposes, on an investment-by-investment basis, long-term investments are classified as either fair value through net income or fair value through other comprehensive income (FVOCI).

4 Use of derivative financial instruments is subject to a policy which requires that no derivative transaction is to be entered into for the purpose of establishing a speculative or leveraged position (the corollary being that all derivative transactions are to be entered into for risk management purposes only) and sets criteria for the creditworthiness of the transaction counterparties.

Derivatives that are part of an established and documented cash flow hedging relationship are accounted for as held for hedging. We believe that classification as held for hedging results in a better matching of the change in the fair value of the derivative financial instrument with the risk exposure being hedged.

In respect of hedges of anticipated transactions, hedge gains/losses are included with the related expenditure and are expensed when the transaction is recognized in our results of operations. We have selected this method as we believe that it results in a better matching of the hedge gains/losses with the risk exposure being hedged.

Derivatives that are not part of a documented cash flow hedging relationship are accounted for as held for trading and thus are measured at fair value through net income.

Derivative financial instruments

We apply hedge accounting to financial instruments used to establish hedge accounting relationships for U.S. dollar-denominated transactions. We believe that our use of derivative financial instruments for hedging or arbitrage assists us in managing our financing costs and/or reducing the uncertainty associated with our financing or other business activities. Uncertainty associated with currency risk and other price risk is reduced through our use of foreign exchange derivatives that effectively swap floating currency exchange rates for fixed rates. When entering into derivative financial instrument contracts, we seek to align the cash flow timing of the hedging items with that of the hedged items. The effects of this risk management strategy and its application are set out in *(i)* following.

(b) Credit risk

Excluding credit risk, if any, arising from currency swaps settled on a gross basis, the best representation of our maximum exposure (excluding income tax effects) to credit risk, which is a worst-case scenario and does not reflect results we expect, is set out in the following table.

As at December 31 (millions)	**2023**	2022
Cash and temporary investments, net	**$ 864**	$ 974
Accounts receivable	**4,234**	3,887
Contract assets	**748**	761
Derivative assets	**215**	333
	$ 6,061	$ 5,955

Cash and temporary investments, net

Credit risk associated with cash and temporary investments is managed by ensuring that these financial assets are placed with: governments; major financial institutions that have been accorded strong investment grade ratings by a primary rating agency; and/or other creditworthy counterparties. An ongoing review evaluates changes in the status of counterparties.

Accounts receivable

Credit risk associated with accounts receivable is inherently managed by the size and diversity of our large customer base, which includes substantially all consumer and business sectors in Canada. We follow a program of credit evaluations of customers and limit the amount of credit extended when we deem it to be necessary. Accounts are considered to be past due (in default) when customers have failed to make the contractually required payments when due, which is generally within 30 days of the billing date. Any late payment charges are levied at an industry-based market rate or a negotiated rate on outstanding non-current customer account balances.

As at December 31 (millions)		**2023**			2022		
	Note	Gross	Allowance	Net [1]	Gross	Allowance	Net [1]
Customer accounts receivable, net of allowance for doubtful accounts							
Less than 30 days past billing date		**$ 1,077**	**$ (14)**	**$ 1,063**	$ 936	$ (11)	$ 925
30-60 days past billing date		**550**	**(14)**	**536**	400	(11)	389
61-90 days past billing date		**139**	**(17)**	**122**	185	(15)	170
More than 90 days past billing date		**193**	**(36)**	**157**	192	(33)	159
Unbilled customer finance receivables		**1,630**	**(36)**	**1,594**	1,509	(39)	1,470
		$ 3,589	**$ (117)**	**$ 3,472**	$ 3,222	$ (109)	$ 3,113
Current	*6(b)*	**$ 2,938**	**$ (103)**	**$ 2,835**	$ 2,636	$ (94)	$ 2,542
Non-current	*20*	**651**	**(14)**	**637**	586	(15)	571
		$ 3,589	**$ (117)**	**$ 3,472**	$ 3,222	$ (109)	$ 3,113

1 Net amounts represent customer accounts receivable for which an allowance had not been made as at the dates of the Consolidated statements of financial position (see *Note 6(b)*).

We maintain allowances for lifetime expected credit losses related to doubtful accounts. Current economic conditions (including forward-looking macroeconomic data), historical information (including credit agency reports, if available), reasons for the accounts being past due and the line of business from which the customer accounts receivable arose are all considered when determining whether to make allowances for past-due accounts. The same factors are considered when determining whether to write off amounts charged to the allowance for doubtful accounts against the customer accounts receivable. The doubtful accounts expense is calculated on a specific-identification basis for customer accounts receivable balances above a specific threshold and on a statistically derived allowance basis for the remainder. No customer accounts receivable are written off directly to the doubtful accounts expense.

The following table presents a summary of the activity related to our allowance for doubtful accounts.

Years ended December 31 (millions)	**2023**	2022
Balance, beginning of period	**$ 109**	$ 110
Additions (doubtful accounts expense)	**110**	82
Accounts written off [1] less than recoveries	**(109)**	(89)
Other	**7**	6
Balance, end of period	**$ 117**	$ 109

1 For the year ended December 31, 2023, accounts that were written off but were still subject to enforcement activity totalled $ 180 (2022 – $148).

Contract assets

Credit risk associated with contract assets is inherently managed by the size and diversity of our large customer base, which includes substantially all consumer and business sectors in Canada. We follow a program of credit evaluations of customers and limit the amount of credit extended when we deem it to be necessary.

We maintain allowances for lifetime expected credit losses related to contract assets. Current economic conditions, historical information (including credit agency reports, if available), and the line of business from which the contract asset arose are all considered when determining impairment allowances. The same factors are considered when determining whether to write off amounts charged to the impairment allowance for contract assets against contract assets.

As at December 31 (millions)	**2023**			2022		
	Gross	Allowance	Net *(Note 6(c))*	Gross	Allowance	Net *(Note 6(c))*
Contract assets, net of impairment allowance						
To be billed and thus reclassified to accounts receivable during:						
The 12-month period ending one year hence	**$ 616**	**$ (21)**	**$ 595**	$ 611	$ (23)	$ 588
The 12-month period ending two years hence	**259**	**(9)**	**250**	277	(11)	266
Thereafter	**54**	**(1)**	**53**	55	(1)	54
	$ 929	**$ (31)**	**$ 898**	$ 943	$ (35)	$ 908

Derivative assets (and derivative liabilities)

Counterparties to our material foreign exchange derivatives are major financial institutions that have been accorded investment grade ratings by a primary credit rating agency. The total dollar amount of credit exposure under contracts with any one financial institution is limited and counterparties' credit ratings are monitored. We do not give or receive collateral on swap agreements and hedging items due to our credit rating and those of our counterparties. While we are exposed to the risk of credit losses due to the potential non-performance of our counterparties, we consider this risk remote. Our derivative liabilities do not have credit risk-related contingent features.

(c) Liquidity risk

As a component of our capital structure financial policies, discussed further in *Note 3*, we manage liquidity risk by:

- maintaining a daily cash pooling process that enables us to manage our available liquidity and our liquidity requirements according to our actual needs;
- maintaining an agreement to sell trade receivables to an arm's-length securitization trust (*Note 22*), bilateral bank facilities (*Note 22*), a supply chain financing program (*Note 23*), a commercial paper program (*Note 26(c)*) and syndicated credit facilities (*Note 26(d),(f)*);
- maintaining in-effect shelf prospectuses;
- continuously monitoring forecast and actual cash flows; and
- managing maturity profiles of financial assets and financial liabilities.

Our debt maturities in future years are disclosed in *Note 26(i)*. As at December 31, 2023, unchanged from December 31, 2022, TELUS Corporation could offer an unlimited amount of securities in Canada, and US$3.5 billion of securities in the United States, qualified pursuant to a Canadian shelf prospectus that is in effect until September 2024. We believe that our investment grade credit ratings contribute to reasonable access to capital markets. TELUS International (Cda) Inc. has a Canadian shelf prospectus that is in effect until May 2024 under which an unlimited amount of debt or equity securities could be offered.

We closely match the contractual maturities of our derivative financial liabilities with those of the risk exposures they are being used to manage.

The expected maturities of our undiscounted financial liabilities do not differ significantly from the contractual maturities, other than as noted below. The contractual maturities of our undiscounted financial liabilities, including interest thereon (where applicable), are set out in the accompanying tables.

	Non-derivative				Derivative					
			Composite long-term debt							
As at December 31, 2023 (millions)	Non-interest bearing financial liabilities	Short-term borrowings [1]	Long-term debt, excluding leases [1] (*Note 26*)	Leases (*Note 26*)	Currency swap agreement amounts to be exchanged [2] (Receive)	Pay	Other	Currency swap agreement amounts to be exchanged (Receive)	Pay	Total
2024	$ 3,126	$ 111	$ 4,408	$ 685	$ (1,271)	$ 1,267	$ —	$ (572)	$ 578	$ 8,332
2025	164	—	2,027	547	(219)	207	1	—	—	2,727
2026	93	—	2,378	416	(215)	206	1	—	—	2,879
2027	152	—	2,383	331	(1,657)	1,653	1	—	—	2,863
2028	43	—	3,388	202	(567)	576	—	—	—	3,642
2029-2033	—	—	10,092	503	(1,702)	1,662	—	—	—	10,555
Thereafter	—	—	12,018	323	(2,778)	2,734	—	—	—	12,297
Total	$ 3,578	$ 111	$ 36,694	$ 3,007	$ (8,409)	$ 8,305	$ 3	$ (572)	$ 578	$ 43,295
Total (*Note 26(i)*)						$ 39,597				

1 Cash outflows in respect of interest payments on our short-term borrowings, commercial paper and amounts drawn under our credit facilities (if any) have been calculated based upon the interest rates in effect as at December 31, 2023.

2 The amounts included in undiscounted non-derivative long-term debt in respect of U.S. dollar-denominated long-term debt, and the corresponding amounts in the long-term debt currency swap receive column, have been determined based upon the currency exchange rates in effect as at December 31, 2023. The hedged U.S. dollar-denominated long-term debt contractual amounts at maturity, in effect, are reflected in the long-term debt currency swap pay column as gross cash flows are exchanged pursuant to the currency swap agreements.

	Non-derivative				Derivative				
			Composite long-term debt						
As at December 31, 2022 (millions)	Non-interest bearing financial liabilities	Short-term borrowings [1]	Long-term debt, excluding leases [1] (*Note 26*)	Leases (*Note 26*)	Currency swap agreement amounts to be exchanged [2] (Receive)	Pay	Currency swap agreement amounts to be exchanged (Receive)	Pay	Total
2023	$ 3,613	$ 9	$ 2,907	$ 596	$ (1,679)	$ 1,674	$ (669)	$ 648	$ 7,099
2024	254	105	3,126	537	(201)	193	—	—	4,014
2025	16	—	1,800	379	(599)	586	—	—	2,182
2026	12	—	2,154	273	(165)	162	—	—	2,436
2027	1	—	2,197	218	(1,644)	1,610	—	—	2,382
2028-2032	—	—	9,929	446	(1,785)	1,707	—	—	10,297
Thereafter	—	—	11,551	364	(2,921)	2,805	—	—	11,799
Total	$ 3,896	$ 114	$ 33,664	$ 2,813	$ (8,994)	$ 8,737	$ (669)	$ 648	$40,209
			Total			$ 36,220			

1 Cash outflows in respect of interest payments on our short-term borrowings, commercial paper and amounts drawn under our credit facilities (if any) have been calculated based upon the interest rates in effect as at December 31, 2022.

2 The amounts included in undiscounted non-derivative long-term debt in respect of U.S. dollar-denominated long-term debt, and the corresponding amounts in the long-term debt currency swap receive column, have been determined based upon the currency exchange rates in effect as at December 31, 2022. The hedged U.S. dollar-denominated long-term debt contractual amounts at maturity, in effect, are reflected in the long-term debt currency swap pay column as gross cash flows are exchanged pursuant to the currency swap agreements.

(d) Currency risk

Our functional currency is the Canadian dollar, but certain routine revenues and operating costs are denominated in U.S. dollars and certain inventory purchases and capital asset acquisitions are sourced internationally. The U.S. dollar is the only foreign currency to which we have significant exposure as at the statement of financial position date.

Our currency risk management includes the use of foreign currency forward contracts and currency options to fix the exchange rates on a varying percentage, typically in the range of 50% to 75%, of our domestic short-term U.S. dollar-denominated transactions and commitments and all U.S. dollar-denominated commercial paper. Other than in respect of U.S. dollar-denominated commercial paper, we designate only the spot element of these instruments as the hedging item, as the forward element is wholly immaterial; in respect of U.S. dollar-denominated commercial paper, we designate the forward rate.

As discussed further in *Note 26(b)* and *Note 26(f)*, we are also exposed to currency risk in that the fair values or future cash flows of our U.S. Dollar Notes and our TELUS International (Cda) Inc. credit facility U.S. dollar borrowings could fluctuate because of changes in foreign exchange rates. Currency hedging relationships have been established for the related semi-annual interest payments and the principal payment at maturity in respect of the U.S. Dollar Notes; we designate only the spot element of these instruments as the hedging item, as the forward element is wholly immaterial. As the functional currency of our TELUS International (Cda) Inc. subsidiary is the U.S. dollar, changes in foreign exchange rates affecting its borrowings are reflected as a foreign currency translation adjustment within other comprehensive income.

(e) Interest rate risk

Changes in market interest rates will cause fluctuations in the fair values or future cash flows of temporary investments, construction credit facility advances made to the real estate joint venture, short-term obligations, long-term debt and interest rate swap derivatives.

When we have temporary investments, they have short maturities and fixed interest rates and, as a result, their fair values will fluctuate with changes in market interest rates; absent monetization prior to maturity, the related future cash flows will not change due to changes in market interest rates.

If the balance of temporary investments or short-term investments includes dividend-paying equity instruments, we could be exposed to interest rate risk.

Due to the short-term nature of the applicable rates of interest charged, the fair value of the construction credit facility advances made to the real estate joint venture is not materially affected by changes in market interest rates; the associated cash flows representing interest payments will be affected until such advances are repaid.

As short-term obligations arising from bilateral bank facilities, which typically have variable interest rates, are rarely outstanding for periods that exceed one calendar week, interest rate risk associated with this item is not material.

Borrowings arising from the sales of trade receivables to an arm's-length securitization trust are fixed-rate debts. Due to the short maturities of these borrowings, interest rate risk associated with this item is not material.

All of our currently outstanding long-term debt, other than commercial paper and amounts drawn on our credit facilities (*Note 26(c)-(d), (f)*), is fixed-rate debt. The fair value of fixed-rate debt fluctuates with changes in market interest rates; absent early redemption, the related future cash flows will not change. Due to the short maturities of commercial paper, its fair value is not materially affected by changes in market interest rates, but the associated cash flows representing interest payments may be affected if the commercial paper is rolled over.

Amounts drawn on our short-term and long-term credit facilities will be affected by changes in market interest rates in a manner similar to commercial paper.

(f) Other price risks

Virtual power purchase agreements

We have entered into virtual power purchase agreements with renewable energy projects that develop and operate solar and wind power generating facilities as part of our commitment to reduce our carbon footprint. The fair value of the virtual power purchase agreement forward element and the associated future cash flows will vary depending upon actual and estimated changes in the electricity spot price, and the electrical power to be produced in the future under each agreement, referenced in the underlying cash-settled contracts for differences.

Long-term investments

We are exposed to equity price risk arising from investments classified as fair value through other comprehensive income. Such investments are held for strategic purposes rather than for trading.

(g) Market risks

Net income and other comprehensive income for the years ended December 31, 2023 and 2022, could have varied if the Canadian dollar: U.S. dollar exchange rate, the U.S. dollar: European euro exchange rate, market interest rates and virtual power purchase agreement forward element valuation varied by reasonably possible amounts from their actual statement of financial position date amounts.

The sensitivity analysis of our exposure to currency risk at the reporting date has been determined based upon a hypothetical change taking place at the relevant statement of financial position date. The U.S. dollar-denominated and European euro-denominated balances and the notional amounts of our derivative financial instruments as at the relevant statement of financial position dates have been used in the calculations.

The sensitivity analysis of our exposure to interest rate risk at the reporting date has been determined based upon a hypothetical change taking place at the beginning of the relevant fiscal year and being held constant through to the statement of financial position date. The principal and notional amounts as at the relevant statement of financial position dates have been used in the calculations.

The sensitivity analysis of our exposure to wind discount risk and solar premium risk at the reporting date has been determined based upon a hypothetical change taking place at the relevant statement of financial position date. The notional amounts of the virtual power purchase agreements as at the relevant statement of financial position dates have been used in the calculations.

Income tax expense, which is reflected net in the sensitivity analysis, was determined using the applicable statutory income tax rates for the reporting periods.

Years ended December 31 (increase (decrease) in millions)	Net income		Other comprehensive income		Comprehensive income	
	2023	2022	**2023**	2022	**2023**	2022
Reasonably possible changes in market risks [1]						
10% change in C$: US$ exchange rate						
Canadian dollar appreciates	**$ (6)**	$ (6)	**$ 110**	$ 19	**$ 104**	$ 13
Canadian dollar depreciates	**$ 6**	$ 6	**$ (110)**	$ (19)	**$ (104)**	$ (13)
10% change in US$: € exchange rate						
U.S. dollar appreciates	**$ 12**	$ 16	**$ (68)**	$ (60)	**$ (56)**	$ (44)
U.S. dollar depreciates	**$ (12)**	$ (16)	**$ 68**	$ 60	**$ 56**	$ 44
25 basis point change in interest rates						
Interest rates increase						
Canadian interest rate	**$ (9)**	$ (8)	**$ 79**	$ 76	**$ 70**	$ 68
U.S. interest rate	**$ —**	$ —	**$ (72)**	$ (76)	**$ (72)**	$ (76)
Combined	**$ (9)**	$ (8)	**$ 7**	$ —	**$ (2)**	$ (8)
Interest rates decrease						
Canadian interest rate	**$ 9**	$ 8	**$ (82)**	$ (79)	**$ (73)**	$ (71)
U.S. interest rate	**$ —**	$ —	**$ 75**	$ 79	**$ 75**	$ 79
Combined	**$ 9**	$ 8	**$ (7)**	$ —	**$ 2**	$ 8
20 basis point change in wind discount						
Wind discount increases	**$ (43)**	$ (34)	**$ —**	$ —	**$ (43)**	$ (34)
Wind discount decreases	**$ 43**	$ 34	**$ —**	$ —	**$ 43**	$ 34
20 basis point change in solar premium						
Solar premium increases	**$ 26**	$ 25	**$ —**	$ —	**$ 26**	$ 25
Solar premium decreases	**$ (26)**	$ (25)	**$ —**	$ —	**$ (26)**	$ (25)

1 These sensitivities are hypothetical and should be used with caution. Changes in net income and/or other comprehensive income generally cannot be extrapolated because the relationship of the change in assumption to the change in net income and/or other comprehensive income may not be linear. In this table, the effect of a variation in a particular assumption on the amount of net income and/or other comprehensive income is calculated without changing any other factors; in reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities.

The sensitivity analysis assumes that we would realize the changes in exchange rates and market interest rates; in reality, the competitive marketplace in which we operate would have an effect on this assumption.

(h) Fair values

General

The carrying values of cash and temporary investments, accounts receivable, short-term obligations, short-term borrowings, accounts payable and certain provisions (including restructuring provisions) approximate their fair values due to the immediate or short-term maturity of these financial instruments. The fair values are determined directly by reference to quoted market prices in active markets.

The fair values of our investment financial assets are based on quoted market prices in active markets or other clear and objective evidence of fair value.

The fair value of our long-term debt, excluding leases, is based on quoted market prices in active markets.

The fair values of the derivative financial instruments we use to manage our exposure to currency risk are estimated based on either quoted market prices in active markets for the same or similar financial instruments or the current rates offered to us for financial instruments of the same maturity, as well as discounted future cash flows determined using current rates for similar financial instruments of similar maturities subject to similar risks (such fair value estimates being largely based on the Canadian dollar: U.S. dollar forward exchange rate as at the statements of financial position dates). The fair values of the derivative financial instruments we use to manage our exposure to price risk associated with the purchase of electrical power are currently estimated using a discounted cash flow approach and are based on industry standard forecasts from EDC Associates Ltd. utilizing observable market data. The significant unobservable inputs used in the fair value measurement of the Level 3 derivative financial instruments were wind discount, reflecting 77% (2022 – 78)% of the electrical power pool price, and solar premium, reflecting 125% (2022 – 125)% of the electrical power pool price.

Derivative

The derivative financial instruments that we measure at fair value on a recurring basis subsequent to initial recognition are set out in the following table.

As at December 31 (millions)		2023				2022			
	Designation	Maximum maturity date	Notional amount	Fair value [1] and carrying value	Price or rate	Maximum maturity date	Notional amount	Fair value [1] and carrying value	Price or rate
Current Assets [2]									
Derivatives used to manage									
Currency risk arising from U.S. dollar-denominated revenues	HFT [4]	2024	**$ 111**	**$ 2**	US$1.00: ₱56	2023	$ 72	$ 1	US$1.00: ₱55
Currency risk arising from U.S. dollar-denominated purchases	HFH [3]	2024	**$ 47**	**—**	US$1.00: C$1.31	2023	$ 397	21	US$1.00: C$1.28
Currency risk arising from U.S. dollar-denominated long-term debt (*Note 26(b)-(c)*)	HFH [3]	2024	**$ 118**	**1**	US$1.00: C$1.31	2023	$ 526	9	US$1.00: C$1.33
Currency risk arising from European euro functional currency operations purchased with U.S. dollar-denominated long-term debt [7] *(Note 26(f))*	HFH [5]	2027	**$ 45**	**17**	€1.00: US$1.09	2025	$ 31	26	€1.00: US$1.09
Interest rate risk associated with non-fixed rate credit facility amounts drawn (*Note 26(f)*)	HFH [3]	2024	**$ 11**	**2**	3.5%	—	$ —	—	—
Price risk associated with purchase of electrical power	HFT [4]	2047	**$ 25**	**14**	$30.60/ MWh	2047	$ 39	26	$29.66/ MWh
				$ 36				$ 83	
Other Long-Term Assets [2]									
Derivatives used to manage									
Currency risk arising from U.S. dollar-denominated long-term debt [6] (*Note 26(b)-(c)*)	HFH [3]	—	**$ —**	**$ —**	—	2048	$ 4,443	$ 66	US$1.00: C$1.30
Currency risk arising from European euro functional currency operations purchased with U.S. dollar-denominated long-term debt [7] (*Note 26(f)*)	HFH [5]	—	**$ —**	**—**	—	2025	$ 454	17	€1.00: US$1.09
Price risk associated with purchase of electrical power	HFT [4]	2047	**$ 672**	**179**	$39.52/ MWh	2047	$ 683	167	$39.15/ MWh
				$ 179				$ 250	
Current Liabilities [2]									
Derivatives used to manage									
Currency risk arising from U.S. dollar-denominated revenues	HFT [4]	2024	**$ 18**	**$ —**	US$1.00: ₱55	2023	$ 68	$ 3	US$1.00: ₱55
Currency risk arising from U.S. dollar-denominated purchases	HFH [3]	2024	**$ 401**	**7**	US$1.00: C$1.34	2023	$ 111	1	US$1.00: C$1.36
Currency risk arising from U.S. dollar-denominated long-term debt (*Note 26(b)-(c)*)	HFH [3]	2024	**$ 943**	**18**	US$1.00: C$1.35	2023	$ 957	14	US$1.00: C$1.37
				$ 25				$ 18	
Other Long-Term Liabilities [2]									
Derivatives used to manage									
Currency risk arising from U.S. dollar-denominated long-term debt [6] (*Note 26(b)-(c)*)	HFH [3]	2049	**$ 6,610**	**$ 176**	US$1.00: C$1.31	2049	$ 2,329	$ 24	US$1.00: C$1.33
Currency risk arising from European euro functional currency operations purchased with U.S. dollar-denominated long-term debt [7] (*Note 26(f)*)	HFH [5]	2027	**$ 591**	**13**	€1.00: US$1.09	—	$ —	—	—
Interest rate risk associated with non-fixed rate credit facility amounts drawn (*Note 26(f)*)	HFH [3]	2028	**$ 205**	**2**	3.6%	—	$ —	—	—
				$ 191				$ 24	

1 Fair value measured at the reporting date using significant other observable inputs (Level 2), except the fair value of virtual power purchase agreements (which we use to manage the price risk associated with the purchase of electrical power), which is measured at the reporting date using significant unobservable inputs (Level 3). Changes in the fair value of derivative financial instruments classified as Level 3 in the fair value hierarchy were as follows:

Years ended December 31	**2023**	2022
Unrealized changes in virtual power purchase agreements forward element		
Included in net income, excluding income taxes	**$ —**	$ 193
Balance, beginning of period	**193**	—
Balance, end of period	**$ 193**	$ 193

2 Derivative financial assets and liabilities are not set off.
3 Designated as held for hedging (HFH) upon initial recognition (cash flow hedging item); hedge accounting is applied. Unless otherwise noted, hedge ratio is 1:1 and is established by assessing the degree of matching between the notional amounts of hedging items and the notional amounts of the associated hedged items.
4 Designated as held for trading (HFT) and classified as fair value through net income upon initial recognition; hedge accounting is not applied.
5 Designated as a hedge of a net investment in a foreign operation; hedge accounting is applied. Hedge ratio is 1:1 and is established by assessing the degree of matching between the notional amounts of hedging items and the notional amounts of the associated hedged items.
6 We designate only the spot element as the hedging item. As at December 31, 2023, the foreign currency basis spread included in the fair value of the derivative instruments, which is used for purposes of assessing hedge ineffectiveness, was $163 (2022 – $123).
7 We designate only the spot element as the hedging item. As at December 31, 2023, the foreign currency basis spread included in the fair value of the derivative instruments, which is used for purposes of assessing hedge ineffectiveness, was $3 (2022 – $1).

Non-derivative

Our long-term debt, which is measured at amortized cost, and the fair value thereof, are set out in the following table.

As at December 31 (millions)	**2023**		2022	
	Carrying value	Fair value	Carrying value	Fair value
Long-term debt, excluding leases (*Note 26*)	**$ 24,735**	**$ 23,853**	$ 22,967	$ 21,000

(i) Recognition of derivative gains and losses

The following table sets out the gains and losses, excluding income tax effects, arising from derivative instruments that are classified as cash flow hedging items and their location within the Consolidated statements of income and other comprehensive income.

Credit risk associated with such derivative instruments, as discussed further in *(b)*, would be the primary source of hedge ineffectiveness. There was no ineffective portion of the derivative instruments classified as cash flow hedging items for the periods presented.

	Amount of gain (loss) recognized in other comprehensive income (effective portion) (*Note 11*)		Gain (loss) reclassified from other comprehensive income to income (effective portion) (*Note 11*)		
				Amount	
Years ended December 31 (millions)	**2023**	2022	Location	**2023**	2022
Derivatives used to manage currency risk					
Arising from U.S. dollar-denominated purchases	**$ (7)**	$ 30	Goods and services purchased	**$ 17**	$ 17
Arising from U.S. dollar-denominated long-term debt [1] *Note 26(b)-(c)*	**(222)**	131	Financing costs	**(108)**	355
Arising from net investment in a foreign operation [2]	**(32)**	47	Financing costs	**7**	(12)
	(261)	208		**(84)**	360
Derivatives used to manage other market risks					
Other	**(3)**	—	Financing costs	**(4)**	(1)
	$ (264)	$ 208		**$ (88)**	$ 359

1 Amounts recognized in other comprehensive income are net of the change in the foreign currency basis spread (which is used for purposes of assessing hedge ineffectiveness) included in the fair value of the derivative instruments; such amounts for the year ended December 31, 2023, were $40 (2022 – $70).

2 Amounts recognized in other comprehensive income are net of the change in the foreign currency basis spread (which is used for purposes of assessing hedge ineffectiveness) included in the fair value of the derivative instruments; such amounts for the year ended December 31, 2023, were $2 (2022 – $NIL).

The following table sets out the gains and losses included in financing costs and arising from derivative instruments that are classified as held for trading and that are not designated as being in a hedging relationship, as well as their location within the Consolidated statements of income and other comprehensive income.

	Gain (loss) on derivatives recognized in income	
Years ended December 31 (millions)	**2023**	2022
Derivatives used to manage currency risk	**$ 5**	$ (24)
Unrealized changes in virtual power purchase agreements forward element	**$ —**	$ 193

5 segment information

General

Operating segments are components of an entity that engage in business activities from which they earn revenues and incur expenses (including revenues and expenses related to transactions with the other component(s)), the operations of which can be clearly distinguished and for which the operating results are regularly reviewed by a chief operating decision-maker to make resource allocation decisions and to assess performance. Effective September 1, 2022, we embarked upon the modification of our internal and external reporting processes, systems and internal controls concurrent with the acquisition and integration of LifeWorks Inc. and correspondingly we are assessing our segmented reporting structure.

The TELUS technology solutions segment includes: network revenues and equipment sales arising from mobile technologies; data revenues (which include internet protocol; television; hosting, managed information technology and cloud-based services; and home and business security); healthcare services, software and technology solutions (including employee and family assistance programs and benefits administration); agriculture and consumer goods services (software, data management and data analytics-driven smart-food chain and consumer goods technologies); voice and other telecommunications services revenues; and equipment sales.

The digitally-led customer experiences – TELUS International (DLCX) segment, which has the U.S. dollar as its primary functional currency, is comprised of digital customer experience and digital-enablement transformation solutions, including artificial intelligence and content management, provided by our TELUS International (Cda) Inc. subsidiary.

Intersegment sales are recorded at the exchange value, which is the amount agreed to by the parties.

The segment information regularly reported to our Chief Executive Officer (our chief operating decision-maker), and the reconciliations thereof to our products and services view of revenues, other revenues and income before income taxes, are set out in the following table.

	TELUS technology solutions						Digitally-led customer experiences - TELUS International [1]					
	Mobile		Fixed		Segment total				Eliminations		Total	
Years ended December 31 (millions)	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Operating revenues												
External revenues												
Service	**$ 7,059**	$ 6,697	**$ 7,550**	$ 6,582	**$ 14,609**	$ 13,279	**$ 2,899**	$ 2,677	**$ —**	$ —	**$ 17,508**	$ 15,956
Equipment	**2,158**	2,026	**339**	310	**2,497**	2,336	**—**	—	**—**	—	**2,497**	2,336
Revenues arising from contracts with customers	**$ 9,217**	$ 8,723	**$ 7,889**	$ 6,892	**17,106**	15,615	**2,899**	2,677	**—**	—	**20,005**	18,292
Other income (*Note 7*)					**84**	120	**27**	—	**—**	—	**111**	120
					17,190	15,735	**2,926**	2,677	**—**	—	**20,116**	18,412
Intersegment revenues					**15**	17	**756**	537	**(771)**	(554)	**—**	—
					$ 17,205	$ 15,752	**$ 3,682**	$ 3,214	**$ (771)**	$ (554)	**$ 20,116**	$ 18,412
EBITDA [2]					**$ 5,722**	$ 5,697	**$ 709**	$ 709	**$ —**	$ —	**$ 6,431**	$ 6,406
Restructuring and other costs included in EBITDA (*Note 16*)					**652**	180	**65**	60	**—**	—	**717**	240
Equity (income) loss related to real estate joint venture					**1**	(3)	**—**	—	**—**	—	**1**	(3)
Adjusted EBITDA [2]					**$ 6,375**	$ 5,874	**$ 774**	$ 769	**$ —**	$ —	**$ 7,149**	$ 6,643
Capital expenditures [3]					**$ 2,697**	$ 3,337	**$ 125**	$ 135	**$ —**	$ —	**$ 2,822**	$ 3,472
Adjusted EBITDA less capital expenditures [2]					**$ 3,678**	$ 2,537	**$ 649**	$ 634	**$ —**	$ —	**$ 4,327**	$ 3,171
					Operating revenues – external and other income (above)						**$ 20,116**	$ 18,412
					Goods and services purchased						**7,537**	7,107
					Employee benefits expense						**6,148**	4,899
					EBITDA (above)						**6,431**	6,406
					Depreciation						**2,514**	2,226
					Amortization of intangible assets						**1,555**	1,226
					Operating income						**2,362**	2,954
					Financing costs						**1,273**	632
					Income before income taxes						**$ 1,089**	$ 2,322

1 The digitally-led customer experiences – TELUS International segment is comprised of our consolidated TELUS International (Cda) Inc. subsidiary. All of our other international operations are included in the TELUS technology solutions segment.

2 Earnings before interest, income taxes, depreciation and amortization (EBITDA), both unadjusted and adjusted, are not standardized financial measures under IFRS-IASB and may not be comparable to similar measures disclosed by other issuers (including those disclosed by TELUS International (Cda) Inc.); we define EBITDA as operating revenues and other income less goods and services purchased and employee benefits expense. We calculate adjusted EBITDA to exclude items that do not reflect our ongoing operations and, in our opinion, should not be considered in a long-term valuation metric or included in an assessment of our ability to service or incur debt. We report EBITDA, adjusted EBITDA and adjusted EBITDA less capital expenditures, because they are key measures that management uses to evaluate the performance of our business, and EBITDA is also utilized in determining compliance with certain debt covenants.

3 See *Note 31(a)* for a reconciliation of capital asset additions, excluding spectrum licences, to cash payments for capital assets, excluding spectrum licences, reported in the Consolidated statements of cash flows.

Geographical information

We attribute revenues from external customers to individual countries on the basis of the location in which the goods and/or services are provided; for the year ended December 31, 2023, we attributed approximately $3.8 billion (2022 – $3.1 billion) of our revenues to countries other than Canada (our country of domicile). We do not have significant amounts of property, plant and equipment located outside of Canada. As at December 31, 2023, on a historical cost basis, we had approximately $3.2 billion (2022 – $2.7 billion) and approximately $3.8 billion (2022 – $3.0 billion) of intangible assets and goodwill, respectively, located outside of Canada.

6 revenue from contracts with customers

(a) Revenues

In the determination of the minimum transaction prices in contracts with customers, amounts are allocated to fulfilling, or the completion of fulfilling, future contracted performance obligations. These unfulfilled, or partially unfulfilled, future contracted performance obligations are largely in respect of services to be provided over the duration of the contract. The following table sets out our aggregate estimated minimum transaction prices allocated to remaining unfulfilled, or partially unfulfilled, future contracted performance obligations and the timing of when we might expect to recognize the associated revenues; actual amounts could differ from these estimates due to a variety of factors, including the unpredictable nature of: customer behaviour; industry regulation; the economic environments in which we operate; and competitor behaviour.

As at December 31 (millions)	**2023**	2022
Estimated minimum transaction price allocated to remaining unfulfilled, or partially unfulfilled, performance obligations to be recognized as revenue in a future period [1, 2]		
During the 12-month period ending one year hence	**$ 2,576**	$ 2,539
During the 12-month period ending two years hence	**1,022**	1,034
Thereafter	**107**	81
	$ 3,705	$ 3,654

1 Excludes constrained variable consideration amounts, amounts arising from contracts originally expected to have a duration of one year or less and, as a permitted practical expedient, amounts arising from contracts that are not affected by revenue recognition timing differences arising from transaction price allocation **or** from contracts under which we may recognize and bill revenue in an amount that corresponds directly with our completed performance obligations.

2 IFRS-IASB requires the explanation of when we might expect to recognize as revenue the amounts disclosed as the estimated minimum transaction price allocated to remaining unfulfilled, or partially unfulfilled, performance obligations. The estimated amounts disclosed are based upon contractual terms and maturities. Actual minimum transaction price revenues recognized, and the timing thereof, will differ from these estimates primarily due to the frequency with which the actual durations of contracts with customers do not match their contractual maturities.

(b) Accounts receivable

As at December 31 (millions)	*Note*	**2023**	2022
Customer accounts receivable		**$ 2,938**	$ 2,636
Accrued receivables – customer		**480**	468
Allowance for doubtful accounts	*4(b)*	**(103)**	(94)
		3,315	3,010
Accrued receivables – other		**282**	306
Accounts receivable – current		**$ 3,597**	$ 3,316

(c) Contract assets

Years ended December 31 (millions)	Note	2023	2022
Balance, beginning of period		**$ 908**	$ 877
Net additions arising from operations		**1,531**	1,483
Amounts billed in the period and thus reclassified to accounts receivable		**(1,550)**	(1,456)
Change in impairment allowance, net	*4(b)*	**4**	1
Other		**5**	3
Balance, end of period		**$ 898**	$ 908
To be billed and thus reclassified to accounts receivable during:			
The 12-month period ending one year hence		**$ 595**	$ 588
The 12-month period ending two years hence		**250**	266
Thereafter		**53**	54
Balance, end of period		**$ 898**	$ 908
Reconciliation of contract assets presented in the Consolidated statements of financial position – current			
Gross contract assets		**$ 595**	$ 588
Reclassification to contract liabilities of contracts with contract assets less than contract liabilities	*24*	**(13)**	(14)
Reclassification from contract liabilities of contracts with contract liabilities less than contract assets	*24*	**(137)**	(133)
		$ 445	$ 441

7 other income

Years ended December 31 (millions)	Note	2023	2022
Government assistance		**$ 13**	$ 6
Other sublet revenue	*19*	**5**	5
Investment income (loss), gain (loss) on disposal of assets and other		**19**	27
Interest income	*21(a)*	**6**	4
Changes in provisions related to business combinations	*25*	**68**	78
		$ 111	$ 120

We receive government assistance, as defined by IFRS-IASB, from a number of sources and, if not in respect of capital, we generally include such amounts received in Other income. We recognize such amounts on an accrual basis as the subsidized services are provided or as the subsidized costs are incurred.

Government of Quebec

Salaries for qualifying employment positions in the province of Quebec, mainly in the information technology sector, are eligible for tax credits. In respect of such tax credits, for the year ended December 31, 2023, we recorded $3 million (2022 – $5 million).

8 employee benefits expense

Years ended December 31 (millions)	Note	2023	2022
Employee benefits expense – gross			
Wages and salaries		**$ 5,763**	$ 4,800
Share-based compensation [1]	*14*	**172**	194
Pensions – defined benefit [2]	*15(a)*	**62**	101
Pensions – defined contribution	*15(f)*	**130**	120
Restructuring costs [1]	*16(a)*	**440**	81
Employee health and other benefits		**284**	257
		6,851	5,553
Capitalized internal labour costs, net			
Contract acquisition costs	*20*		
Capitalized		**(91)**	(92)
Amortized		**93**	83
Contract fulfilment costs	*20*		
Capitalized		**(24)**	(11)
Amortized		**4**	2
Property, plant and equipment		**(366)**	(379)
Intangible assets subject to amortization		**(319)**	(257)
		(703)	(654)
		$ 6,148	$ 4,899

1 For the year ended December 31, 2023, $(1) (2022 – $7) of share-based compensation in the digitally-led customer experiences segment was included in restructuring costs.
2 For the year ended December 31, 2023, $10 (2022 – $NIL) of defined benefit pension expense for the TELUS technology solutions segment was included in restructuring and other costs.

9 financing costs

Years ended December 31 (millions)	Note	2023	2022
Interest expense			
Long-term debt, excluding lease liabilities – gross		**$ 1,081**	$ 779
Long-term debt, excluding lease liabilities – capitalized [1]	*18*	**(6)**	(30)
Long-term debt, excluding lease liabilities		**1,075**	749
Lease liabilities	*19*	**133**	74
Short-term borrowings and other		**48**	16
Accretion on provisions	*25*	**30**	20
		1,286	859
Employee defined benefit plans net interest	*15*	**7**	8
Foreign exchange		**3**	(25)
Unrealized changes in virtual power purchase agreements forward element		**—**	(193)
		1,296	649
Interest income		**(23)**	(17)
		$ 1,273	$ 632
Net interest cost	*3*	**$ 1,272**	$ 847
Interest expense on long-term debt, excluding lease liabilities – capitalized [1]		**(6)**	(30)
Employee defined benefit plans net interest		**7**	8
Unrealized changes in virtual power purchase agreements forward element		**—**	(193)
		$ 1,273	$ 632

1 Interest on long-term debt, excluding lease liabilities, at a composite rate of 3.10% was capitalized to intangible assets with indefinite lives during the period.

10 income taxes

(a) Expense composition and rate reconciliation

Years ended December 31 (millions)	2023	2022
Current income tax expense		
For the current reporting period	**$ 402**	$ 584
Adjustments recognized in the current period for income taxes of prior periods	**(40)**	(11)
	362	573
Deferred income tax expense		
Arising from the origination and reversal of temporary differences	**(136)**	9
Adjustments recognized in the current period for income taxes of prior periods	**(4)**	22
	(140)	31
	$ 222	$ 604

Our income tax expense and effective income tax rate differ from those computed by applying the applicable statutory rates for the following reasons:

Years ended December 31 ($ in millions)	2023		2022	
Income taxes computed at applicable statutory rates	**$ 255**	**23.5 %**	$ 595	25.6 %
Adjustments recognized in the current period for income taxes of prior periods	**(44)**	**(4.0)**	11	0.5
(Non-taxable) non-deductible amounts, net	**(19)**	**(1.7)**	1	0.1
Withholding and other taxes	**24**	**2.1**	31	1.3
Foreign tax differential	**(13)**	**(1.3)**	(39)	(1.7)
Other	**19**	**1.7**	5	0.2
Income tax expense per Consolidated statements of income and other comprehensive income	**$ 222**	**20.3 %**	$ 604	26.0 %

(b) Temporary differences

We must make significant estimates in respect of the composition of our deferred income tax liability. Our operations are complex and the related income tax interpretations, regulations, legislation and jurisprudence are continually changing. As a result, there are usually some income tax matters in question.

Our estimates of the temporary differences comprising the net deferred income tax liability and the amounts of deferred income taxes recognized in the Consolidated statements of income and other comprehensive income and the Consolidated statements of changes in owners' equity are set out in the following table.

(millions)	Property, plant and equipment (owned) and intangible assets subject to amortization	Intangible assets with indefinite lives	Property, plant and equipment (leased), net of lease liabilities	Contract assets and liabilities	Net pension amounts	Provisions not currently deductible	Losses available to be carried forward [1]	Share-based compensation amounts and other	Net deferred income tax liability
Balance as at January 1, 2022	$ 2,447	$ 1,751	$ (33)	$ 195	$ (60)	$ (174)	$ (108)	$ (8)	$ 4,010
Deferred income tax expense recognized in Net income	(14)	105	1	(90)	(19)	28	(29)	49	31
Other comprehensive income	—	—	—	—	45	—	—	(50)	(5)
Deferred income taxes charged directly to owners' equity and other (*Note 18(c)*)	413	—	—	—	—	(4)	(7)	(2)	400
Balance as at December 31, 2022	2,846	1,856	(32)	105	(34)	(150)	(144)	(11)	4,436
Deferred income tax expense recognized in Net income	**(237)**	**89**	**75**	**21**	**(16)**	**(52)**	**(37)**	**17**	**(140)**
Other comprehensive income	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**(40)**	**(40)**
Deferred income taxes charged directly to owners' equity and other (*Note 18(b)*)	**121**	**—**	**—**	**—**	**—**	**(2)**	**(21)**	**(2)**	**96**
Balance as at December 31, 2023	**$ 2,730**	**$ 1,945**	**$ 43**	**$ 126**	**$ (50)**	**$ (204)**	**$ (202)**	**$ (36)**	**$ 4,352**

1 We expect to be able to utilize our non-capital losses prior to expiry.

Temporary differences arise from the carrying value of investments in subsidiaries and partnerships exceeding their tax base, for which no deferred income tax liabilities have been recognized because the parent is able to control the timing of the reversal of the differences and it is probable that they will not reverse in the foreseeable future. In our specific instance, this is relevant to our investments in Canadian subsidiaries and Canadian partnerships. We are not required to recognize such deferred income tax liabilities, as we are in a position to control the timing and manner of the reversal of the temporary differences, which would not be expected to be exigible to income tax, and it is probable that such differences will not reverse in the foreseeable future. We are in a position to control the timing and manner of the reversal of the temporary differences in respect of our non-Canadian subsidiaries, and it is probable that such differences will not reverse in the foreseeable future.

(c) Other

We conduct research and development activities, which may be eligible to earn Investment Tax Credits. During the year ended December 31, 2023, we recorded Investment Tax Credits of $25 million (2022 – $11 million). Of this amount, $19 million (2022 – $9 million) was recorded as a reduction of property, plant and equipment and/or intangible assets and the balance was recorded as a reduction of goods and services purchased.

11 other comprehensive income

(millions)	Items that may subsequently be reclassified to income								Item never reclassified to income		Item never reclassified to income	
	Change in unrealized fair value of derivatives designated as cash flow hedges in current period (*Note 4(i)*)											
	Derivatives used to manage currency risk			Derivatives used to manage other market risks								
	Gains (losses) arising	Prior period (gains) losses transferred to net income	Total	Gains (losses) arising	Prior period (gains) losses transferred to net income	Total	Total	Cumulative foreign currency translation adjustment	Change in measurement of investment financial assets	Accumulated other comprehensive income	Employee defined benefit plan re-measure-ments	Other comprehensive income
Balance as at January 1, 2022			$ 81			$ (3)	$ 78	$ 25	$ 83	$ 186		
Other comprehensive income (loss)												
Amount arising	$ 208	$ (360)	(152)	$ —	$ 1	1	(151)	41	7	(103)	$ 177	$ 74
Income taxes	$ 12	$ (63)	(51)	$ —	$ 1	1	(50)	—	—	(50)	45	(5)
Net			(101)			—	(101)	41	7	(53)	$ 132	$ 79
Balance as at December 31, 2022			(20)			(3)	(23)	66	90	133		
Other comprehensive income (loss)												
Amount arising	**$ (261)**	**$ 84**	**(177)**	**$ (3)**	**$ 4**	**1**	**(176)**	**(30)**	**(13)**	**(219)**	**$ 1**	**$ (218)**
Income taxes	**$ (53)**	**$ 14**	**(39)**	**$ (1)**	**$ 1**	**—**	**(39)**	**—**	**(1)**	**(40)**	**—**	**(40)**
Net			**(138)**			**1**	**(137)**	**(30)**	**(12)**	**(179)**	**$ 1**	**$ (178)**
Balance as at December 31, 2023			**$ (158)**			**$ (2)**	**$ (160)**	**$ 36**	**$ 78**	**$ (46)**		
Attributable to:												
Common Shares										**$ (44)**		
Non-controlling interests										**(2)**		
										$ (46)		

12 per share amounts

Basic net income per Common Share is calculated by dividing net income attributable to Common Shares by the total weighted average number of Common Shares outstanding during the period. Diluted net income per Common Share is calculated to give effect to share option awards and restricted share unit awards.

The following table presents reconciliations of the denominators of the basic and diluted per share computations. Net income was equal to diluted net income for all periods presented.

Years ended December 31 (millions)	**2023**	2022
Basic total weighted average number of Common Shares outstanding	**1,451**	1,396
Effect of dilutive securities – Restricted share units	**6**	7
Diluted total weighted average number of Common Shares outstanding	**1,457**	1,403

For the years ended December 31, 2023 and 2022, no outstanding equity-settled restricted share unit awards were excluded in the calculation of diluted income per Common Share. For the year ended December 31, 2023, less than 1 million (2022 - NIL) TELUS Corporation share option awards were excluded in the calculation of diluted income per Common Share.

13 dividends per share

(a) TELUS Corporation Common Share dividends declared

Years ended December 31 (millions except per share amounts)

TELUS Corporation Common Share dividends	Declared Effective	Declared Per share	Paid to shareholders	Total
2023				
Quarter 1 dividend	**Mar. 10, 2023**	**$ 0.3511**	**Apr. 3, 2023**	**$ 506**
Quarter 2 dividend	**June 8, 2023**	**0.3636**	**July 4, 2023**	**526**
Quarter 3 dividend	**Sep. 8, 2023**	**0.3636**	**Oct. 3, 2023**	**529**
Quarter 4 dividend	**Dec. 11, 2023**	**0.3761**	**Jan. 2, 2024**	**550**
		$ 1.4544		**$ 2,111**
2022				
Quarter 1 dividend	Mar. 11, 2022	$ 0.3274	Apr. 1, 2022	$ 450
Quarter 2 dividend	June 10, 2022	0.3386	July 4, 2022	467
Quarter 3 dividend	Sep. 9, 2022	0.3386	Oct. 3, 2022	480
Quarter 4 dividend	Dec. 9, 2022	0.3511	Jan. 3, 2023	502
		$ 1.3557		$ 1,899

On February 8, 2024, the Board of Directors declared a quarterly dividend of $ 0.3761 per share on issued and outstanding TELUS Corporation Common Shares payable on April 1, 2024, to holders of record at the close of business on March 11, 2024. The final amount of the dividend payment depends upon the number of TELUS Corporation Common Shares issued and outstanding at the close of business on March 11, 2024.

(b) Dividend Reinvestment and Share Purchase Plan

We have a Dividend Reinvestment and Share Purchase Plan under which eligible holders of TELUS Corporation Common Shares may acquire additional TELUS Corporation Common Shares by reinvesting dividends and by making additional optional cash payments to the trustee. Under this plan, we have the option of offering TELUS Corporation Common Shares from Treasury or having the trustee acquire TELUS Corporation Common Shares in the stock market. We may, at our discretion, offer TELUS Corporation Common Shares at a discount of up to 5% from the market price under the plan. Effective with our dividends paid October 1, 2019, we offered TELUS Corporation Common Shares from Treasury at a discount of 2%. In respect of TELUS Corporation Common Shares held by eligible shareholders who have elected to participate in the plan, dividends declared during the year ended December 31, 2023, of $702 million (2022 –$639 million) were to be reinvested in TELUS Corporation Common Shares.

14 share-based compensation

(a) Details of share-based compensation expense

Reflected in the Consolidated statements of income and other comprehensive income as Employee benefits expense and in the Consolidated statements of cash flows are the share-based compensation amounts set out in the accompanying table.

Years ended December 31 (millions)		2023			2022		
	Note	Employee benefits expense [1]	Associated operating cash outflows	Statement of cash flows adjustment	Employee benefits expense	Associated operating cash outflows	Statement of cash flows adjustment
Restricted share units	(b)	**$ 127**	**$ (9)**	**$ 118**	$ 158	$ (25)	$ 133
Employee share purchase plan	(c)	**43**	**(43)**	**—**	45	(45)	—
Share option awards	(d)	**1**	**(2)**	**(1)**	(2)	(9)	(11)
		$ 171	**$ (54)**	**$ 117**	$ 201	$ (79)	$ 122
TELUS technology solutions		**$ 144**	**$ (45)**	**$ 99**	$ 168	$ (53)	$ 115
Digitally-led customer experiences		**27**	**(9)**	**18**	33	(26)	7
		$ 171	**$ (54)**	**$ 117**	$ 201	$ (79)	$ 122

1 Within employee benefits expense (see *Note 8*) for the year ended December 31, 2023, restricted share units expense of $ 128 (2022 - $151) is presented as share-based compensation expense and the balance is included in restructuring costs (see *Note 16*) of the digitally-led customer experiences segment.

(b) Restricted share units

General

We use restricted share units as a form of retention and incentive compensation. Each restricted share unit is nominally equal in value to one equity share and is nominally entitled to the dividends that would arise thereon if it were an issued and outstanding equity share. Notional dividends are recorded as additional issuances of restricted share units during the life of the restricted share unit. Due to the notional dividend mechanism, the grant-date fair value of restricted share units equals the fair market value of the corresponding equity shares at the grant date, other than for the notional subset of our restricted share units affected by the relative total shareholder return performance condition (for which a grant-date fair value is determined using a Monte Carlo simulation). Restricted share units generally become payable when vesting is complete; TELUS Corporation restricted share units typically vest over a period of 33 months (the requisite service period) and TELUS International (Cda) Inc. restricted share units typically vest over a period of 48 months (the requisite service period). The vesting method of restricted share units, which is determined on or before the date of grant, may be either cliff or graded; the majority of TELUS Corporation restricted share units outstanding are cliff-vesting and the majority of TELUS International (Cda) Inc. restricted share units outstanding are graded-vesting. Accounting for restricted share units, either as equity instruments or as liability instruments, is based upon the expected manner of their settlement when they are granted. Grants of TELUS Corporation restricted share units prior to fiscal 2019, and grants of TELUS International (Cda) Inc. restricted share units prior to fiscal 2021, were accounted for as liability instruments, as the associated obligations were normally expected to be cash-settled when granted.

TELUS Corporation restricted share units

We also award restricted share units that largely have the same features as our general restricted share units, but have a variable payout (0% – 200%) that depends upon the achievement of our total customer connections performance condition (with a weighting of 25%) and the total shareholder return on TELUS Corporation Common Shares relative to an international peer group of telecommunications companies (with a weighting of 75%). The grant-date fair value of the notional subset of our restricted share units affected by the total customer connections performance condition equals the fair market value of the corresponding TELUS Corporation Common Shares at the grant date, and thus the notional subset has been included in the presentation of our restricted share units with only service conditions. Reflecting a variable payout, we estimate the fair value of the notional subset of our restricted share units affected by the relative total shareholder return performance condition using a Monte Carlo simulation. Grants of restricted share units in 2023 and 2022 are accounted for as equity-settled, as that was the expected manner of their settlement when granted.

The following table presents a summary of outstanding TELUS Corporation non-vested restricted share units.

As at December 31	**2023**	2022
Restricted share units without market performance conditions		
Restricted share units with service conditions only	**5,769,038**	5,224,220
Notional subset affected by non-market performance conditions	**429,281**	357,263
	6,198,319	5,581,483
Restricted share units with market performance conditions		
Notional subset affected by relative total shareholder return performance condition	**1,191,563**	1,071,789
Number of non-vested restricted share units	**7,389,882**	6,653,272

The following table presents a summary of the activity related to TELUS Corporation restricted share units without market performance conditions.

	Number of restricted share units [1]		Weighted average grant-date fair value
	Non-vested	Vested	
Outstanding, January 1, 2022			
Non-vested	5,848,469	—	$ 25.67
Vested	—	49,138	$ 25.63
Granted			
Initial award	3,033,255	—	$ 31.31
In lieu of dividends	340,259	2,251	$ 29.54
Variable payout related	48,266	—	$ 25.79
Vested	(3,285,325)	3,285,325	$ 22.68
Settled			
In equity	—	(3,054,488)	$ 25.60
In cash	—	(246,407)	$ 26.27
Forfeited	(403,441)	—	$ 27.32
Outstanding, December 31, 2022			
Non-vested	5,581,483	—	$ 30.62
Vested	—	35,819	$ 27.00
Granted			
Initial award	**3,806,458**	**—**	**$ 27.07**
In lieu of dividends	**459,742**	**2,049**	**$ 24.98**
Variable payout related	**29,244**	**—**	**$ 25.97**
Vested	**(3,090,935)**	**3,090,935**	**$ 26.41**
Settled			
In equity	**—**	**(2,927,106)**	**$ 26.35**
In cash	**—**	**(169,176)**	**$ 27.19**
Forfeited	**(587,673)**	**—**	**$ 28.37**
Outstanding, December 31, 2023			
Non-vested	**6,198,319**	**—**	**$ 28.68**
Vested	**—**	**32,521**	**$ 28.97**

1 Excluding the notional subset of restricted share units affected by the relative total shareholder return performance condition.

TELUS International (Cda) Inc. restricted share units

We also award restricted share units that largely have the same features as the TELUS Corporation restricted share units, but have a variable payout (0% – 150%) that depends upon the achievement of TELUS International (Cda) Inc. financial performance and non-market quality-of-service performance conditions. Grants of restricted share units in 2023 and 2022 are accounted for as equity-settled, as that was the expected manner of their settlement when granted.

The following table presents a summary of the activity related to TELUS International (Cda) Inc. restricted share units.

	Number of restricted share units		Weighted average grant-date fair value
	Non-vested	Vested	
Outstanding, January 1, 2022	1,850,807	—	US$ 21.94
Granted – initial award	821,223	59,512	US$ 26.41
Vested	(798,373)	798,373	US$ 16.63
Settled			
In equity	—	(360,044)	US$ 27.84
In cash	—	(497,841)	US$ 10.06
Forfeited	(267,836)	—	US$ 21.32
Outstanding, December 31, 2022	1,605,821	—	US$ 27.10
Granted – initial award	**1,567,809**	**770,043**	**US$ 15.34**
Vested	**(423,501)**	**423,501**	**US$ 26.49**
Settled in equity	**—**	**(1,193,544)**	**US$ 17.01**
Forfeited	**(134,383)**	**—**	**US$ 23.80**
Outstanding, December 31, 2023	**2,615,746**	**—**	**US$ 21.36**

(c) TELUS Corporation employee share purchase plan

We have an employee share purchase plan under which eligible employees can purchase TELUS Corporation Common Shares through regular payroll deductions. In respect of TELUS Corporation Common Shares held within the employee share purchase plan, dividends declared thereon during the year ended December 31, 2023, of $53 million (2022 – $47 million) were to be reinvested in TELUS Corporation Common Shares acquired by the trustee from Treasury, with a discount applicable, as set out in *Note 13(b)*.

(d) Share option awards

General

We use share option awards as a form of retention and incentive compensation. We apply the fair value method of accounting for share-based compensation awards granted to officers and other employees. Share option awards typically have a three-year vesting period (the requisite service period). The vesting method of share option awards, which is determined on or before the date of grant, may be either cliff or graded; all TELUS Corporation share option awards granted subsequent to 2004 have been cliff-vesting.

The weighted average fair value of share option awards granted is calculated by using the Black-Scholes model (a closed-form option pricing model). The risk-free interest rate used in determining the fair value of the share option awards is based on a Government of Canada yield curve that is current at the time of grant. The expected lives of the share option awards are based on our historical share option award exercise data. Similarly, expected volatility considers the historical volatility in the price of our Common Shares in respect of TELUS Corporation share options and the average historical volatility in the prices of a peer group's shares, and in the price of TELUS International (Cda) Inc.'s shares in respect of TELUS International (Cda) Inc. share options. The dividend yield is the annualized dividend current at the time of grant divided by the share option award exercise price. Dividends are not paid on unexercised share option awards and are not subject to vesting.

TELUS Corporation share options

Employees may be granted share option awards to purchase TELUS Corporation Common Shares at an exercise price equal to the fair market value at the time of grant. Share option awards granted under the plan may be exercised over specific periods not to exceed seven years from the date of grant.

These share option awards have a net-equity settlement feature. The optionee does not have the choice of exercising the net-equity settlement feature; it is at our option whether the exercise of a share option award is settled as a share option or settled using the net-equity settlement feature.

The following table presents a summary of the activity related to the TELUS Corporation share option plan.

Years ended December 31	**2023**		2022	
	Number of share options	Weighted average share option price [1]	Number of share options	Weighted average share option price
Outstanding, beginning of period	**2,755,300**	**$ 22.05**	3,050,300	$ 22.04
Exercised [2]	**(774,899)**	**$ 21.35**	—	$ —
Forfeited	**(201,500)**	**$ 22.11**	(295,000)	$ 21.93
Outstanding, end of period	**1,778,901**	**$ 22.35**	2,755,300	$ 22.05
Exercisable, end of period	**1,518,901**	**$ 21.73**	—	$ —

1 The weighted average remaining contractual life is 3.3 years.
2 For the year ended December 31, 2023, the weighted average price at the dates of exercise was $ 24.67.

TELUS International (Cda) Inc. share options

Employees may be granted equity share options (equity-settled) to purchase TELUS International (Cda) Inc. subordinate voting shares at a price equal to, or a multiple of, the fair market value at the time of grant and/or phantom share options (cash-settled) that provide them with exposure to appreciation in the TELUS International (Cda) Inc. subordinate voting share price. Share option awards granted under the plan may be exercised over specific periods not to exceed ten years from the time of grant. All equity share option awards and most phantom share option awards have a variable payout (0% – 100%) that depends upon the achievement of TELUS International (Cda) Inc. financial performance and non-market quality-of-service performance conditions.

The following table presents a summary of the activity related to the TELUS International (Cda) Inc. share option plan.

Years ended December 31	**2023**		2022	
	Number of share options	Weighted average share option price [1]	Number of share options	Weighted average share option price [1]
Outstanding, beginning of period	**2,677,297**	**US$ 10.27**	3,180,767	US$ 9.86
Exercised [2]	**(124,337)**	**US$ 8.46**	(293,860)	US$ 8.46
Forfeited	**(16,177)**	**US$ 5.77**	(209,610)	US$ 6.59
Outstanding, end of period	**2,536,783**	**US$ 10.39**	2,677,297	US$ 10.27
Exercisable, end of period	**2,316,683**	**US$ 9.00**	2,210,126	US$ 8.23

1 For 2,096,582 share options, the range of share option prices is US$ 4.87 – US$8.95 per TELUS International (Cda) Inc. subordinated voting share and the weighted average remaining contractual life is 3.0 years; for the balance of share options, the price is US$25.00 and the weighted average remaining contractual life is 7.2 years.
2 For the year ended December 31, 2023, the weighted average exercise price at the date of exercise was US$ 14.81 (2022 - US$23.75).

15 employee future benefits

(a) Defined benefit pension plans – summary

Amounts in the primary financial statements relating to defined benefit pension plans

Years ended December 31		2023			2022		
(millions)	Note	Plan assets	Defined benefit obligations accrued [1]	Net	Plan assets	Defined benefit obligations accrued [1]	Net
Employee benefits expense	8						
Benefits earned for current service		**$ —**	**$ (75)**	**—**	$ —	$ (111)	—
Benefits earned for past service		**—**	**(10)**	**—**	—	(3)	—
Employees' contributions		**17**	**—**	**—**	18	—	—
Administrative fees		**(4)**	**—**	**—**	(5)	—	—
		13	**(85)**	**$ (72)**	13	(114)	$ (101)
Financing costs	9						
Notional income on plan assets [2] and interest on defined benefit obligations accrued		**439**	**(399)**	**—**	296	(299)	—
Interest effect on asset ceiling limit		**(47)**	**—**	**—**	(5)	—	—
		392	**(399)**	**(7)**	291	(299)	(8)
DEFINED BENEFIT (COST) INCLUDED IN NET INCOME [3]		**—**	**—**	**(79)**	—	—	(109)
Other comprehensive income	11						
Difference between actual results and estimated plan assumptions [4]		**377**	**(46)**	**—**	(1,197)	(141)	—
Changes in plan financial assumptions		**—**	**(383)**	**—**	—	2,242	—
Changes in the effect of limiting net defined benefit plan assets to the asset ceiling		**51**	**—**	**—**	(734)	—	—
		428	**(429)**	**(1)**	(1,931)	2,101	170
DEFINED BENEFIT (COST) INCLUDED IN COMPREHENSIVE INCOME [3]		**—**	**—**	**(80)**	—	—	61
AMOUNTS INCLUDED IN OPERATING ACTIVITIES CASH FLOWS							
Employer contributions		**28**	**—**	**28**	44	—	44
BENEFITS PAID BY PLANS		**(499)**	**499**	**—**	(474)	474	—
EFFECTS OF BUSINESS ACQUISITION		**—**	**—**	**—**	4	(4)	—
PLAN ACCOUNT BALANCES [5]							
Change in period		**362**	**(414)**	**(52)**	(2,053)	2,158	105
Balance, beginning of period		**7,990**	**(8,075)**	**(85)**	10,043	(10,233)	(190)
Balance, end of period		**$ 8,352**	**$ (8,489)**	**$ (137)**	$ 7,990	$ (8,075)	$ (85)
FUNDED STATUS – PLAN SURPLUS (DEFICIT)							
Pension plans that have plan assets in excess of defined benefit obligations accrued	20	**$ 7,519**	**$ (7,203)**	**$ 316**	$ 7,185	$ (6,878)	$ 307
Pension plans that have defined benefit obligations accrued in excess of plan assets		**—**	**—**	**—**	—	—	—
Funded		**833**	**(1,068)**	**(235)**	805	(996)	(191)
Unfunded		**—**	**(218)**	**(218)**	—	(201)	(201)
	27	**833**	**(1,286)**	**(453)**	805	(1,197)	(392)
		$ 8,352	**$ (8,489)**	**$ (137)**	$ 7,990	$ (8,075)	$ (85)
PBSR SOLVENCY POSITION [6]							
Pension plans that have plan assets in excess of defined benefit obligations accrued		**—**	**—**	**$1,910**	—	—	$1,698
Funded pension plans that have defined benefit obligations accrued in excess of plan assets		**—**	**—**	**—**	—	—	—
		—	**—**	**$1,910**	—	—	$1,698
DEFINED BENEFIT OBLIGATIONS ACCRUED OWED TO:							
Active members		**—**	**$ (1,815)**	**—**	—	$ (1,652)	
Deferred members		**—**	**(382)**	**—**	—	(350)	
Pensioners		**—**	**(6,292)**	**—**	—	(6,073)	
		—	**$ (8,489)**	**—**	—	$ (8,075)	

1 Defined benefit obligations accrued are the actuarial present values of benefits attributed to employee services rendered to a particular date.

2 The interest income on the plan assets portion of the employee defined benefit plans net interest amount included in Financing costs reflects a rate of return on plan assets equal to the discount rate used in determining the defined benefit obligations accrued at the end of the immediately preceding fiscal year.
3 Excluding income taxes.
4 Financial assumptions in respect of plan assets (interest income on plan assets included in Financing costs reflects a rate of return on plan assets equal to the discount rate used in determining the defined benefit obligations accrued) and demographic assumptions in respect of the actuarial present values of the defined benefit obligations accrued, as at the end of the immediately preceding fiscal year for both.
5 The measurement date used to determine the plan assets and defined benefit obligations accrued was December 31.
6 The Office of the Superintendent of Financial Institutions, by way of the *Pension Benefits Standards Regulations, 1985* (PBSR) (see *(e)*), requires that a solvency valuation be performed on a periodic basis. The actual PBSR solvency positions are determined in conjunction with mid-year annual funding reports prepared by actuaries (see *(e)*); as a result, the PBSR solvency positions in this table as at December 31, 2023 and 2022, are interim estimates and updated estimates, respectively. The interim estimate as at December 31, 2022, was a net surplus of $1,605.

Interim estimated solvency ratios as at December 31, 2023, ranged from 117% to 131% (2022 – updated estimate is 115% to 129%; interim estimate was 117% to 126%) and the estimated three-year average solvency ratios, adjusted as required by the PBSR, ranged from 112% to 126% (2022 – updated estimate is 102% to 118%; interim estimate was 104% to 118%).

The solvency valuation effectively uses the fair value (excluding any asset ceiling limit effects) of the funded defined benefit pension plan assets (adjusted for theoretical wind-up expenses) to measure the solvency valuation assets. Although the defined benefit obligations accrued and the solvency valuation liabilities are calculated similarly, the assumptions used for each differ, primarily in respect of retirement ages and discount rates, and the solvency valuation liabilities, due to the required assumption that each plan is terminated on the valuation date, do not reflect assumptions about future compensation levels. Relative to the experience-based estimates of retirement ages used for purposes of determining the defined benefit obligations accrued, the minimum no-consent retirement age used for solvency valuation purposes may result in either a greater or lesser pension liability, depending upon the provisions of each plan. The solvency positions in this table reflect composite weighted average discount rates of 4.7% (2022 - 4.9%). A hypothetical decrease of 25 basis points in the composite weighted average discount rate would result in a $207 decrease in the PBSR solvency position as at December 31, 2023 (2022 – $ 182); these sensitivities are hypothetical, should be used with caution, are calculated without changing any other assumption and generally cannot be extrapolated because changes in amounts may not be linear.

(b) Pension plans and other defined benefit plans – overview

We have a number of defined benefit and defined contribution plans that provide pension and other retirement and post-employment benefits to most of our employees. As at December 31, 2023 and 2022, all registered defined benefit pension plans were closed to substantially all new participants and substantially all benefits had vested. The benefit plans in which our employees are participants reflect developments in our corporate history.

TELUS Corporation Pension Plan

Management and professional employees in Alberta who joined us prior to January 1, 2001, and certain unionized employees who joined us prior to June 9, 2011, are covered by this contributory defined benefit pension plan, which comprises slightly more than one-half of our total defined benefit obligation accrued. The plan contains a supplemental benefit account that may provide indexation of up to 70% of the annual increase in a specified cost-of-living index. Pensionable remuneration is determined by the average of the best five years of remuneration in the last ten consecutive years preceding retirement.

Pension Plan for Management and Professional Employees of TELUS Corporation

This defined benefit pension plan, which with certain limited exceptions ceased accepting new participants on January 1, 2006, and which comprises approximately one-quarter of our total defined benefit obligation accrued, provides a non-contributory base level of pension benefits. Additionally, on a contributory basis, employees annually can choose increased and/or enhanced levels of pension benefits above the base level. At an enhanced level of pension benefits, the plan has indexation of 100% of the annual increase in a specified cost-of-living index, to an annual maximum of 2%. Pensionable remuneration is determined by the annualized average of the best 60 consecutive months of remuneration.

TELUS Québec Defined Benefit Pension Plan

This contributory defined benefit pension plan, which ceased accepting new participants on April 14, 2009, covers any employee not governed by a collective agreement in Quebec who joined us prior to April 1, 2006, any non-supervisory employee governed by a collective agreement who joined us prior to September 6, 2006, and certain other unionized employees. The plan comprises approximately one-tenth of our total defined benefit obligation accrued. The plan has no indexation and pensionable remuneration is determined by the average of the best four years of remuneration.

TELUS Edmonton Pension Plan

This contributory defined benefit pension plan ceased accepting new participants on January 1, 1998. Indexation is 60% of the annual increase in a specified cost-of-living index and pensionable remuneration is determined by the annualized average of the best 60 consecutive months of remuneration. The plan comprises less than one-tenth of our total defined benefit obligation accrued.

Other defined benefit pension plans

In addition to the foregoing plans, we have non-registered, non-contributory supplementary defined benefit pension plans, which have the effect of maintaining the pension benefit earned once the allowable maximums in the registered plans are attained. As is common with non-registered plans of this nature, these plans are typically funded only as benefits are paid. These plans comprise less than 5% of our total defined benefit obligation accrued.

Telecommunication Workers Pension Plan

Certain employees in British Columbia are covered by a negotiated-cost, target-benefit union pension plan. Our contributions are determined in accordance with provisions of negotiated labour contracts, and are generally based on employee gross earnings. We are not required to guarantee the benefits or assure the solvency of the plan, and we are not liable to the plan for other participating employers' obligations. For the years ended December 31, 2023 and 2022, our contributions comprised a significant proportion of the employer contributions to this union pension plan; similarly, our active and retired employees represented a significant proportion of the plan participants.

British Columbia Public Service Pension Plan

Certain employees in British Columbia are covered by a public service pension plan. Contributions are determined in accordance with provisions of labour contracts negotiated by the Province of British Columbia and are generally based on employee gross earnings.

Defined contribution pension plans

We primarily offer and sponsor three defined contribution pension plans, which are contributory, that are available to our non-unionized and certain of our unionized employees. For the years ended December 31, 2023 and 2022, employees could generally choose to contribute to the plans at a rate of between 3% and 10% of their pensionable earnings; generally, we match 100% of contributions of employees up to 5% of their pensionable earnings and 80% of contributions of employees between 5% and 6% of their pensionable earnings. Membership in a defined contribution pension plan is generally voluntary until an employee's third-year service anniversary. In the event that annual contributions exceed allowable maximums, excess amounts are in certain cases contributed to a non-registered supplementary defined contribution savings plan.

Other defined benefit plans

Other defined benefit plans, all of which are non-contributory and, as at December 31, 2023 and 2022, non-funded, included a healthcare plan for retired employees and a life insurance plan, both of which ceased accepting new participants on January 1, 1997.

(c) Plan investment strategies and policies

Our primary goal for the defined benefit pension plans is to ensure the security of the retirement income and other benefits of the plan members and their beneficiaries. A secondary goal is to maximize the long-term rate of return on the defined benefit plans' assets within a level of risk acceptable to us.

Risk management

We consider absolute risk (the risk of contribution increases, inadequate plan surplus and unfunded obligations) to be more important than relative return risk. Accordingly, the defined benefit plans' designs, the nature and maturity of defined benefit obligations and the characteristics of the plans' memberships significantly influence investment strategies and policies. We manage risk by specifying allowable and prohibited investment types, setting diversification strategies and determining target asset allocations.

Allowable and prohibited investment types

Allowable and prohibited investment types, along with associated guidelines and limits, are set out in each plan's required Statement of Investment Policies and Procedures (SIP&P), which is reviewed and approved annually by the designated governing body. The SIP&P guidelines and limits are further governed by the permitted investments and lending limits set out in the *Pension Benefits Standards Regulations, 1985*. As well as conventional investments, each fund's SIP&P may provide for the use of derivative financial instruments to facilitate investment operations and to manage risk, provided that no short position is taken and no guidelines and limits established in the SIP&P are violated. Internally and externally managed funds are not permitted to invest directly in our securities or those of our subsidiaries.

Diversification

Our strategy for investments in equity securities is to be broadly diversified across individual securities, industry sectors and geographical regions. A meaningful portion (20% – 30% of total plan assets) of the plans' investments in equity securities is allocated to foreign equity securities, with the intent of further diversifying plan assets. Investments in debt securities may include a meaningful allocation to mortgages, with the objective of enhancing cash flow and providing greater scope for the management of the bond component of the plan assets. Debt securities may also include real return bonds to provide inflation protection, consistent with the indexed nature of some defined benefit obligations. Real estate investments are used to provide diversification of plan assets, hedging of potential long-term inflation and comparatively stable investment income.

Relationship between plan assets and benefit obligations

With the objective of lowering the long-term costs of our defined benefit pension plans, we purposely mismatch plan assets and benefit obligations. This mismatching is effected by including equity investments in the long-term asset mix, as well as fixed income securities and mortgages with durations that differ from those of the benefit obligations.

As at December 31, 2023, the present value-weighted average timing of estimated cash flows for the obligations (duration) of the defined benefit pension plans was 12.0 years (2022 – 11.4 years). Compensation for liquidity issues that may otherwise have arisen from the mismatching of plan assets and benefit obligations is provided by broadly diversified investment holdings (including cash and short-term investments) and cash flows from dividends, interest and rents from those diversified investment holdings.

Fair value measurements

Information about the fair value measurements of our defined benefit pension plan assets, target asset allocations and actual asset allocations, in aggregate, is as set out in the following table:

						Fair value measurements at reporting date using			
						Quoted prices in active markets for identical items		Other	
As at December 31 ($ in millions)	2024	**2023**		2022		**2023**	2022	**2023**	2022
	Target allocation of plan assets	Total	Percentage of plan assets at end of year	Total	Percentage of plan assets at end of year				
Asset class									
Equity securities	25-55 %	—	**38 %**	—	40 %	—	—	—	—
Canadian	—	**$ 832**	—	$ 841	—	**$ 634**	$ 708	**$ 198**	$ 133
Foreign	—	**2,671**	—	2,707	—	**582**	500	**2,089**	2,207
Debt securities	40-75 %	**—**	**49 %**	—	47 %	**—**	—	**—**	—
Issued by national, provincial or local governments	—	**2,649**	—	2,210	—	**2,484**	2,056	**165**	154
Corporate debt securities	—	**1,060**	—	1,081	—	**—**	—	**1,060**	1,081
Asset-backed securities	—	**3**	—	4	—	**—**	—	**3**	4
Commercial mortgages	—	**878**	—	865	—	**—**	—	**878**	865
Cash, cash equivalents and other	0-15 %	**269**	**3 %**	270	3 %	**12**	2	**257**	268
Real estate	10-30 %	**904**	**10 %**	930	10 %	**—**	—	**904**	930
	—	**9,266**	—	8,908	—	**$ 3,712**	$ 3,266	**$ 5,554**	$ 5,642
Effect of asset ceiling limit									
Beginning of year	—	**(918)**	—	(179)					
Interest effect on asset ceiling limit	—	**(47)**	—	(5)					
Change in the effect of limiting net defined benefit assets to the asset ceiling	—	**51**	—	(734)					
End of year	—	**(914)**	—	(918)					
	—	**$8,352**	—	$7,990					

As at December 31, 2023, pension benefit trusts that we administered held no TELUS Corporation Common Shares and no TELUS International (Cda) Inc. subordinate voting shares, nor held debt of TELUS Corporation (see *(c) – Allowable and prohibited investment types*). As at December 31, 2023 and 2022, pension benefit trusts that we administered did not lease real estate to us.

(d) Assumptions

As referred to in *Note 1(b)*, management is required to make significant estimates related to certain actuarial and economic assumptions that are used in determining defined benefit pension costs, defined benefit obligations accrued and pension plan assets. These significant estimates are of a long-term nature, consistent with the nature of employee future benefits.

Demographic assumptions

In determining the defined benefit pension expense recognized in net income for the years ended December 31, 2023 and 2022, we utilized the Canadian Institute of Actuaries CPM 2014 mortality tables.

Financial assumptions

The discount rate, which is used to determine a plan's defined benefit obligations accrued, is based upon the yield on long-term, high-quality, fixed-term investments, and is set annually. The rate of future increases in compensation is based upon current benefits policies and economic forecasts.

The significant weighted average actuarial assumptions arising from these estimates and used to determine our defined benefit obligations accrued are as follows:

	2023	2022
Mortality assumptions used to determine defined benefit obligations accrued as at December 31 Life expectancy at 65 for a member currently at age 65 (years)	**24.2**	24.2
Discount rate [1] used to determine:		
Net benefit costs for the year ended December 31	**5.05 %**	2.95 %
Defined benefit obligations accrued as at December 31	**4.65 %**	5.05 %
Current service cost in subsequent fiscal year	**4.65 %**	5.05 %
Rate of future increases in compensation used to determine:		
Net benefit costs for the year ended December 31	**3.00 %**	3.00 %
Defined benefit obligations accrued as at December 31	**3.00 %**	3.00 %

1 The discount rate disclosed in this table reflects the computation of an average discount rate that replicates the estimated timing of the obligation cash flows.

Sensitivity of key assumptions

The sensitivity of our key assumptions for our defined benefit pension plans was as follows:

Years ended, or as at, December 31	**2023**		2022	
Increase (decrease) (millions)	Change in obligations	Change in expenses	Change in obligations	Change in expenses
Sensitivity of key demographic assumptions to an increase of one year [1] in life expectancy	**$ 238**	**$ 8**	$ 213	$ 11
Sensitivity of key financial assumptions to a decrease of 25 basis points [1] in:				
Discount rate	**$ 256**	**$ 10**	$ 238	$ 16
Rate of future increases in compensation	**$ (23)**	**$ (2)**	$ (20)	$ (3)

1 These sensitivities are hypothetical and should be used with caution. Favourable hypothetical changes in the assumptions result in decreased amounts, and unfavourable hypothetical changes in the assumptions result in increased amounts, of obligations and expenses (both employee benefit expense and financing cost). Changes in amounts based on a variation in assumptions of one year or 25 basis points generally cannot be extrapolated because the relationship of the change in an assumption to the change in amounts may not be linear. Also, in this table, the effect of a variation in a particular assumption on the change in obligations or change in expenses is calculated without changing any other assumption; in reality, changes in one factor may result in changes in another (for example, an increase in the discount rate may result in changes in expectations about the rate of future increases in compensation), which might magnify or counteract the sensitivities.

(e) Employer contributions

The determination of the minimum funding amounts necessary for substantially all of our registered defined benefit pension plans is governed by the *Pension Benefits Standards Act, 1985*, which requires that current service costs be funded, and that both going-concern and solvency valuations be performed on a specified periodic basis.

- Any excess of plan assets over plan liabilities determined in the going-concern valuation reduces our minimum funding requirement for current service costs, but may not reduce the requirement to an amount less than the employees' contributions. The going-concern valuation generally determines the excess (if any) of a plan's assets over its liabilities on a projected benefit basis.
- As of the date of these consolidated financial statements, the solvency valuation generally requires that a plan's average solvency valuation liabilities (determined on the basis that the plan is terminated on the valuation date) in excess of its assets (if any) be funded, at a minimum, in equal annual amounts over a period not exceeding five years. So as to manage the risk of overfunding the plans, which results from the solvency valuation utilizing average solvency ratios for funding purposes, our funding may include the provision of letters of credit. As at December 31, 2023, undrawn letters of credit in the amount of $NIL (2022 – $49 million) secured certain obligations of the defined benefit pension plans.

Our best estimate of fiscal 2024 employer contributions to our defined benefit plans is approximately $ 10 million for registered defined benefit pension plans. This estimate is based upon the mid-year 2023 annual funding valuations that were prepared by actuaries using December 31, 2022, actuarial valuations. The funding reports are based on the pension plans' fiscal years, which are calendar years. The next annual funding valuations are expected to be prepared mid-year 2024.

Future benefit payments

Estimated future benefit payments from our funded and unfunded defined benefit pension plans, calculated as at December 31, 2023, are as follows:

Years ending December 31 (millions)	Funded	Unfunded	Total
2024	**$ 477**	**$ 12**	**$ 489**
2025	**489**	**12**	**501**
2026	**496**	**13**	**509**
2027	**501**	**13**	**514**
2028	**507**	**13**	**520**
2029 - 2033	**2,613**	**74**	**2,687**

(f) Defined contribution plans – expense

Our total defined contribution pension plan costs recognized were as follows:

Years ended December 31 (millions)	**2023**	2022
Union pension plan and public service pension plan contributions	**$ 17**	$ 19
Other defined contribution pension plans	**113**	101
	$ 130	$ 120

We expect that our 2024 union pension plan and public service pension plan contributions will total approximately $ 14 million.

(g) Other defined benefit plans

For the year ended December 31, 2023, other defined benefit plan current service cost was $ 10 million (2022 – $9 million) and employee defined benefit plan remeasurements in other comprehensive income were $(2) million (2022 - $NIL). Estimated future benefit payments from our other defined benefit plans, calculated as at December 31, 2023, are $1 million annually for the five-year period from 2024 to 2028 and $4 million for the five-year period from 2029 to 2033.

16 restructuring and other costs

(a) Details of restructuring and other costs

With the objective of reducing ongoing costs, we incur associated incremental non-recurring restructuring costs, as discussed further in *(b)* following. We may also incur atypical charges when undertaking major or transformational changes to our business or operating models or post-acquisition business integration. In other costs, we include incremental atypical external costs incurred in connection with business acquisition or disposition activity; significant litigation costs in respect of losses or settlements; and adverse retrospective regulatory decisions.

Restructuring and other costs are presented in the Consolidated statements of income and other comprehensive income, as set out in the accompanying table.

Years ended December 31 (millions)	**2023**	2022
Restructuring [1] ***(b)***		
Goods and services purchased	**$ 178**	$ 118
Employee benefits expense	**440**	81
	618	199
Other *(c)*		
Goods and services purchased	**12**	41
Employee benefits expense	**87**	—
	99	41
Total		
Goods and services purchased	**190**	159
Employee benefits expense	**527**	81
	$ 717	$ 240

1 For the year ended December 31, 2023, excludes real estate rationalization-related restructuring impairments of property, plant and equipment of $73 (2022 – $9) which are included in depreciation.

(b) Restructuring provisions

Employee-related provisions and other provisions, as presented in *Note 25,* include amounts in respect of restructuring activities. In 2023, restructuring activities included ongoing and incremental efficiency initiatives, some of which involved personnel-related costs and rationalization of real estate. These initiatives were intended to improve our long-term operating productivity and competitiveness.

(c) Other

During the year ended December 31, 2023, incremental external costs were incurred in connection with business acquisitions and collective bargaining activities. In connection with business acquisitions, non-recurring atypical business integration expenditures that would be considered neither restructuring costs nor part of the fair value of the net assets acquired have been included in other costs. Employee benefits expense is in respect of lump sum payments to substantially all of our existing unionized members of Telecommunications Workers Union, United Steelworkers Local 1944 (TWU), for the ratification of the new collective agreement, as discussed in *Note 29(c)*, and a lump sum past service cost defined benefit pension payment made in connection with collective commitments.

17 property, plant and equipment

		Owned assets						Right-of-use lease assets (*Note 19*)				
(millions)	*Note*	Network assets	Buildings and leasehold improvements	Computer hardware and other	Land	Assets under construction	Total	Network assets	Real estate	Other	Total	Total
AT COST												
Balance as at January 1, 2022		$34,510	$ 3,537	$ 1,525	$ 75	$ 771	$40,418	$ 594	$1,694	$ 99	$ 2,387	$ 42,805
Additions [1]		770	34	62	8	1,379	2,253	519	290	31	840	3,093
Additions arising from business acquisitions		1	50	22	—	—	73	—	129	—	129	202
Assets under construction put into service		1,088	156	91	—	(1,335)	—	—	—	—	—	—
Transfers		223	—	55	—	—	278	(278)	—	—	(278)	—
Dispositions, retirements and other		(559)	(38)	4	—	—	(593)	—	(35)	(8)	(43)	(636)
Net foreign exchange differences		3	7	13	—	—	23	—	17	—	17	40
Balance as at December 31, 2022		36,036	3,746	1,772	83	815	42,452	835	2,095	122	3,052	45,504
Additions [1]		**1,006**	**29**	**62**	**—**	**803**	**1,900**	**473**	**289**	**19**	**781**	**2,681**
Additions arising from business acquisitions	*18(b)*	**36**	**13**	**3**	**—**	**—**	**52**	**—**	**28**	**—**	**28**	**80**
Assets under construction put into service		**625**	**175**	**126**	**1**	**(927)**	**—**	**—**	**—**	**—**	**—**	**—**
Dispositions, retirements and other		**(547)**	**(129)**	**(113)**	**(1)**	**—**	**(790)**	**—**	**(15)**	**(25)**	**(40)**	**(830)**
Net foreign exchange differences		**(2)**	**(4)**	**(8)**	**—**	**(2)**	**(16)**	**—**	**(11)**	**—**	**(11)**	**(27)**
Balance as at December 31, 2023		**$37,154**	**$ 3,830**	**$ 1,842**	**$ 83**	**$ 689**	**$43,598**	**$ 1,308**	**$2,386**	**$ 116**	**$ 3,810**	**$ 47,408**
ACCUMULATED DEPRECIATION												
Balance as at January 1, 2022		$23,070	$ 2,207	$ 938	$ —	$ —	$26,215	$ 64	$ 566	$ 34	$ 664	$ 26,879
Depreciation [2]		1,552	143	201	—	—	1,896	75	236	19	330	2,226
Transfers		54	—	35	—	—	89	(89)	—	—	(89)	—
Dispositions, retirements and other		(566)	(31)	(86)	—	—	(683)	—	(13)	(6)	(19)	(702)
Net foreign exchange differences		2	3	6	—	—	11	—	6	—	6	17
Balance as at December 31, 2022		24,112	2,322	1,094	—	—	27,528	50	795	47	892	28,420
Depreciation [2]		**1,671**	**195**	**216**	**—**	**—**	**2,082**	**122**	**291**	**19**	**432**	**2,514**
Dispositions, retirements and other		**(528)**	**(113)**	**(81)**	**—**	**—**	**(722)**	**—**	**(21)**	**(18)**	**(39)**	**(761)**
Net foreign exchange differences		**(1)**	**—**	**(3)**	**—**	**—**	**(4)**	**—**	**(9)**	**—**	**(9)**	**(13)**
Balance as at December 31, 2023		**$25,254**	**$ 2,404**	**$ 1,226**	**$ —**	**$ —**	**$28,884**	**$ 172**	**$1,056**	**$ 48**	**$ 1,276**	**$ 30,160**
NET BOOK VALUE												
Balance as at December 31, 2022		$11,924	$ 1,424	$ 678	$ 83	$ 815	$14,924	$ 785	$1,300	$ 75	$ 2,160	$ 17,084
Balance as at December 31, 2023		**$11,900**	**$ 1,426**	**$ 616**	**$ 83**	**$ 689**	**$14,714**	**$ 1,136**	**$1,330**	**$ 68**	**$ 2,534**	**$ 17,248**

1 For the year ended December 31, 2023, additions include $ 59 (2022 – $(198)) in respect of asset retirement obligations (see *Note 25*).

2 For the year ended December 31, 2023, depreciation includes $ 36 (2022 - $9) in respect of impairment of real estate right-of-use lease assets.

As at December 31, 2023, our contractual commitments for the acquisition of property, plant and equipment totalled $ 297 million over a period ending December 31, 2027 (2022 – $275 million over a period ending December 31, 2027).

18 intangible assets and goodwill

(a) Intangible assets and goodwill, net

(millions)	Note	Intangible assets subject to amortization: Customer contracts, related customer relationships and subscriber base [1]	Software [1]	Access to rights-of-way, crowdsource assets and other	Assets under construction	Total	Intangible assets with indefinite lives: Spectrum licences	Total intangible assets	Goodwill [1, 2]	Total intangible assets and goodwill
AT COST										
Balance as at January 1, 2022		$ 3,028	$ 6,723	$ 437	$ 275	$ 10,463	$ 12,185	$ 22,648	$ 7,634	$ 30,282
Additions		—	151	4	866	1,021	—	1,021	—	1,021
Additions arising from business acquisitions	*(c)*	1,335	381	46	16	1,778	—	1,778	1,794	3,572
Assets under construction put into service		—	622	—	(622)	—	—	—	—	—
Dispositions, retirements and other (including capitalized interest)	*g*	66	(358)	1	—	(291)	30	(261)	—	(261)
Net foreign exchange differences		60	3	10	—	73	—	73	67	140
Balance as at December 31, 2022		4,489	7,522	498	535	13,044	12,215	25,259	9,495	34,754
Additions		**—**	**119**	**5**	**857**	**981**	**29**	**1,010**	**—**	**1,010**
Additions arising from business acquisitions	*(b)*	**866**	**—**	**131**	**—**	**997**	**—**	**997**	**975**	**1,972**
Assets under construction put into service		**—**	**845**	**17**	**(862)**	**—**	**—**	**—**	**—**	**—**
Dispositions, retirements and other (including capitalized interest)	*g*	**47**	**(570)**	**(63)**	**—**	**(586)**	**6**	**(580)**	**—**	**(580)**
Net foreign exchange differences		**(42)**	**(1)**	**(6)**	**—**	**(49)**	**—**	**(49)**	**(48)**	**(97)**
Balance as at December 31, 2023		**$ 5,360**	**$ 7,915**	**$ 582**	**$ 530**	**$ 14,387**	**$ 12,250**	**$ 26,637**	**$ 10,422**	**$ 37,059**
ACCUMULATED AMORTIZATION										
Balance as at January 1, 2022		$ 712	$ 4,279	$ 172	$ —	$ 5,163	$ —	$ 5,163	$ 364	$ 5,527
Amortization		357	802	67	—	1,226	—	1,226	—	1,226
Dispositions, retirements and other		—	(370)	(16)	—	(386)	—	(386)	—	(386)
Net foreign exchange differences		13	2	2	—	17	—	17	—	17
Balance as at December 31, 2022		1,082	4,713	225	—	6,020	—	6,020	364	6,384
Amortization		**473**	**995**	**87**	**—**	**1,555**	**—**	**1,555**	**—**	**1,555**
Dispositions, retirements and other		**(18)**	**(571)**	**(64)**	**—**	**(653)**	**—**	**(653)**	**—**	**(653)**
Net foreign exchange differences		**(4)**	**(1)**	**(1)**	**—**	**(6)**	**—**	**(6)**	**—**	**(6)**
Balance as at December 31, 2023		**$ 1,533**	**$ 5,136**	**$ 247**	**$ —**	**$ 6,916**	**$ —**	**$ 6,916**	**$ 364**	**$ 7,280**
NET BOOK VALUE										
Balance as at December 31, 2022		$ 3,407	$ 2,809	$ 273	$ 535	$ 7,024	$ 12,215	$ 19,239	$ 9,131	$ 28,370
Balance as at December 31, 2023		**$ 3,827**	**$ 2,779**	**$ 335**	**$ 530**	**$ 7,471**	**$ 12,250**	**$ 19,721**	**$ 10,058**	**$ 29,779**

1 The amounts for customer relationships, software and goodwill arising from business acquisitions for the year ended December 31, 2022, have been adjusted as set out in *(c)*.

2 Accumulated amortization of goodwill is amortization recorded prior to 2002; there are no accumulated impairment losses in the accumulated amortization of goodwill.

As at December 31, 2023, our contractual commitments for the acquisition of intangible assets totalled $ 25 million over a period ending December 31, 2026 (2022 – $14 million over a period ending December 31, 2023).

During the year ended December 31, 2023, we acquired AWS-1 and BRS spectrum licences from the previous licensee for $ 23 million; such transfer of licences has been approved by Innovation, Science and Economic Development Canada.

The Innovation, Science and Economic Development Canada 3800 MHz band spectrum auction occurred during the period from October 24, 2023, through November 24, 2023. We were the successful auction participant for 1,430 spectrum licences with a total purchase price of $620 million. In accordance with the auction terms, 20% ($124 million) was remitted to Innovation, Science and Economic Development Canada on its due date, January 17, 2024, while the remaining balance will be paid on, or before, May 29, 2024. Until such time as Innovation, Science and Economic Development Canada determines that we qualify as a radio communications carrier and comply with the *Canadian Ownership and Control* rules, we may not commercially use the licences.

(b) Business acquisitions

WillowTree

On October 27, 2022, we announced a definitive agreement to acquire WillowTree, a full-service digital product provider focused on end-user experiences, such as native mobile applications and unified web interfaces. On January 3, 2023, subsequent to the satisfaction of the closing conditions, WillowTree was acquired through our TELUS International (Cda) Inc. subsidiary and has been consolidated within our digitally-led customer experiences – TELUS International segment.

The acquisition brings key talent and diversity to our segment's portfolio of next-generation solutions, and further augments its digital consulting and client-centric software development capabilities. The primary factor that gave rise to the recognition of goodwill was the earnings capacity of the acquired business in excess of the net tangible and intangible assets acquired (such excess arising from the low level of tangible assets relative to the earnings capacity of the business). A portion of the amounts assigned to goodwill may be deductible for income tax purposes.

In respect of the acquired business, we concurrently provided written put options to the remaining selling shareholders for their approximate 14% economic interest, which will be settled subject to certain performance-based criteria and will become exercisable in tranches over a three-year period starting in 2026. The acquisition-date fair value of the puttable shares held by the non-controlling shareholders has been recorded as a provision in the three-month period ended March 31, 2023. The provision may be settled in cash or, at our option, in a combination of cash and up to 70% in TELUS International (Cda) Inc. subordinate voting shares. Concurrent with this acquisition, the non-controlling shareholders provided us with purchased call options, which substantially mirror the written put options.

As is customary in a business acquisition transaction, until the time of acquisition of control, we did not have full access to the books and records of WillowTree. Upon having sufficient time to review the books and records of WillowTree, as well as obtaining new and additional information about the related facts and circumstances as of the acquisition date, we will adjust provisional amounts for identifiable assets acquired and liabilities assumed and thus finalize our purchase price allocation.

Individually immaterial transactions

During the year ended December 31, 2023, we acquired 100% ownership of businesses that were complementary to our existing lines of business. The primary factor that gave rise to the recognition of goodwill was the earnings capacity of the acquired businesses in excess of the net tangible and intangible assets acquired (such excess arising from the low level of tangible assets relative to the earnings capacity of the businesses). A portion of the amounts assigned to goodwill may be deductible for income tax purposes.

Acquisition-date fair values

Acquisition-date fair values assigned to the assets acquired and liabilities assumed are set out in the following table:

(millions)	WillowTree [1]	Individually immaterial transactions [1]	Total
Assets			
Current assets			
Cash	$ 7	$ 6	$ 13
Accounts receivable [2]	84	14	98
Other	3	2	5
	94	22	116
Non-current assets			
Property, plant and equipment			
Owned assets	20	32	52
Right-of-use lease assets	27	1	28
Intangible assets subject to amortization [3]	947	50	997
	994	83	1,077
Total identifiable assets acquired	1,088	105	1,193
Liabilities			
Current liabilities			
Short-term borrowings	—	2	2
Accounts payable and accrued liabilities	50	17	67
Income and other taxes payable	4	1	5
Advance billings and customer deposits	5	2	7
Current maturities of long-term debt	126	1	127
	185	23	208
Non-current liabilities			
Long-term debt	22	28	50
Deferred income taxes	94	8	102
	116	36	152
Total liabilities assumed	301	59	360
Net identifiable assets acquired	787	46	833
Goodwill	819	156	975
Net assets acquired	$ 1,606	$ 202	$ 1,808
Acquisition effected by way of:			
Cash consideration	$ 1,169	$ 133	$ 1,302
Accounts payable and accrued liabilities	—	1	1
Provisions	266	45	311
Issue of TELUS Corporation Common Shares [4]	—	23	23
Issue of shares by a subsidiary to a non-controlling interest [5]	171	—	171
	$ 1,606	$ 202	$ 1,808

1 The purchase price allocation, primarily in respect of customer contracts, related customer relationships and deferred income taxes, had not been finalized as of the date of issuance of these consolidated financial statements. As is customary in a business acquisition transaction, until the time of acquisition of control, we did not have full access to the books and records of the acquired businesses. Upon having sufficient time to review the books and records of the acquired businesses, we expect to finalize our purchase price allocations.

2 The fair value of accounts receivable is equal to the gross contractual amounts receivable and reflects the best estimate at the acquisition date of the contractual cash flows expected to be collected.

3 Customer contracts and customer relationships (including those related to customer contracts) are generally expected to be amortized over a period of 15 years, and other intangible assets are expected to be amortized over a period of 4-10 years.

4 The fair value of TELUS Corporation Common Shares was measured based upon market prices observed at the date of acquisition of control.

5 The fair value of the TELUS International (Cda) Inc. subordinate voting shares was measured based upon market prices observed at the date of acquisition of control.

Pro forma disclosures

The following pro forma supplemental information represents certain results of operations as if the business acquisitions noted above had been completed at the beginning of the 2023 fiscal year.

Year ended December 31, 2023 (millions except per share amounts)	As reported [1]	Pro forma [2]
Operating revenues and other income	$ 20,116	$ 20,154
Net income	$ 867	$ 872
Net income per Common Share		
Basic	$ 0.58	$ 0.58
Diluted	$ 0.58	$ 0.58

1 Operating revenues and other income and net income (loss) for the year ended December 31, 2023, include $ 231 and $(127), respectively, in respect of WillowTree. Inclusive of intersegment revenues, WillowTree operating revenues and other income for the year ended December 31, 2023, were $254.
2 Pro forma amounts for the year ended December 31, 2023, reflect the acquired businesses. The results of the acquired businesses have been included in our Consolidated statements of income and other comprehensive income effective the dates of acquisition.

The pro forma supplemental information is based upon estimates and assumptions that we believe to be reasonable. The pro forma supplemental information is not necessarily indicative of our consolidated financial results in future periods or the actual results that would have been realized had the business acquisitions been completed at the beginning of the period presented. The pro forma supplemental information includes incremental depreciation of property, plant and equipment, amortization of intangible assets, financing and other charges incurred as a result of the acquisitions, net of the related tax effects.

(c) Business acquisitions – prior period

In 2022, we acquired businesses that were complementary to our existing lines of business. As at December 31, 2022, purchase price allocations had not been finalized. During the year ended December 31, 2023, the preliminary acquisition-date fair values for accounts receivable, income and other taxes receivable, customer relationships, software, goodwill, accounts payable and accrued liabilities, and deferred income tax liabilities were increased by $19 million, decreased by $19 million, decreased by $118 million, increased by $179 million, decreased by $38 million, increased by $5 million, and increased by $18 million, respectively; as required by IFRS-IASB, comparative amounts have been adjusted so as to reflect those increases (decreases) effective the dates of acquisition.

(d) Intangible assets with indefinite lives – spectrum licences

Our intangible assets with indefinite lives include spectrum licences granted by Innovation, Science and Economic Development Canada, which are used for the provision of both mobile and fixed wireless services. The spectrum licence policy terms indicate that the licences will likely be renewed. We expect our spectrum licences to be renewed every 20 years following a review of our compliance with licence terms. In addition to current usage, our licensed spectrum can be used for planned and new technologies. As a result of our assessment of the combination of these significant factors, we currently consider our spectrum licences to have indefinite lives and, as referred to in *Note 1(b)*, this represents a significant judgment for us.

(e) Impairment testing of intangible assets with indefinite lives and goodwill

General

As referred to in *Note 1(f)*, the carrying values of intangible assets with indefinite lives and goodwill are periodically tested for impairment and, as referred to in *Note 1(b)*, this test represents a significant estimate for us, while also requiring significant judgments to be made.

The carrying values allocated to the cash-generating units' intangible assets with indefinite lives and goodwill are set out in the following table.

As at December 31 (millions)	2023	2022
Intangible assets with indefinite lives		
TELUS technology solutions	**$ 12,250**	$ 12,215
Goodwill		
TELUS technology solutions	**7,296**	7,137
Digitally-led customer experiences – TELUS International	**2,762**	1,994
	10,058	9,131
	$ 22,308	$ 21,346

The recoverable amounts of the cash-generating units' assets have been determined based on a fair value less costs of disposal calculation. There is a material degree of uncertainty with respect to the estimates of the recoverable amounts of the cash-generating units' assets, given the necessity of making key economic assumptions about the future. Recoverable amounts based on fair value less costs of disposal calculations are categorized as Level 3 fair value measures.

We validate the results of our recoverable amounts calculations through a market-comparable approach and an analytical review of industry facts and facts that are specific to us. The market-comparable approach uses current (at time of test) market consensus estimates and equity trading prices for U.S. and Canadian firms in the same industry. In addition, we ensure that the combination of the valuations of the cash-generating units is reasonable based on our current (at time of test) market value.

Key assumptions

The fair value less costs of disposal calculation uses discounted cash flow projections that employ the following key assumptions: future cash flows and growth projections (including judgments about the allocation of future capital expenditures to support both mobile and fixed operations); associated economic risk assumptions and estimates of the likelihood of achieving key operating metrics and drivers; estimates of future generational infrastructure capital expenditures; and the future weighted average cost of capital. We consider a range of reasonably possible amounts for use as key assumptions and decide upon amounts that represent management's best estimates of market amounts. In the normal course, we make changes to key assumptions so that they reflect current (at time of test) economic conditions, updates of historical information used to develop the key assumptions and changes (if any) in our debt ratings.

The key assumptions for cash flow projections are based upon our approved financial forecasts, which span a period of three years and are discounted, for December 2023 annual impairment test purposes, at a consolidated post-tax notional rate of 6.6% (2022 - 6.6%) and 9.8% (2022 - 9.5%) for the TELUS technology solutions and the digitally-led customer experiences – TELUS International cash-generating units, respectively. These cash flow projections incorporate established corporate targets with respect to operational net carbon neutrality, renewable energy, energy efficiency and waste reduction. For impairment testing valuations, cash flows subsequent to the three-year projection period are extrapolated, for December 2023 annual impairment test purposes, generally using perpetual growth rates of 1.95% (2022 – 1.95%) and 3.0% (2022 – 3.0%) for the TELUS technology solutions cash-generating unit and the digitally-led customer experiences – TELUS International cash-generating unit, respectively; these growth rates do not exceed the long-term average growth rates observed in the markets in which we operate.

We believe that any *reasonably possible* change in the key assumptions on which our calculation of the recoverable amounts of our cash-generating units is based would not cause the cash-generating units' carrying values (including the intangible assets with indefinite lives and goodwill allocated to each cash-generating unit) to exceed their recoverable amounts. If the future were to *adversely* differ from management's best estimates for the key assumptions and associated cash flows were to be materially adversely affected, we could potentially experience future material impairment charges in respect of our intangible assets with indefinite lives and goodwill.

19 leases

We have the right of use of land, buildings and equipment under leases. Most of our leases for real estate that we use for office, retail or network (including mobile site) purposes typically have options to extend the lease terms, which we use to protect our investments in leasehold improvements (including mobile site equipment) and to mitigate relocation risk, and/or which reflect the importance of the underlying real estate right-of-use lease assets to our operations. Judgments about lease terms are determinative of the measurement of right-of-use lease assets and the associated lease liabilities. Our judgment in respect of lease terms for leased real estate utilized in connection with our telecommunications infrastructure, more so than for any other right-of-use lease assets, routinely includes periods covered by options to extend the lease terms, as we are reasonably certain that we will choose to extend such leases.

In the normal course of operations, there are future non-executory cash outflows in respect of leases to which we are potentially exposed and which are not included in our lease liabilities as at the reporting date. A significant portion (approximately one-third) of our mobile site lease payments have consumer price index-based price adjustments and such adjustments will result in future periodic re-measurements of the lease liabilities, with commensurate adjustments to the associated real estate right-of-use lease assets (and associated future depreciation amounts); these adjustments would represent our current variable lease payments. As well, we routinely and necessarily commit to leases that have not yet commenced.

As mandated by Innovation, Science and Economic Development Canada, telecommunications companies are obligated to allow, on their real estate assets owned, on their real estate right-of-use lease assets and/or on equipment they own that is situated on real estate right-of-use lease assets, competitors to co-locate telecommunications infrastructure equipment. Of the real estate right-of-use lease assets we use for the purpose of situating telecommunications infrastructure equipment, less than one-fifth have co-location subleases that we, as lessor, account for as operating leases.

Maturity analyses of lease liabilities are set out in *Note 4(c)* and *Note 26(i)*; the period interest expense in respect thereof is set out in *Note 9*. The additions to, the depreciation charges for, and the carrying amounts of, right-of-use lease assets are set out in *Note 17*. We have not currently elected to exclude low-value and short-term leases from lease accounting.

Years ended December 31 (millions)	*Note*	**2023**	2022
Income from subleasing right-of-use lease assets			
Co-location sublet revenue included in operating service revenues		**$ 17**	$ 18
Other sublet revenue included in other income	*7*	**$ 5**	$ 5
Lease payments		**$ 671**	$ 571

20 other long-term assets

As at December 31 (millions)	*Note*	**2023**	2022
Pension assets	*15*	**$ 316**	$ 307
Unbilled customer finance receivables	*4(b)*	**637**	571
Derivative assets	*4(h)*	**179**	250
Deferred income taxes		**38**	19
Costs incurred to obtain or fulfill contracts with customers		**218**	154
Real estate joint venture advances	*21(a)*	**94**	114
Investments in real estate joint ventures	*21(a)*	**50**	1
Investments in associates	*21(b)*	**232**	120
Portfolio investments [1]			
At fair value through net income		**42**	21
At fair value through other comprehensive income		**502**	467
Prepaid maintenance		**46**	61
Refundable security deposits and other		**139**	118
		$ 2,493	$ 2,203

1 Fair value measured at reporting date using significant other observable inputs (Level 2).

The costs incurred to obtain and fulfill contracts with customers are set out in the following table:

(millions)	Costs incurred to Obtain contracts with customers	Fulfill contracts with customers	Total
Balance as at January 1, 2022	$ 336	$ 6	$ 342
Additions	344	13	357
Amortization	(276)	(4)	(280)
Balance as at December 31, 2022	**404**	**15**	**419**
Additions	**377**	**30**	**407**
Amortization	**(305)**	**(6)**	**(311)**
Balance as at December 31, 2023	**$ 476**	**$ 39**	**$ 515**
Current [1]	**$ 289**	**$ 8**	**$ 297**
Non-current	**187**	**31**	**218**
	$ 476	**$ 39**	**$ 515**

1 Presented in the Consolidated statements of financial position in prepaid expenses.

21 real estate joint ventures and investments in associates

(a) Real estate joint ventures

In 2013, we partnered, as equals, with two arm's-length parties in TELUS Sky, a residential and commercial real estate redevelopment project in Calgary, Alberta. The new-build tower, completed in 2020, was to be built to the LEED Platinum standard for the commercial portion and the Gold standard for the residential portion; activities to obtain LEED certification are underway. During the year ended December 31, 2023, the TELUS Sky real estate joint venture entered into an agreement to sell the income-producing properties and the related net assets to the venture partners; the two arm's-length parties will purchase the residential parcel and we will purchase the commercial parcel. Timing for the closing of these sales and purchases is dependent upon timing for the subdivision of the parcels, as well as other customary closing conditions.

In 2023, we partnered, as equals, with an arm's-length party in residential real estate redevelopment projects in Vancouver, British Columbia.

Summarized financial information

Years ended December 31 (millions)	**2023**	2022
Revenue	**$ 26**	$ 20
Depreciation and amortization [1]	**$ 7**	$ 8
Interest expense	**$ 9**	$ 8
Net income (loss) and comprehensive income (loss) [2]	**$ (20)**	$ (16)

1 Depreciation and amortization of the TELUS Sky investment property ceased upon its classification as held for sale.
2 As the real estate joint ventures are partnerships, no provision is made for income taxes in respect of the partners in determining the real estate joint ventures' net income and comprehensive income.

As at December 31 (millions)	2023	2022
ASSETS		
Current assets		
Cash and temporary investments, net	**$ 5**	$ 8
Other	**29**	27
	34	35
Non-current assets		
Investment property [1]	**326**	330
Investment property under development	**81**	—
Other	**10**	10
	417	340
	$ 451	$ 375
LIABILITIES AND OWNERS' EQUITY		
Current liabilities		
Accounts payable and accrued liabilities	**$ 8**	$ 18
Construction credit facilities [1]	**282**	342
	290	360
Owners' equity		
TELUS [2]	**108**	5
Other partners [3]	**53**	10
	161	15
	$ 451	$ 375

1 Classified as held for sale as at December 31, 2023.
2 The equity amounts recorded by the real estate joint ventures differ from those recorded by us by the amount of the deferred gains on our real estate contributed and the valuation provision we have recorded in excess of that recorded by the real estate joint ventures.
3 Other partners' equity is net of $80 (2022 – $NIL) promissory notes issued to the joint ventures by the arm's-length party in the real estate redevelopment projects in Vancouver, British Columbia.

Our real estate joint ventures activity

Our real estate joint ventures investment activity is set out in the following table.

(millions)	Loans and receivables [1]	Equity [2]
Balance as at January 1, 2022	$ 114	$ (8)
Related to real estate joint ventures' statements of income and other comprehensive income		
Comprehensive income (loss) attributable to us [3]	—	(6)
Valuation provision	—	3
Related to real estate joint ventures' statements of financial position		
Items not affecting currently reported cash flows		
Construction credit facilities financing costs charged by us *(Note 7)*	4	—
Cash flows in the current reporting period		
Construction credit facilities		
Financing costs paid to us	(4)	—
Funds we advanced or contributed, excluding construction credit facilities	—	4
Funds repaid to us and earnings distributed	—	(1)
Balance as at December 31, 2022	114	(8)
Related to real estate joint ventures' statements of income and other comprehensive income		
Comprehensive income (loss) attributable to us [3]	**—**	**(3)**
Valuation provision	**—**	**(2)**
Related to real estate joint ventures' statements of financial position		
Items not affecting currently reported cash flows		
Construction credit facilities financing costs charged by us *(Note 7)*	**6**	**—**
Reduction in construction credit facility and increase in capital contributed	**(20)**	**20**
Our real estate contributed	**—**	**78**
Deferred gains on our remaining interests in our real estate contributed	**—**	**(35)**
Cash flows in the current reporting period		
Construction credit facilities		
Financing costs paid to us	**(6)**	**—**
Funds we advanced or contributed, excluding construction credit facilities	**—**	**4**
Funds repaid to us and earnings distributed	**—**	**(4)**
Balance as at December 31, 2023	**$ 94**	**$ 50**

1 Loans and receivables are included in our Consolidated statements of financial position as Real estate joint venture advances and are comprised of advances under construction credit facilities.

2 We account for our interests in the real estate joint ventures using the equity method of accounting. As at December 31, 2022, we had recorded equity losses in excess of our recorded equity investment in respect of one of the real estate joint ventures; such resulting balance has been included in other long-term liabilities (*Note 27*).

3 As the real estate joint ventures are partnerships, no provision is made for income taxes in respect of the partners in determining the real estate joint ventures' net income and comprehensive income.

We have entered into lease agreements with the TELUS Sky real estate joint venture. During the year ended December 31, 2023, the TELUS Sky real estate joint venture recognized $9 million (2022 – $8 million) of revenue from our office tenancy; of this amount, as at the statement of financial position date, one-third was due to our economic interest and two-thirds was due to our partners' economic interests.

Construction credit facilities

The TELUS Sky real estate joint venture has a credit agreement, maturing July 12, 2024 (2022 - July 15, 2023), with Canadian financial institutions and others (as 66-2/3% lenders) and TELUS Corporation (as 33-1/3% lender), that provides $282 million (2022 - $342 million) of construction financing for the project. The construction credit facilities contain customary real estate construction financing representations, warranties and covenants and are secured by demand debentures constituting first fixed and floating charge mortgages over the underlying real estate assets. The construction credit facilities are available by way of bankers' acceptance or prime loan and bear interest at rates in line with similar construction financing facilities.

(b) Investments in associates

As at December 31, 2023, we had a 43% (2022 – 32%) equity interest in Miovision Technologies Incorporated, an associate that is incorporated in Canada and is complementary to, and is viewed to grow, our existing Internet of Things business; our judgment is that we obtained significant influence over the associate concurrent with acquiring our initial equity interest. Miovision Technologies Incorporated is developing a suite of hardware and cloud-based solutions that provide cities with the data and tools they need to reduce traffic congestion, make better urban planning decisions and improve safety on their roads. Our aggregate interests in Miovision Technologies Incorporated and in other individually immaterial associates as at December 31, 2023, totalled $184 million (2022 – $75 million) and $48 million (2022 – $45 million), respectively.

22 short-term borrowings

On July 26, 2002, one of our subsidiaries, TELUS Communications Inc., entered into an agreement with an arm's-length securitization trust associated with a major Schedule I bank under which it is currently able to sell an interest in certain trade receivables up to a maximum of $600 million (unchanged from December 31, 2022). The term of this revolving-period securitization agreement ends December 31, 2024 (unchanged from December 31, 2022), and it requires minimum cash proceeds of $100 million from monthly sales of interests in certain trade receivables. TELUS Communications Inc. is required to maintain a credit rating of at least BB (unchanged from December 31, 2022) from DBRS Limited or the securitization trust may require that the sale program be wound down prior to the end of the term.

Sales of trade receivables in securitization transactions are recognized as collateralized short-term borrowings and thus do not result in our de-recognition of the trade receivables sold. When we sell our trade receivables, we retain reserve accounts, which are retained interests in the securitized trade receivables, and servicing rights. As at December 31, 2023, we had sold to the trust (but continued to recognize) trade receivables of $121 million (2022 - $118 million). Short-term borrowings of $100 million (2022 - $100 million) are comprised of amounts advanced to us by the arm's-length securitization trust pursuant to the sale of trade receivables.

The balance of short-term borrowings (if any) is comprised of amounts drawn on bilateral bank facilities and/or other.

23 accounts payable and accrued liabilities

As at December 31 (millions)	2023	2022
Accrued liabilities	**$ 1,342**	$ 1,593
Payroll and other employee-related liabilities	**674**	656
Restricted share units liability	**—**	1
	2,016	2,250
Trade accounts payable [1]	**996**	1,382
Interest payable	**235**	206
Indirect taxes payable and other	**144**	114
	$ 3,391	$ 3,952

1 The composition of trade accounts payable varies due to factors that include suppliers' invoice timing, data processing cycle timing and the seasonal nature of some of business activities, as well as whether the statement of financial position date is a business day. Trade accounts payable represent future payments for invoices received in respect of both operating and capital activities, and may include amounts for assessed and self-assessed government remittances.

Initiated in 2023, we have a supply chain financing program that allows suppliers of qualifying trade accounts payable to choose to be paid in advance of industry-standard payment terms by an arm's-length third party; in turn, we reimburse the arm's-length third party for those payments when the trade accounts payable would otherwise have been due.

24 advance billings and customer deposits

As at December 31 (millions)	2023	2022
Advance billings	**$ 718**	$ 662
Deferred customer activation and connection fees	**3**	5
Customer deposits	**15**	12
Contract liabilities	**736**	679
Other	**235**	212
	$ 971	$ 891

Contract liabilities represent our future performance obligations to customers in respect of services and/or equipment for which we have received consideration from the customer or for which an amount is due from the customer. Our contract liability balances, and the changes in those balances, are set out in the following table:

Years ended December 31 (millions)	*Note*	**2023**	2022
Balance, beginning of period		**$ 914**	$ 870
Revenue deferred in previous period and recognized in current period		**(625)**	(630)
Net additions arising from operations		**678**	623
Additions arising from business acquisitions		**7**	51
Balance, end of period		**$ 974**	$ 914
Current		**$ 886**	$ 826
Non-current	*27*		
Deferred revenues		**84**	82
Deferred customer activation and connection fees		**4**	6
		$ 974	$ 914
Reconciliation of contract liabilities presented in the Consolidated statements of financial position – current			
Gross contract liabilities		**$ 886**	$ 826
Reclassification to contract assets of contracts with contract liabilities less than contract assets	*6(c)*	**(137)**	(133)
Reclassification from contract assets of contracts with contract assets less than contract liabilities	*6(c)*	**(13)**	(14)
		$ 736	$ 679

25 provisions

(millions)	Asset retirement obligations	Employee-related	Written put options and contingent consideration	Other	Total
Balance as at January 1, 2022	$ 501	$ 66	$ 203	$ 100	$ 870
Additions [1]	140	94	30	162	426
Reversals	(21)	(1)	(80)	(16)	(118)
Uses	(10)	(75)	(2)	(100)	(187)
Interest effects [2]	(294)	—	6	—	(288)
Effects of foreign exchange, net	—	—	—	1	1
Balance as at December 31, 2022	316	84	157	147	704
Additions	**36**	**547**	**288**	**230**	**1,101**
Reversals	**—**	**(12)**	**(68)**	**(8)**	**(88)**
Uses [3]	**(10)**	**(400)**	**(110)**	**(180)**	**(700)**
Interest effects [2]	**36**	**—**	**17**	**—**	**53**
Effects of foreign exchange, net	**—**	**—**	**(8)**	**(1)**	**(9)**
Balance as at December 31, 2023	**$ 378**	**$ 219**	**$ 276**	**$ 188**	**$ 1,061**
Current	**$ 24**	**$ 215**	**$ —**	**$ 78**	**$ 317**
Non-current	**354**	**4**	**276**	**110**	**744**
Balance as at December 31, 2023	**$ 378**	**$ 219**	**$ 276**	**$ 188**	**$ 1,061**

1 For the year ended December 31, 2022, asset retirement obligations included $28 for the removal of specified telecommunications infrastructure equipment as required by Innovation, Science and Economic Development Canada

2 The difference of $23 (2022 – $(308)) between the asset retirement obligation interest effects in this table and the amount disclosed in *Note 9* is a result of the change in the discount rates applicable to the provision, with such difference included in the cost of the associated asset(s) by way of being included with (netted against) the additions detailed in *Note 17*.
3 Written put options and contingent consideration uses include $54 from the issuance of Common Shares.

Asset retirement obligations

We establish provisions for liabilities associated with the retirement of property, plant and equipment when those obligations result from the acquisition, construction, development and/or normal operation of the assets. We expect that the associated cash outflows in respect of the balance accrued as at the financial statement date will occur proximate to the dates these assets are retired.

Employee-related

Our employee-related provisions are largely in respect of restructuring activities (as discussed further in *Note 16(b)*). The timing of the associated cash outflows in respect of the balance accrued as at the financial statement date is substantially short-term in nature.

Written put options and contingent consideration

In connection with certain business acquisitions, we have established provisions for written put options in respect of non-controlling interests. Provisions for some written put options are determined based on the net present value of estimated future earnings, and such provisions require us to make key economic assumptions about the future. Similarly, we have established provisions for contingent consideration. No cash outflows in respect of the written put options are expected prior to their initial exercisability, and no cash outflows in respect of contingent consideration are expected prior to completion of the periods during which the contingent consideration can be earned; in some instances, settlement of the provision for written put options may include the use of equity instruments.

Other

The provisions for other include: legal claims; non-employee-related restructuring activities; and contract termination costs and onerous contracts related to business acquisitions. Other than as set out following, we expect that the associated cash outflows in respect of the balance accrued as at the financial statement date will occur over an indeterminate multi-year period.

As discussed further in *Note 29*, we are involved in a number of legal claims and we are aware of certain other possible legal claims. In respect of legal claims, we establish provisions, when warranted, after taking into account legal assessments, information presently available, and the expected availability of recourse. The timing of cash outflows associated with legal claims cannot be reasonably determined.

In connection with business acquisitions, we have established provisions for contract termination costs and onerous contracts acquired.

26 long-term debt

(a) Details of long-term debt

As at December 31 (millions)	*Note*	**2023**	2022
Senior unsecured			
TELUS Corporation senior notes	*(b)*	**$ 20,301**	$ 18,660
TELUS Corporation commercial paper	*(c)*	**1,021**	1,458
TELUS Corporation credit facilities	*(d)*	**1,144**	1,145
TELUS Communications Inc. debentures	*(e)*	**200**	199
Secured			
TELUS International (Cda) Inc. credit facility	*(f)*	**1,781**	914
Other	*(g)*	**288**	321
		24,735	22,697
Lease liabilities	*(h)*	**2,614**	2,340
Long-term debt		**$ 27,349**	$ 25,037
Current		**$ 3,994**	$ 2,541
Non-current		**23,355**	22,496
Long-term debt		**$ 27,349**	$ 25,037

(b) TELUS Corporation senior notes

The notes are senior unsecured and unsubordinated obligations and rank equally in right of payment with all of our existing and future unsecured unsubordinated obligations, are senior in right of payment to all of our existing and future subordinated indebtedness, and are effectively subordinated to all existing and future obligations of, or guaranteed by, our subsidiaries. The indentures governing the notes contain covenants that, among other things, place limitations on our ability, and the ability of certain of our subsidiaries, to: grant security in respect of indebtedness; enter into sale-leaseback transactions; and incur new indebtedness.

Interest is payable semi-annually. The notes require us to make an offer to repurchase them at a price equal to 101% of their principal amount plus accrued and unpaid interest to the date of repurchase upon the occurrence of a change in control triggering event, as defined in the supplemental trust indenture.

At any time prior to the respective maturity dates set out in the table below, the notes issued prior to September 2023 are redeemable at our option, in whole at any time, or in part from time to time, on not fewer than 30 days' and not more than 60 days' prior notice; for notes issued subsequent to August 2023, the notice period is not fewer than 10 days' and not more than 60 days' prior notice. On or after the respective redemption present value spread cessation dates set out in the table below, the notes issued prior to September 2023 are redeemable at our option, in whole but not in part, on not fewer than 30 days' and not more than 60 days' prior notice, at redemption prices equal to 100% of the principal amounts thereof; for notes issued subsequent to August 2023, the notice period is not fewer than 10 days' and not more than 60 days' prior notice. In addition, accrued and unpaid interest, if any, will be paid to the date fixed for redemption.

					Principal face amount		Redemption present value spread	
Series	Issued	Maturity	Issue price	Effective interest rate [1]	Originally issued	Outstanding at financial statement date	Basis points [2]	Cessation date
3.35% Notes, Series CJ	December 2012	March 2023	$ 998.83	3.36 %	$ 500 million	$ NIL	40	Dec. 15, 2022
3.35% Notes, Series CK	April 2013	April 2024	$ 994.35	3.41 %	$ 1.1 billion	$ 1.1 billion	36	Jan. 2, 2024
3.75% Notes, Series CQ	September 2014	January 2025	$ 997.75	3.78 %	$ 800 million	$ 800 million	38.5	Oct. 17, 2024
3.75% Notes, Series CV	December 2015	March 2026	$ 992.14	3.84 %	$ 600 million	$ 600 million	53.5	Dec. 10, 2025
2.75% Notes, Series CZ	July 2019	July 2026	$ 998.73	2.77 %	$ 800 million	$ 800 million	33	May 8, 2026
2.80% U.S. Dollar Notes [3]	September 2016	February 2027	US$ 991.89	2.89 %	US$ 600 million	US$ 600 million	20	Nov. 16, 2026
3.70% U.S. Dollar Notes [3]	March 2017	September 2027	US$ 998.95	3.71 %	US$ 500 million	US$ 500 million	20	June 15, 2027
2.35% Notes, Series CAC	May 2020	January 2028	$ 997.25	2.39 %	$ 600 million	$ 600 million	48	Nov. 27, 2027
3.625% Notes, Series CX	March 2018	March 2028	$ 989.49	3.75 %	$ 600 million	$ 600 million	37	Dec. 1, 2027
3.30% Notes, Series CY	April 2019	May 2029	$ 991.75	3.40 %	$ 1.0 billion	$ 1.0 billion	43.5	Feb. 2, 2029
5.00% Notes, Series CAI	September 2022	September 2029	$ 995.69	5.07 %	$ 350 million	$ 350 million	46.5	July 13, 2029
3.15% Notes, Series CAA	December 2019	February 2030	$ 996.49	3.19 %	$ 600 million	$ 600 million	39.5	Nov. 19, 2029
5.60% Notes, Series CAM	September 2023	September 2030	$ 998.85	5.62 %	$ 500 million	$ 500 million	46	July 9, 2030
2.05% Notes, Series CAD	October 2020	October 2030	$ 997.93	2.07 %	$ 500 million	$ 500 million	38	July 7, 2030
2.85% Sustainability-Linked Notes, Series CAF	June 2021	November 2031	$ 997.52	2.88 % [4]	$ 750 million	$ 750 million	34	Aug. 13, 2031
3.40% U.S. Dollar Sustainability-Linked Notes [3]	February 2022	May 2032	US$ 997.13	3.43 % [4]	US$ 900 million	US$ 900 million	25	Feb. 13, 2032
5.25% Sustainability-Linked Notes, Series CAG	September 2022	November 2032	$ 996.73	5.29 % [4]	$ 1.1 billion	$ 1.1 billion	51.5	Aug. 15, 2032
4.95% Sustainability-Linked Notes, Series CAJ	March 2023	March 2033	$ 998.28	4.97 % [4]	$ 500 million	$ 500 million	54.5	Dec. 28, 2032
5.75% Sustainability-Linked Notes, Series CAK	September 2023	September 2033	$ 997.82	5.78 % [4]	$ 850 million	$ 850 million	52	June 8, 2033
4.40% Notes, Series CL	April 2013	April 2043	$ 997.68	4.41 %	$ 600 million	$ 600 million	47	Oct. 1, 2042
5.15% Notes, Series CN	November 2013	November 2043	$ 995.00	5.18 %	$ 400 million	$ 400 million	50	May 26, 2043
4.85% Notes, Series CP	Multiple [5]	April 2044	$ 987.91 [5]	4.93 % [5]	$ 500 million [5]	$ 900 million [5]	46	Oct. 5, 2043
4.75% Notes, Series CR	September 2014	January 2045	$ 992.91	4.80 %	$ 400 million	$ 400 million	51.5	July 17, 2044
4.40% Notes, Series CU	March 2015	January 2046	$ 999.72	4.40 %	$ 500 million	$ 500 million	60.5	July 29, 2045
4.70% Notes, Series CW	Multiple [6]	March 2048	$ 998.06 [6]	4.71 % [6]	$ 325 million [6]	$ 475 million [6]	58.5	Sept. 6, 2047
4.60% U.S. Dollar Notes [3]	June 2018	November 2048	US$ 987.60	4.68 %	US$ 750 million	US$ 750 million	25	May 16, 2048
4.30% U.S. Dollar Notes [3]	May 2019	June 2049	US$ 990.48	4.36 %	US$ 500 million	US$ 500 million	25	Dec. 15, 2048
3.95% Notes, Series CAB	Multiple [7]	February 2050	$ 997.54 [7]	3.97 % [7]	$ 400 million [7]	$ 800 million [7]	57.5	Aug. 16, 2049
4.10% Notes, Series CAE	April 2021	April 2051	$ 994.70	4.13 %	$ 500 million	$ 500 million	53	Oct. 5, 2050
5.65% Notes, Series CAH	September 2022	September 2052	$ 996.13	5.68 %	$ 550 million	$ 550 million	61.5	Mar. 13, 2052
5.95% Notes, Series CAL	September 2023	September 2053	$ 992.67	6.00 %	$ 400 million	$ 400 million	61.5	Mar. 8, 2053

1 The effective interest rate is that which the notes would yield to an initial debt holder if held to maturity.
2 For Canadian dollar-denominated notes, the redemption price is equal to the greater of (i) the present value of the notes discounted at the Government of Canada yield plus the redemption present value spread calculated over the period to the redemption present value spread cessation date, or (ii) 100% of the principal amount thereof.

For U.S. dollar-denominated notes, the redemption price is equal to the greater of (i) the present value of the notes discounted at the U.S. Adjusted Treasury Rate (at the U.S. Treasury Rate for the 3.40% U.S. Dollar Sustainability-Linked Notes) plus the redemption present value spread calculated over the period to the redemption present value spread cessation date, or (ii) 100% of the principal amount thereof.

3 We have entered into foreign exchange derivatives (cross currency interest rate exchange agreements) that effectively convert the principal payments and interest obligations to Canadian dollar obligations as follows:

Series	Interest rate fixed at	Canadian dollar equivalent principal	Exchange rate
2.80% U.S. Dollar Notes	2.95 %	$ 792 million	$ 1.3205
3.70% U.S. Dollar Notes	3.41 %	$ 667 million	$ 1.3348
3.40% U.S. Dollar Sustainability-Linked Notes	3.89 %	$ 1,148 million	$ 1.2753
4.60% U.S. Dollar Notes	4.41 %	$ 974 million	$ 1.2985
4.30% U.S. Dollar Notes	4.27 %	$ 672 million	$ 1.3435

4 If we have not obtained a sustainability performance target verification assurance certificate for the fiscal year ended December 31, 2030, the sustainability-linked notes will bear interest at an increased rate from the trigger date through to their individual maturities. The interest rate on certain of the sustainability-linked notes may also increase (MFN step-up) in certain circumstances if we fail to meet additional sustainability and/or environmental, social or governance targets as may be provided for in a sustainability-linked bond; the interest rate on the sustainability-linked notes, however, in no event can exceed the initial rate by more than the aggregate MFN step-up and trigger event limit, whether as a result of not obtaining a sustainability performance target verification assurance certificate and/or any targets provided for in one or more future sustainability-linked bonds. Similarly, if we redeem any of the sustainability-linked notes and we have not obtained a sustainability performance target verification assurance certificate at the end of the fiscal year immediately preceding the date fixed for redemption, the interest accrued (if any) will be determined using the rates set out in the following table:

	Sustainability performance target verification assurance certificate				
Series	Fiscal year	Trigger date	Post-trigger event interest rate	Aggregate MFN step-up and trigger event limit	Redemption interest accrual rate if certificate not obtained
2.85% Sustainability-Linked Notes, Series CAF	2030	Nov. 14, 2030	3.85 %	N/A	3.85 %
3.40% U.S. Dollar Sustainability-Linked Notes	2030	Nov. 14, 2030	4.40 %	1.50 %	4.40 %
5.25% Sustainability-Linked Notes, Series CAG	2030	Nov. 15, 2030	6.00 %	1.50 %	6.00 %
4.95% Sustainability-Linked Notes, Series CAJ	2030	Mar. 28, 2031	5.70 %	1.50 %	5.70 %
5.75% Sustainability-Linked Notes, Series CAK	2030	Apr. 30, 2031	6.35 %	1.20 %	6.35 %

5 $500 million of 4.85% Notes, Series CP were issued in April 2014 at an issue price of $ 998.74 and an effective interest rate of 4.86%. This series of notes was reopened in December 2015 and a further $ 400 million of notes were issued at an issue price of $974.38 and an effective interest rate of 5.02%.

6 $325 million of 4.70% Notes, Series CW were issued in March 2017 at an issue price of $ 990.65 and an effective interest rate of 4.76%. This series of notes was reopened in February 2018 and a further $ 150 million of notes were issued in March 2018 at an issue price of $1,014.11 and an effective interest rate of 4.61%.

7 $400 million of 3.95% Notes, Series CAB were issued in December 2019 at an issue price of $ 991.54 and an effective interest rate of 4.00%. This series of notes was reopened in May 2020 and a further $ 400 million of notes were issued at an issue price of $1,003.53 and an effective interest rate of 3.93%.

(c) TELUS Corporation commercial paper

TELUS Corporation has an unsecured commercial paper program, which is backstopped by our revolving $ 2.75 billion syndicated credit facility (see *(d)*) and is to be used for general corporate purposes, including capital expenditures and investments. This program enables us to issue commercial paper, subject to conditions related to debt ratings, up to a maximum aggregate equivalent amount at any one time of $2.0 billion (US$1.5 billion maximum). Foreign currency forward contracts are used to manage currency risk arising from issuing commercial paper denominated in U.S. dollars. Commercial paper debt is due within one year and is classified as a current portion of long-term debt, as the amounts are fully supported, and we expect that they will continue to be supported, by the revolving credit facility, which has no repayment requirements within the next year. As at December 31, 2023, we had $1.0 billion (2022 - $1.5 billion) of commercial paper outstanding, all of which was denominated in U.S. dollars (US$ 0.8 billion; 2022 - US$1.1 billion), with an effective average interest rate of 5.8%, maturing through June 2024.

(d) TELUS Corporation credit facilities

As at December 31, 2023, TELUS Corporation had an unsecured revolving $ 2.75 billion bank credit facility, expiring on July 14, 2028 (2022 - April 6, 2026), with a syndicate of financial institutions, which is to be used for general corporate purposes, including the backstopping of commercial paper.

As at December 31, 2023, TELUS Corporation had an unsecured non-revolving $ 1.1 billion bank credit facility, maturing July 9, 2024, with a syndicate of financial institutions, which is to be used for general corporate purposes. As at December 31, 2023, we had drawn $1.1 billion on the non-revolving bank credit facility, with an effective average interest rate of 6.0% through January 2024.

The TELUS Corporation credit facilities bear interest at prime rate, U.S. Dollar Base Rate, a bankers' acceptance rate or term secured overnight financing rate (SOFR) (as such terms are used or defined in the credit facilities), plus applicable margins. The credit facilities contain customary representations, warranties and covenants, including two financial quarter-end ratio tests. These tests are that our leverage ratio must not exceed 4.25:1.00 and our operating cash flow to interest expense ratio must not be less than 2.00:1.00, all as defined in the credit facilities.

Continued access to the TELUS Corporation credit facilities is not contingent upon TELUS Corporation maintaining a specific credit rating.

As at December 31 (millions)	**2023**	2022
Net available	**$ 1,729**	$ 1,292
Backstop of commercial paper	**1,021**	1,458
Gross available revolving $2.75 billion bank credit facility	**$ 2,750**	$ 2,750

We had $60 million of letters of credit outstanding as at December 31, 2023 (2022 – $ 119 million), issued under various uncommitted facilities; such letter of credit facilities are in addition to the ability to provide letters of credit pursuant to our committed revolving bank credit facility.

We had arranged $338 million of incremental letters of credit to allow us to participate in the Innovation, Science and Economic Development Canada 3800 MHz band spectrum auction that was held in October-November 2023, as discussed further in *Note 18(a)*.

(e) TELUS Communications Inc. debentures

The 8.80% Series B Debentures were issued in the amount of $ 200 million in September 1995 at a price of $ 995.10 by a predecessor corporation of TELUS Communications Inc., AGT Limited, under a Trust Indenture dated August 24, 1994, and a supplemental trust indenture dated September 22, 1995. Interest is payable semi-annually. At any time prior to maturity in September 2025, the debentures are redeemable at our option, in whole at any time, or in part from time to time, on not fewer than 30 days' prior notice. The redemption price is equal to the greater of (i) the present value of the debentures discounted at the Government of Canada yield plus the redemption present value spread of 15 basis points, or (ii) 100% of the principal amount thereof. In addition, accrued and unpaid interest, if any, will be paid to the date fixed for redemption.

The debentures became obligations of TELUS Communications Inc. pursuant to an amalgamation on January 1, 2001, are not secured by any mortgage, pledge or other charge, and are governed by certain covenants, including a negative pledge and a limitation on issues of additional debt, subject to a debt to capitalization ratio and an interest coverage test. Effective June 12, 2009, TELUS Corporation guaranteed the payment of the debentures' principal and interest.

(f) TELUS International (Cda) Inc. credit facility

As at December 31, 2023 and 2022, TELUS International (Cda) Inc. had a credit facility, secured by its assets, expiring on January 3, 2028, with a syndicate of financial institutions, including TELUS Corporation. The credit facility is comprised of revolving components totalling US$800 million, with TELUS Corporation as approximately 7.2% lender, and amortizing term loan components totalling US$1.2 billion, with TELUS Corporation as approximately 7.2% lender. The credit facility is non-recourse to TELUS Corporation. The outstanding revolving components and term loan components had a weighted average interest rate of 7.5% as at December 31, 2023.

The TELUS International (Cda) Inc. credit facility bears interest at prime rate, U.S. Dollar Base Rate, a bankers' acceptance rate or term secured overnight financing rate (SOFR) (all such terms as used or defined in the credit facility), plus applicable margins. The credit facility contains customary representations, warranties and covenants, including two financial quarter-end ratio tests: the TELUS International (Cda) Inc. quarter-end net debt to operating cash flow ratio must not exceed 4.25:1.00 through fiscal 2023, 3.75:1.00 through fiscal 2024, and 3.25:1.00 subsequently; and the quarter-end operating cash flow to debt service (interest and scheduled principal repayment) ratio must not be less than 1.50:1.00; all as defined in the credit facility.

The term loan components are subject to amortization schedules which require that 5% of the principal advanced be repaid each year of the term of the agreement, with the balance due at maturity.

As at December 31 (millions)	**2023**			2022		
	Revolving components	Term loan components [1]	Total	Revolving components	Term loan components [1]	Total
Available [2]	**US$ 492**	**US$ —**	**US$ 492**	US$ 658	US$ 600	US$ 1,258
Outstanding						
Due to other	**286**	**1,072**	**1,358**	132	557	689
Due to TELUS Corporation	**22**	**83**	**105**	10	43	53
	US$ 800	**US$ 1,155**	**US$ 1,955**	US$ 800	US$ 1,200	US$ 2,000

1 Relative to amounts owed to the syndicate of financial institutions, excluding TELUS Corporation, we have entered into foreign exchange derivatives (cross currency interest rate exchange agreements) that effectively convert an amortizing amount of US$431 of the principal payments, and associated interest obligations, to European euro obligations with an effective fixed interest rate of 2.6% and an effective fixed exchange rate of US$1.088:€1.00. These have been accounted for as a net investment hedge in a foreign operation (see *Note 4*).

2 Of the amounts available at December 31, 2022, US$ 525 of the revolving components and US$ 600 of the term loan components had a condition precedent of consummating the WillowTree acquisition, which occurred on January 3, 2023 (see *Note 18(b)).*

(g) Other

Other liabilities bear interest at 3.3%, are secured by the AWS-4 spectrum licences associated with these other liabilities, and are subject to amortization schedules, so that the principal is repaid over the periods to maturity, the last period ending March 31, 2035.

(h) Lease liabilities

Lease liabilities are subject to amortization schedules, so that the principal is repaid over various periods, including reasonably expected renewals. The weighted average interest rate on lease liabilities was approximately 5.7% as at December 31, 2023.

(i) Long-term debt maturities

Anticipated requirements for long-term debt repayments, calculated for long-term debt owing as at December 31, 2023, are as follows:

Composite long-term debt denominated in	Canadian dollars			U.S. dollars					Other currencies	
	Long-term debt, excluding	Leases		Long-term debt, excluding	Leases	Currency swap agreement amounts to be exchanged			Leases	
Years ending December 31 (millions)	leases	*(Note 19)*	Total	leases	*(Note 19)*	(Receive) [1]	Pay	Total	*(Note 19)*	Total
2024	$ 2,267	$ 470	$ 2,737	$ 1,094	$ 29	$ (1,073)	$ 1,092	$ 1,142	$ 59	$ 3,938
2025	1,023	364	1,387	74	28	(28)	32	106	52	1,545
2026	1,424	263	1,687	74	29	(28)	32	107	44	1,838
2027	25	215	240	1,529	25	(1,484)	1,491	1,561	32	1,833
2028	1,226	117	1,343	1,501	15	(452)	459	1,523	27	2,893
2029-2033	6,279	301	6,580	1,190	37	(1,190)	1,148	1,185	56	7,821
Thereafter	5,561	256	5,817	1,653	—	(1,653)	1,646	1,646	—	7,463
Future cash outflows in respect of composite long-term debt principal repayments	17,805	1,986	19,791	7,115	163	(5,908)	5,900	7,270	270	27,331
Future cash outflows in respect of associated interest and like carrying costs [2]	8,869	436	9,305	2,905	77	(2,501)	2,405	2,886	75	12,266
Undiscounted contractual maturities (*Note 4(c)*)	$ 26,674	$ 2,422	$ 29,096	$ 10,020	$ 240	$ (8,409)	$ 8,305	$ 10,156	$ 345	$ 39,597

1 Where applicable, cash flows reflect foreign exchange rates as at December 31, 2023.
2 Future cash outflows in respect of associated interest and like carrying costs for commercial paper and amounts drawn under our credit facilities (if any) have been calculated based upon the rates in effect as at December 31, 2023.

27 other long-term liabilities

As at December 31 (millions)	*Note*	**2023**	2022
Contract liabilities	*24*	**$ 84**	$ 82
Other		**2**	2
Deferred revenues		**86**	84
Pension benefit liabilities	*15*	**453**	392
Other post-employment benefit liabilities		**76**	68
Derivative liabilities	*4(h)*	**191**	24
Investment in real estate joint ventures	*21(a)*	**—**	9
Other		**57**	53
		863	630
Deferred customer activation and connection fees	*24*	**4**	6
		$ 867	$ 636

28 owners' equity

(a) TELUS Corporation Common Share capital - general

Our authorized share capital is as follows:

As at December 31	**2023**	2022
First Preferred Shares	**1 billion**	1 billion
Second Preferred Shares	**1 billion**	1 billion
Common Shares	**4 billion**	4 billion

Only holders of Common Shares may vote at our general meetings, with each holder of Common Shares entitled to one vote per Common Share held at all such meetings so long as not less than 66-2/3% of the issued and outstanding Common Shares are owned by Canadians. With respect to priority in the payment of dividends and in the distribution of assets in the event of our liquidation, dissolution or winding-up, whether voluntary or involuntary, or any other distribution of our assets among our shareholders for the purpose of winding up our affairs, preferences are as follows: First Preferred Shares; Second Preferred Shares; and finally Common Shares.

As at December 31, 2023, approximately 119 million Common Shares were reserved for issuance from Treasury under a dividend reinvestment and share purchase plan (see *Note 13(b)*); approximately 46 million Common Shares were reserved for issuance from Treasury under a restricted share unit plan (see *Note 14(b)*); and approximately 12 million Common Shares were reserved for issuance from Treasury under a share option plan (see *Note 14(d)*).

(b) Purchase of TELUS Corporation Common Shares for cancellation pursuant to normal course issuer bid

As referred to in *Note 3*, we may purchase a portion of our Common Shares for cancellation pursuant to normal course issuer bids in order to maintain or adjust our capital structure. In June 2022, we received approval for a normal course issuer bid to purchase and cancel up to 10 million of our Common Shares (up to a maximum amount of $ 250 million) from June 6, 2022, to June 5, 2023. During the years ended December 31, 2023 and 2022, we did not purchase or cancel any shares pursuant to normal course issuer bids.

(c) Subsidiary with significant non-controlling interest

Our TELUS International (Cda) Inc. subsidiary is incorporated under the *Business Corporations Act* (British Columbia) and has geographically dispersed operations, with its principal places of business located in Asia, Central America, Europe and North America.

Changes in our economic and voting interests during the years ended December 31, 2023 and 2022, and which are reflected in the Consolidated statement of changes in owners' equity, are set out in the following table.

	Economic interest [1]		Voting interest [1]	
Years ended December 31	**2023**	2022	**2023**	2022
Interest in TELUS International (Cda) Inc., beginning of period	**56.6 %**	55.1 %	**72.4 %**	70.9 %
Effect of				
Issue of TELUS International (Cda) Inc. subordinate voting shares as consideration in business acquisition (*Note 18(b)*)	**(1.4)**	—	**(0.2)**	—
TELUS Corporation acquisition of shares from non-controlling interests [2]	**0.9**	1.6	**1.2**	1.5
Share-based compensation and other	**(0.1)**	(0.1)	**—**	—
Non-controlling interests conversion of multiple voting shares to subordinate voting shares	**—**	—	**12.0**	—
Interest in TELUS International (Cda) Inc., end of period	**56.0 %**	56.6 %	**85.4 %**	72.4 %

1 Due to the voting rights associated with the multiple voting shares held by TELUS Corporation, our economic and voting interests differ.

2 Acquisition of shares from non-controlling interests for $57 million (2022 – $123 million), of which $32 million (2022 – $86 million) was charged to amounts recorded in owners' equity for contributed surplus and the balance was charged to non-controlling interests.

Summarized financial information

Summarized financial information of our TELUS International (Cda) Inc. subsidiary is set out in the accompanying table.

As at, or for the years ended, December 31 (millions) [1]	**2023**	2022
Statement of financial position		
Current assets	**$ 1,122**	$ 926
Non-current assets	**$ 5,395**	$ 3,875
Current liabilities	**$ 990**	$ 733
Non-current liabilities	**$ 2,829**	$ 1,581
Statement of income and other comprehensive income		
Revenue and other income	**$ 3,682**	$ 3,214
Net income	**$ 72**	$ 235
Comprehensive income	**$ 14**	$ 327
Statement of cash flows		
Cash provided by operating activities	**$ 492**	$ 519
Cash used by investing activities	**$ (1,273)**	$ (156)
Cash provided (used) by financing activities	**$ 780**	$ (342)

1 As required by IFRS-IASB, this summarized financial information excludes inter-company eliminations.

29 contingent liabilities

(a) Claims and lawsuits

General

A number of claims and lawsuits (including class actions and intellectual property infringement claims) seeking damages and other relief are pending against us and, in some cases, other mobile carriers and telecommunications service providers. As well, we have received notice of, or are aware of, certain possible claims (including intellectual property infringement claims) against us and, in some cases, other mobile carriers and telecommunications service providers.

It is not currently possible for us to predict the outcome of such claims, possible claims and lawsuits due to various factors, including: the preliminary nature of some claims; uncertain damage theories and demands; an incomplete factual record; uncertainty concerning legal theories and procedures and their resolution by the courts, at both the trial and the appeal levels; and the unpredictable nature of opposing parties and their demands.

However, subject to the foregoing limitations, management is of the opinion, based upon legal assessments and information presently available, that it is unlikely that any liability, to the extent not provided for through insurance or otherwise, would have a material effect on our financial position and the results of our operations, including cash flows, with the exception of the items enumerated following.

Certified class actions

Certified class actions against us include the following:

Per minute billing class action

In 2008, a class action was brought in Ontario against us alleging breach of contract, breach of the Ontario *Consumer Protection Act*, breach of the *Competition Act* and unjust enrichment, in connection with our practice of “rounding up” mobile airtime to the nearest minute and charging for the full minute. The action sought certification of a national class. In November 2014, an Ontario class only was certified by the Ontario Superior Court of Justice in relation to the breach of contract, breach of *Consumer Protection Act*, and unjust enrichment claims; all appeals of the certification decision have now been exhausted. At the same time, the Ontario Superior Court of Justice declined to stay the claims of our business customers, notwithstanding an arbitration clause in our customer service agreements with those customers. This latter decision was appealed and on May 31, 2017, the Ontario Court of Appeal dismissed our appeal. The Supreme Court of Canada granted us leave to appeal this decision and on April 4, 2019, granted our appeal and stayed the claims of business customers. Notice of this certified class action was provided to potential class members in 2022.

Call set-up time class actions

In 2005, a class action was brought against us in British Columbia alleging that we have engaged in deceptive trade practices in charging for incoming calls from the moment the caller connects to the network, and not from the moment the incoming call is connected to the recipient. In 2011, the Supreme Court of Canada upheld a stay of all of the causes of action advanced by the plaintiff in this class action, with one exception, based on the arbitration clause that was included in our customer service agreements. The sole exception was the cause of action based on deceptive or unconscionable practices under the British Columbia *Business Practices and Consumer Protection Act*, which the Supreme Court of Canada declined to stay. In January 2016, the British Columbia Supreme Court certified this class action in relation to the claim under the *Business Practices and Consumer Protection Act*. The class is limited to residents of British Columbia who contracted mobile services with us in the period from January 21, 1999, to April 2010. We have appealed the certification decision. A companion class action was brought against us in Alberta at the same time as the British Columbia class action. The Alberta class action duplicates the allegations in the British Columbia action, but has not proceeded to date and is not certified. Subject to a number of conditions, including court approval, we have now settled both the British Columbia and the Alberta class actions.

Uncertified class actions

Uncertified class actions against us include:

9-1-1 class actions

In 2008, a class action was brought in Saskatchewan against us and other Canadian telecommunications carriers alleging that, among other matters, we failed to provide proper notice of 9-1-1 charges to the public, have been deceitfully passing them off as government charges, and have charged 9-1-1 fees to customers who reside in areas where 9-1-1 service is not available. The plaintiffs advance causes of action in breach of contract, misrepresentation and false advertising and seek certification of a national class. A virtually identical class action was filed in Alberta at the same time, but the Alberta Court of Queen's Bench declared that class action expired against us as of 2009. No steps have been taken in this proceeding since 2016.

Public Mobile class actions

In 2014, class actions were brought against us in Quebec and Ontario on behalf of Public Mobile's customers, alleging that changes to the technology, services and rate plans made by us contravene our statutory and common law obligations. In particular, the Quebec action alleges that our actions constitute a breach of the Quebec *Consumer Protection Act*, the Quebec *Civil Code*, and the Ontario *Consumer Protection Act*. On June 28, 2021, the Quebec Superior Court approved the discontinuance of this claim against TELUS. The Ontario class action alleges negligence, breach of express and implied warranty, breach of the *Competition Act*, unjust enrichment, and waiver of tort. No steps have been taken in this proceeding since it was filed and served.

Summary

We believe that we have good defences to the above matters. Should the ultimate resolution of these matters differ from management's assessments and assumptions, a material adjustment to our financial position and the results of our operations, including cash flows, could result. Management's assessments and assumptions include that reliable estimates of any such exposure cannot be made considering the continued uncertainty about: the nature of the damages that may be sought by the plaintiffs; the causes of action that are being, or may ultimately be, pursued; and, in the case of the uncertified class actions, the causes of action that may ultimately be certified.

(b) Indemnification obligations

In the normal course of operations, we provide indemnification in conjunction with certain transactions. The terms of these indemnification obligations range in duration. These indemnifications would require us to compensate the indemnified parties for costs incurred as a result of failure to comply with contractual obligations, or litigation claims or statutory sanctions, or damages that may be suffered by an indemnified party. In some cases, there is no maximum limit on these indemnification obligations. The overall maximum amount of an indemnification obligation will depend on future events and conditions and therefore cannot be reasonably estimated. Where appropriate, an indemnification obligation is recorded as a liability. Other than obligations recorded as liabilities at the time of the related transactions, historically we have not made significant payments under these indemnifications. As at December 31, 2023, we had no liability recorded in respect of our indemnification obligations.

See *Note 21(a)* for details regarding our guarantees to the real estate joint ventures.

(c) Concentration of labour

In October 2021, we commenced collective bargaining with the Telecommunications Workers Union, United Steelworkers Local 1944 (TWU), to renew the collective agreement that expired on December 31, 2021. In early March 2023, the TWU and ourselves reached a tentative four-year collective agreement which would be subject to ratification by members of the TWU. On March 17, 2023, the TWU and ourselves announced that the ratification process was completed with a majority of the TWU members who cast their ballots voting to accept the tentative agreement. The new collective agreement with the TWU is effective from April 16, 2023, to March 31, 2027, and currently covers less than 4,500 team members nationally.

30 related party transactions

(a) Transactions with key management personnel

Our key management personnel have authority and responsibility for overseeing, planning, directing and controlling our activities and consist of our Board of Directors and our Executive Team.

Total compensation expense for key management personnel, and the composition thereof, is as follows:

Years ended December 31 (millions)	2023	2022
Short-term benefits	**$ 20**	$ 17
Post-employment pension [1] and other benefits	**12**	10
Share-based compensation [2]	**39**	65
	$ 71	$ 92

1 The members of our Executive Team are members of our *Pension Plan for Management and Professional Employees of TELUS Corporation* and certain other non-registered, non-contributory supplementary defined benefit and defined contribution pension plans.

2 We accrue an expense for the notional subset of our restricted share units with market performance conditions using a fair value determined by a Monte Carlo simulation. Restricted share units with an equity settlement feature are accounted for as equity instruments. The expense in respect of restricted share units that do not ultimately vest is reversed against the expense that was previously recorded in their respect.

As disclosed in *Note 14*, we made initial awards of share-based compensation in 2023 and 2022 to our key management personnel, as set out in the following table. As most of these awards are cliff-vesting or graded-vesting and have multi-year requisite service periods, the related expense is being recognized rateably over a period of years and thus only a portion of the 2023 and 2022 initial awards is included in the amounts in the table above.

Years ended December 31 ($ in millions)	Number of units	Notional value [1]	Grant-date fair value [1]
2023			
TELUS Corporation			
Restricted share units	**1,237,272**	**$ 34**	**$ 36**
TELUS International (Cda) Inc.			
Restricted share units	**353,789**	**10**	**10**
		$ 44	**$ 46**
2022			
TELUS Corporation			
Restricted share units	1,007,431	$ 32	$ 39
TELUS International (Cda) Inc.			
Restricted share units	265,617	9	9
		$ 41	$ 48

1 The notional value of restricted share units is determined by multiplying the equity share price at the time of award by the number of units awarded; the grant-date fair value differs from the notional value because the fair values of some awards have been determined using a Monte Carlo simulation (see *Note 14(b)*). The notional value of share options has been determined using an option pricing model.

The amount recorded for liability-accounted restricted share units and share options outstanding as at December 31, 2023, was $NIL (2022 - $1 million).

Our *Directors' Deferred Share Unit Plan* provides that, in addition to his or her annual equity grant of deferred share units, a director may elect to receive his or her annual retainer and meeting fees in deferred share units, TELUS Corporation Common Shares or cash. Deferred share units entitle directors to a specified number of TELUS Corporation Common Shares. Deferred share units are settled when a director ceases to be a director, for any reason, at a time elected by the director in accordance with the *Directors' Deferred Share Unit Plan*; during the years ended December 31, 2023 and 2022, no amounts were paid out in respect of deferred share units accounted for as liabilities and 534,420 (2022 - NIL) deferred share units accounted for as equity, with a weighted average grant-date fair value of $23.56 (2022 - N/A) were settled in equity. As at December 31, 2023 and 2022, no share-based compensation awards accounted for as liabilities were outstanding.

Employment agreements with members of the Executive Team typically provide for severance payments if an executive's employment is terminated without cause: generally, 18–24 months of base salary, benefits and accrual of pension service in lieu of notice, and 50% of base salary in lieu of an annual cash bonus. In the event of a change in control, Executive Team members are not entitled to treatment any different than that given to our other employees with respect to non-vested share-based compensation.

(b) Transactions with defined benefit pension plans

During the year ended December 31, 2023, we provided our defined benefit pension plans with management and administrative services on a cost recovery basis and actuarial services on an arm's-length basis; the charges for these services amounted to $10 million (2022 – $7 million).

(c) Transactions with real estate joint ventures and associate

During the years ended December 31, 2023 and 2022, we had transactions with the real estate joint ventures, which are related parties, as set out in *Note 21*. As at December 31, 2023, we had recorded lease liabilities of $ 84 million (2022 - $87 million) in respect of our TELUS Sky leases, and monthly cash payments are made in accordance with the lease agreements; as at the statement of financial position date, one-third of those amounts is due to our economic interest in the real estate joint venture.

During the year ended December 31, 2023, we increased our investment in Miovision Technologies Incorporated, as set out in *Note 21(b)*.

31 additional statement of cash flow information

(a) Statements of cash flows – operating activities and investing activities

Years ended December 31 (millions)	*Note*	**2023**	2022
OPERATING ACTIVITIES			
Net change in non-cash operating working capital			
Accounts receivable		**$ (184)**	$ (312)
Inventories		**53**	(89)
Contract assets		**(4)**	9
Prepaid expenses		**(60)**	(56)
Accounts payable and accrued liabilities		**(268)**	173
Income and other taxes receivable and payable, net		**(72)**	50
Advance billings and customer deposits		**74**	(12)
Provisions		**135**	44
		$ (326)	$ (193)
INVESTING ACTIVITIES			
Cash payments for capital assets, excluding spectrum licences			
Capital asset additions			
Gross capital expenditures			
Property, plant and equipment	*17*	**$ (2,622)**	$ (3,291)
Intangible assets subject to amortization	*18*	**(981)**	(1,021)
		(3,603)	(4,312)
Additions arising from leases	*17*	**781**	840
Capital expenditures	*5*	**(2,822)**	(3,472)
Effect of asset retirement obligations		**(59)**	198
		(2,881)	(3,274)
Other non-cash items included above			
Change in associated non-cash investing working capital		**(360)**	(175)
Non-cash change in asset retirement obligation		**59**	(198)
		(301)	(373)
		$ (3,182)	$ (3,647)

(b) Changes in liabilities arising from financing activities

(millions)	Balanace as at January 1, 2022	Year ended December 31, 2022 Statement of cash flows: Issued or received	Statement of cash flows: Redemptions, repayments or payments	Non-cash changes: Foreign exchange movement (*Note 4(i)*)	Non-cash changes: Other	Balance as at December 31, 2022	**Year ended December 31, 2023** Statement of cash flows: Issued or received	Statement of cash flows: Redemptions, repayments or payments	Non-cash changes: Foreign exchange movement (*Note 4(i)*)	Non-cash changes: Other	Balance as at December 31, 2023
Dividends payable to holders of Common Shares	$ 449	$ —	$ (1,846)	$ —	$ 1,899	$ 502	**$ —**	**$ (2,063)**	**$ —**	**$ 2,111**	**$ 550**
Dividends reinvested in shares from Treasury	—	—	658	—	(658)	—	**—**	**748**	**—**	**(748)**	**—**
	$ 449	$ —	$ (1,188)	$ —	$ 1,241	$ 502	**$ —**	**$ (1,315)**	**$ —**	**$ 1,363**	**$ 550**
Short-term borrowings	$ 114	$ 480	$ (497)	$ —	$ 7	$ 104	**$ 607**	**$ (609)**	**$ —**	**$ 2**	**$ 104**
Long-term debt											
TELUS Corporation senior notes	$ 15,258	$ 3,143	$ —	$ 280	$ (21)	$ 18,660	**$ 2,250**	**$ (500)**	**$ (104)**	**$ (5)**	**$ 20,301**
TELUS Corporation commercial paper	1,900	5,523	(6,077)	112	—	1,458	**5,502**	**(5,929)**	**(10)**	**—**	**1,021**
TELUS Corporation credit facilities	—	1,594	(449)	—	—	1,145	**—**	**—**	**—**	**(1)**	**1,144**
TELUS Communications Inc. debentures	448	—	(249)	—	—	199	**—**	**—**	**—**	**1**	**200**
TELUS International (Cda) Inc. credit facility	1,062	11	(219)	68	(8)	914	**1,471**	**(548)**	**(60)**	**4**	**1,781**
Other	308	—	(665)	—	678	321	**—**	**(182)**	**—**	**149**	**288**
Lease liabilities	1,876	—	(495)	(3)	962	2,340	**—**	**(538)**	**15**	**797**	**2,614**
Derivatives used to manage currency risk arising from U.S. dollar- denominated long-term debt – liability (asset)	4	6,105	(6,000)	(423)	234	(80)	**5,984**	**(5,977)**	**134**	**(48)**	**13**
	20,856	16,376	(14,154)	34	1,845	24,957	**15,207**	**(13,674)**	**(25)**	**897**	**27,362**
To eliminate effect of gross settlement of derivatives used to manage currency risk arising from U.S. dollar-denominated long-term debt	—	(6,105)	6,105	—	—	—	**(5,984)**	**5,984**	**—**	**—**	**—**
	$ 20,856	$ 10,271	$ (8,049)	$ 34	$ 1,845	$ 24,957	**$ 9,223**	**$ (7,690)**	**$ (25)**	**$ 897**	**$ 27,362**

TELUS CORPORATION

Management's discussion and analysis

2023



Caution regarding forward-looking statements

The terms *TELUS, the Company, we, us* and *our* refer to TELUS Corporation and, where the context of the narrative permits or requires, its subsidiaries.

This document contains forward-looking statements about expected events and our financial and operating performance. Forward-looking statements include any statements that do not refer to historical facts. They include, but are not limited to, statements relating to our objectives and our strategies to achieve those objectives, our expectations regarding trends in the telecommunications industry (including demand for data and ongoing subscriber base growth), and our financing plans (including our multi-year dividend growth program). Forward-looking statements are typically identified by the words *assumption*, *goal*, *guidance*, *objective*, *outlook*, *strategy*, *target* and other similar expressions, or future or conditional verbs such as *aim*, *anticipate*, *believe*, *could*, *expect*, *intend*, *may*, *plan*, *predict*, *seek*, *should*, *strive* and *will*. These statements are made pursuant to the "safe harbour" provisions of applicable securities laws in Canada and the United States *Private Securities Litigation Reform Act of 1995*.

By their nature, forward-looking statements are subject to inherent risks and uncertainties and are based on assumptions, including assumptions about future economic conditions and courses of action. These assumptions may ultimately prove to have been inaccurate and, as a result, our actual results or other events may differ materially from expectations expressed in or implied by the forward-looking statements.

These risks and assumptions underlying our forward-looking statements are described in additional detail in *Section 9 General trends, outlook and assumptions, and regulatory developments and proceedings* and *Section 10 Risks and risk management* in this Management's discussion and analysis (MD&A). Those descriptions are incorporated by reference in this cautionary statement but are not intended to be a complete list of the risks that could affect the Company or of our assumptions.

Risks and uncertainties that could cause actual performance or other events to differ materially from the forward-looking statements made herein and in other TELUS filings include, but are not limited to, the following:

- **Regulatory matters**. *We operate in a number of highly regulated industries and are therefore subject to a wide variety of laws and regulations domestically and internationally. Policies and practices of elected officials and regulatory decisions, reviews and government activity may have strategic, operational and/or financial implications (including on revenue and free cash flow).*

  Risks and uncertainties include:

  - changes to our regulatory regime or the outcomes of proceedings, cases or inquiries relating to its application, including but not limited to those set out in *Section 9.4 Communications industry regulatory developments and proceedings* in this MD&A;
  - the potential for government to allow consolidation of competitors in our industry or conversely for government to intervene with the intent of further increasing competition, for example, through mandated wholesale access, including to fibre-to-the-premises (FTTP) facilities;
  - the potential for additional government intervention on pricing, including internet overage charges and roaming fees;
  - changes to federal or provincial legislation or its application (including consumer protection legislation);
  - the introduction of new privacy legislation by the federal, provincial or territorial governments or in non-Canadian jurisdictions where we do business that could materially expand or alter the scope of consumer privacy rights, include significant administrative monetary penalties and a private right of action, and implement a new regulatory regime for the use of artificial intelligence (AI) in the private sector, with significant enforcement powers;
  - potential threats to unitary federal regulatory authority over communications in Canada;
  - potential threats to the CRTC's ability to enforce competitive safeguards such as the Standstill Rule and the *Wholesale Code*, which aim to ensure the fair treatment by vertically integrated firms of rival competitors operating as both broadcasting distributors and programming services;

- regulatory action by the Competition Bureau or other regulatory agencies;
- spectrum allocation and compliance with licences, including our compliance with licence conditions, changes to spectrum licence fees, spectrum policy determinations such as restrictions on the purchase, sale, subordination, use and transfer of spectrum licences, the cost and availability of spectrum and timing of spectrum allocation, and ongoing and future consultations and decisions on spectrum licensing and policy frameworks, auctions and allocation;
- draft legislation permitting the government to restrict the use in telecommunications networks of equipment made by specified companies, including Huawei and ZTE;
- draft legislation imposing new cybersecurity reporting requirements; the request by the Minister of Innovation, Science and Industry to telecommunications service providers, including TELUS, to improve network resiliency, along with CRTC proceedings to investigate network reliability and resiliency;
- potential limitations on international roaming fees and ancillary service fees;
- restrictions on non-Canadian ownership and control of the common shares of TELUS Corporation (Common Shares) and the ongoing monitoring of, and compliance with, such restrictions;
- unanticipated changes to the current copyright regime, which could impact obligations for internet service providers or broadcasting undertakings;
- our ability to comply with complex and changing regulation of the healthcare, virtual care and medical devices industries in the jurisdictions in which we operate, including as an operator of health clinics; and risks related to the quality of care and provision of insured/uninsured services; and
- our ability to comply with, or facilitate our clients' compliance with, numerous, complex and sometimes conflicting legal regimes, both domestically and internationally.

- **Competitive environment**.*Competitor expansion, activity and intensity (pricing, including discounting, bundling), as well as non-traditional competition, disruptive technology and disintermediation, may alter the nature of the market and impact our market share and financial results (including revenue and free cash flow*).

  Risks and uncertainties include:

  - our ability to continue to retain customers by providing a customer service experience that meets or exceeds expectations, a range of relevant products and services and a reliable state-of-the-art network;
  - the intensity of competition, including aggressive promotional offers and device financing strategies and the ability of industry competitors to offer bundled and/or discounted services;
  - competition across all services with communications companies and virtual broadcast distribution undertakings and other over-the-top (OTT) services, which, among other things, places pressures on current and future average revenue per subscriber per month (ARPU), cost of acquisition, cost of retention and churn rates for all services;
  - consolidation, mergers and acquisitions of industry competitors (including the acquisition of Shaw by Rogers and associated assets divested to Videotron), as well as any related regulatory actions;
  - regional operators leveraging wholesale access regulations to enter the market;
  - low-earth-orbit satellite internet services becoming available in urban areas;
  - our ability to obtain and offer content on a timely basis across multiple devices on mobile and TV platforms at a reasonable cost as content costs per unit continue to grow;

- vertical integration in the broadcasting industry resulting in competitors owning broadcast content services, and timely and effective enforcement of related regulatory safeguards;
- TI's ability to compete with professional services companies that offer consulting services, information technology companies with digital capabilities, and traditional contact centre and business process outsourcing companies that are expanding their capabilities to offer higher-margin and higher-growth digital services;
- in our TELUS Health business, our ability to compete with other providers of employee and family assistance programs, benefits administration, electronic medical records and pharmacy management products, claims adjudicators, systems integrators and health service providers, including competitors with a vertically integrated mix of health services delivery, IT solutions and related services, global providers that could achieve expanded Canadian footprints, and providers of virtual healthcare services, preventative health services and personal emergency response services; and
- in our TELUS Agriculture & Consumer Goods business, our ability to compete with focused software and IoT competitors.

- **Technology**. *Consumer adoption of alternative technologies and changing customer expectations have the potential to impact our revenue streams and customer churn rates*.

  Risks and uncertainties include:

  - reduced utilization and increased commoditization of traditional fixed voice services (local and long distance) resulting from impacts of OTT applications and mobile substitution;
  - a declining overall market for TV services, resulting in part from content piracy and signal theft, a rise in OTT direct-to-consumer video offerings and virtual multichannel video programming distribution platforms;
  - the increasing number of households with only mobile and/or internet-based telephone services;
  - potential decline in ARPU as a result of, among other factors, substitution by messaging and OTT applications; substitution by increasingly available Wi-Fi services;
  - disruptive technologies, such as OTT IP services, including software-defined networks in the business market that may displace or cause us to reprice our existing data services, and self-installed technology solutions;
  - any failure to innovate, maintain technological advantages or respond effectively and in a timely manner to changes in technology;
  - high subscriber demand for data that challenges wireless networks and spectrum capacity levels and may be accompanied by increases in delivery cost;
  - the roll-out, anticipated benefits and efficiencies, and ongoing evolution of wireless broadband technologies and systems;
  - availability of resources and our ability to build out adequate broadband capacity;
  - our reliance on wireless network access agreements, which have facilitated our deployment of mobile technologies;
  - our choice of suppliers and those suppliers' ability to maintain and service their product lines, which could affect the success of upgrades to, and evolution of, technology that we offer;
  - supplier limitations and concentration and market power for products such as network equipment, TELUS TV and mobile handsets;
  - our expected long-term need to acquire additional spectrum capacity through future spectrum auctions and from third parties to address increasing demand for data, and our ability to utilize spectrum we acquire;

- deployment and operation of new fixed broadband network technologies at a reasonable cost and the availability and success of new products and services to be rolled out using such network technologies;
- network reliability and change management; and
- our deployment of self-learning tools and automation, which may change the way we interact with customers.

- **Security and data protection**. *Our ability to detect and identify potential threats and vulnerabilities depends on the effectiveness of our security controls in protecting our infrastructure and operating environment, and our timeliness in responding to attacks and recovering business operations. A successful attack may impede the operations of our network or lead to the unauthorized interception, destruction, use or dissemination of customer, team member or business information.*
- **Generative AI (GenAI)**. GenAI exposes us to numerous risks including risks related to the responsible use of AI, data privacy and cybersecurity, and the possibility that our use of AI may produce inaccurate or inappropriate content or create negative perceptions among companies and regulators that could affect demand for our services.
- **Climate and the Environment**. *Natural disasters, pandemics, disruptive events and climate change may impact our operations, customer satisfaction and team member experience.*

  Risks and uncertainties include:

  - loss of employee work time as a result of illness or injury;
  - public concerns related to radio frequency emissions
  - climate-related risks (such as extreme weather events and other natural hazards);
  - waste and waste recycling;
  - risks relating to fuel systems on our properties and the environmental impact of our network including legacy network equipment; and
  - changing government and public expectations regarding environmental matters and our responses.

  Our goals to achieve carbon neutrality and reduce our greenhouse gas (GHG) emissions in our operations are subject to our ability to identify, procure and implement solutions to reduce energy consumption and adopt cleaner sources of energy, our ability to identify and make suitable investments in renewable energy, including in the form of virtual power purchase agreements, and our ability to continue to realize significant absolute reductions in energy use and the resulting GHG emissions in our operations.
- **Operational performance and business combination**. *Investments and acquisitions present opportunities to expand our operational scope, but may expose us to new risks. We may be unsuccessful in gaining market traction/share and realizing benefits, and integration efforts may divert resources from other priorities.*

  Risks and uncertainties include:

  - our ability to identify suitable candidates for partnerships or strategic transactions and our ability to complete these transactions;
  - our reliance on legacy systems and our ability to implement and support new products and services and business operations in a timely manner;
  - our ability to manage the requirements of large enterprise deals;

- our ability to implement effective change management for system replacements and upgrades, process redesigns, cost efficiency programs and business integrations (such as our ability in a timely manner to successfully complete and integrate acquisitions into our operations and culture, complete divestitures or establish partnerships and realize expected strategic benefits, including those following compliance with any regulatory orders);
- our ability to identify and manage new risks inherent in new service offerings that we may provide, including as a result of acquisitions, which could result in damage to our brand, our business in the relevant area or as a whole, and additional exposure to litigation or regulatory proceedings;
- our ability to effectively manage the growth of our infrastructure and integrate new team members;
- our reliance on third-party cloud-based computing services to deliver our IT services; and
- economic, political and other risks associated with doing business globally (including war and other geopolitical developments), as we have assets and operations located outside Canada and the U.S.

- **Customer service**. *Our service delivery directly impacts customer experience, customer churn rates, and likelihood to recommend outcomes. We may not be able to deliver the excellence our customers expect or maintain our competitive advantage in this area*.

  Risks and uncertainties include:

  - our ability to successfully implement cost reduction initiatives (including efficiency and effectiveness programs, business integrations, business product simplification, business process automation and outsourcing, offshoring, reorganizations, procurement initiatives, and real estate rationalization).

- **Our systems and processes**. *Systems and technology innovation, maintenance and management may impact our IT systems and network reliability, as well as our operating costs*.

  Risks and uncertainties include:

  - our ability to maintain customer service and operate our network in the event of human error or human-caused threats, such as cyberattacks and equipment failures that could cause various degrees of network outages;
  - technical disruptions and infrastructure breakdowns;
  - delays and rising costs, including as a result of government restrictions or trade actions; and
  - the completeness and effectiveness of business continuity and disaster recovery plans and responses.

- **Our team**. *The rapidly evolving and highly competitive nature of our markets and operating environment, along with the globalization and evolving demographic profile of our workforce, and the effectiveness of our internal training, development, succession and health and well-being programs, may impact our ability to attract, develop and retain team members with the skills required to meet the changing needs of our customers and our business. There may be greater physical and mental health challenges faced by team members (and their families) as a result of the pandemic, and the effect of other significant change initiatives at the organization may result in the loss of key team members through short-term and long-term disability*.

  Risks and uncertainties include:

  - recruitment, retention and appropriate training in a highly competitive industry (including retention of team members leading recently acquired businesses in emerging areas of our business);
  - the level of our employee engagement and impact on engagement or other aspects of our business or any unresolved collective agreements;
  - our ability to maintain our unique culture and team member engagement as we grow and implement organizational changes and cost reduction initiatives;

- the risk that certain independent contractors in our business could be classified as employees; and
- the physical and mental health of our team, which are critical to engagement and productivity.

- **Suppliers**. *We may be impacted by supply chain disruptions and lack of resiliency in relation to global or local events. Dependence on a single supplier for products, components, service delivery or support may impact our ability to efficiently meet constantly changing and rising customer expectations while maintaining quality of service*.

- **Real estate matters**. *Real estate investments are exposed to possible financing risks and uncertainty related to future demand, occupancy and rental rates, especially following the pandemic. Future real estate developments may not be completed on budget or on time and may not obtain lease commitments as planned*.

- **Financing, debt and dividends**. *Our ability to access funding at optimal pricing may be impacted by general market conditions and changing assessments in the fixed-income and capital markets regarding our ability to generate sufficient future cash flow to service our debt. Our current intention to return capital to shareholders could constrain our ability to invest in our operations to support future growth*.

Our capital expenditure levels and potential outlays for spectrum licences in auctions or purchases from third parties affect and are affected by: our broadband initiatives, including connecting more homes and businesses directly to fibre; our ongoing deployment of newer mobile technologies, including wireless small cells that can improve coverage and capacity; investments in network technology required to comply with laws and regulations relating to the security of cyber systems, including bans on the products and services of certain vendors; investments in network resiliency and reliability; the allocation of resources to acquisitions and future spectrum auctions held by Innovation, Science and Economic Development Canada (ISED), including the millimetre wave spectrum auction, which is expected to commence in 2024. Our capital expenditure levels could be impacted if we do not achieve our targeted operational and financial results or if there are changes to our regulatory environment.

Lower than planned free cash flow could constrain our ability to invest in operations, reduce leverage or return capital to shareholders. This program may be affected by factors such as the competitive environment, fluctuations in the Canadian economy or the global economy, our earnings and free cash flow (which may be affected by restructuring and other costs resulting from initiatives such as post-acquisition integration and cost efficiency programs), our levels of capital expenditures and spectrum licence purchases, acquisitions, the management of our capital structure, regulatory decisions and developments, and business continuity events. Quarterly dividend decisions are subject to assessment and determination by our Board of Directors based on our financial position and outlook. There can be no assurance that our dividend growth program will be maintained through 2025 or renewed.

Factors that may affect TI's financial performance are described in TI's public filings available on SEDAR+ and EDGAR. TI may choose to publicize targets or provide other guidance regarding its business and it may not achieve such targets. Failure to meet these targets could affect TELUS' ability to achieve targets for the organization as a whole and could result in a decline in the trading price of the TI Subordinate Voting Shares or the TELUS Common Shares or both.

- **Tax matters**. *Complexity of domestic and foreign tax laws, regulations and reporting requirements applying to TELUS and our international operating subsidiaries may impact financial results, effective governance of tax considerations and compliance. International acquisitions and expansion of operations heighten our exposure to multiple forms of taxation*.

  Risks and uncertainties include:

  - interpretation of complex domestic and foreign tax laws by the relevant tax authorities that may differ from our interpretations;
  - the timing and character of income and deductions, such as depreciation and operating expenses;
  - tax credits or other attributes;
  - changes in tax laws, including tax rates;

- tax expenses that are materially different than anticipated, including the taxability of income and deductibility of tax attributes or retroactive application of new legislation;
- elimination of income tax deferrals; and
- changes to the interpretation of tax laws, including those resulting from changes to applicable accounting standards or the adoption of more aggressive auditing practices by tax authorities, tax reassessments or adverse court decisions impacting the tax payable by us.

- **The economy**. *Changing global economic conditions, including a potential recession and alternating expectations about inflation, as well as our effectiveness in monitoring and revising growth assumptions and contingency plans, may impact the achievement of our corporate objectives, our financial results (including free cash flow), and our defined benefit pension plans.*

  Risks and uncertainties include:

  - the state of the economy in Canada, which may be influenced by economic and other developments outside of Canada, including potential outcomes of future policies and actions of foreign governments;
  - expectations regarding future interest rates;
  - inflation;
  - unemployment levels;
  - immigration levels;
  - effects of volatility in oil prices;
  - effects of low business spending (such as reducing investments and cost structure);
  - pension investment returns and factors affecting pension benefit obligations, funding and solvency discount rates;
  - fluctuations in exchange rates of the currencies of various countries in which we operate;
  - sovereign credit ratings and effects on the cost of borrowing;
  - the impact of tariffs on trade between Canada and the United States; and
  - global implications of the dynamics of trade relationships among major world economies.

- **Litigation and legal matters**. *Complexity of, and compliance with, laws, regulations, commitments and expectations may have a financial and reputational impact*.

  Risks and uncertainties include:

  - our ability to successfully respond to investigations and regulatory proceedings;
  - our ability to defend against existing and potential claims and lawsuits (including intellectual property infringement claims and class actions based on consumer claims, data, privacy or security breaches and secondary market liability), or our ability to negotiate and exercise indemnity rights or other protections in respect of such claims and lawsuits; and
  - the complexity of legal compliance in domestic and foreign jurisdictions, including compliance with competition, anti-bribery and foreign corrupt practices laws.

Many of these risks and uncertainties are beyond our control or outside of our current expectations or knowledge. Additional risks and uncertainties that are not currently known to us or that we currently deem to be immaterial may also have a material adverse effect on our financial position, financial performance, cash flows, business or reputation. Except as otherwise indicated in this

document, the forward-looking statements made herein do not reflect the potential impact of any non-recurring or special items or any mergers, acquisitions, dispositions or other business combinations or transactions that may be announced or that may occur after the date of this document.

Readers are cautioned not to place undue reliance on forward-looking statements. Forward-looking statements in this document describe our expectations, and are based on our assumptions, as at the date of this document and are subject to change after this date. Except as required by law, we disclaim any intention or obligation to update or revise any forward-looking statements.

This cautionary statement qualifies all of the forward-looking statements in this MD&A.

Management's discussion and analysis (MD&A)
February 9, 2024

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1. Introduction

The forward-looking statements in this section, including, for example, estimates regarding economic growth, inflation, unemployment, housing starts and immigration, are qualified by the *Caution regarding forward-looking statements* at the beginning of this Management's discussion and analysis (MD&A).

1.1 Preparation of the MD&A

The following sections are a discussion of our consolidated financial position and financial performance for the year ended December 31, 2023, and should be read together with our December 31, 2023 audited consolidated statements of income and other comprehensive income, statements of financial position, statements of changes in owners' equity and statements of cash flows, and the related notes (collectively referred to as the Consolidated financial statements). The generally accepted accounting principles (GAAP) that we use are International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) and Canadian GAAP. In this MD&A, the term IFRS refers to these standards. In our discussion, we also use certain non-GAAP and other specified financial measures to evaluate our performance, monitor compliance with debt covenants and manage our capital structure. These measures are defined, qualified and reconciled with their nearest GAAP measures, as required by National Instrument 52-112, *Non-GAAP and Other Financial Measures Disclosure*, in *Section 11.1*. All currency amounts are in Canadian dollars, unless otherwise specified.

Additional information relating to the Company, including our Annual Information Form and other filings with securities commissions or similar regulatory authorities in Canada, is available on SEDAR+ (**sedarplus.com**). Our information filed with or furnished to the Securities and Exchange Commission in the United States, including Form 40-F, is available on EDGAR (**sec.gov**). Additional information about our TELUS International (Cda) Inc. (TELUS International or TI) subsidiary, including discussion of its business and results, can be found in its public filings available on SEDAR+ and EDGAR.

Our disclosure controls and procedures are designed to provide reasonable assurance that all relevant information is gathered and reported to senior management on a timely basis, so that appropriate decisions can be made regarding public disclosure. This MD&A and the Consolidated financial statements were reviewed by our Audit Committee and authorized by our Board of Directors (Board) for issuance on February 9, 2024.

In this MD&A, unless otherwise indicated, results for the year ended December 31, 2023 are compared with results for the year ended December 31, 2022.

1.2 The environment in which we operate

The success of our business and the challenges we face can best be understood with reference to the environment in which we operate, including broader economic factors that affect both TELUS and our customers, and the competitive nature of our business operations.

2023 Canadian telecom industry growth Est. 3%	**TELUS 2023 operating revenues and other income** $20.1 billion	**TELUS telecom subscriber connections** 19.3 million	**TELUS Corporation Common Share 2023 dividends declared and growth per share** $2.1 billion / 7.3%

Canadian telecommunications industry

Canadians have become increasingly reliant on connectivity for many purposes – business, education, entertainment and staying connected, – and facilities-based operators continued to invest in expanding and enhancing network infrastructure to meet this demand. We estimate that Canadian telecommunications industry revenues (including TV revenue and excluding equipment and media revenue) grew by approximately 3% in 2023, with industry mobile network revenue growth of approximately 5.3%. Revenues generated by mobile products and services continued to account for the largest portion of telecommunications sector revenues, as Canadians increasingly relied on their mobile devices. We estimate that the Canadian mobile phone industry added approximately 1.7 million net new subscribers in 2023, compared to an estimate of approximately 1.8 million in 2022. With respect to fixed products and services, we estimate the Canadian consumer high-speed internet penetration rate grew by approximately one percentage point to 92% in 2023, and subscriber growth is expected to remain steady. Industry internet services revenue growth continued, as many Canadians relied on access to high-speed internet for work and entertainment at home and increased the speed of their service packages. The shift from the conventional television landscape to alternative forms of media also continued. Competitive pressures persisted in both the consumer and business markets for fixed products and services. (See *Section 9 General trends, outlook and assumptions, and regulatory developments and proceedings, Section 10.4 Competitive environment* and *Section 10.17 The economy*.) In May 2023, the World Health Organization announced that COVID-19 no longer qualified as a global health emergency. Notably, neither Ontario nor Quebec introduced widespread public health measures in 2023. Travel also returned to pre-pandemic levels during the year.

TELUS technology solutions (TTech)

Across TTech, we are leveraging our leading technology and social purpose to enable remarkable human outcomes. Our long-standing commitment to putting our customers first across the full range of our solutions spanning mobile, data, IP, voice, television, entertainment, video and security, delivered over our award-winning networks, has made us a distinct leader in customer service excellence and loyalty. The recognition we have earned over the years from independent, industry-leading network insight firms highlights the speed, reliability and expansiveness of our leading networks, demonstrating our commitment to provide Canadians with access to superior technology that connects us to the people, resources and information that matter most. The healthcare industry continues to move toward the digitization of everyday functions across the healthcare ecosystem. We are helping Canadians and others live healthier lives by leveraging technology that enables access to health information and delivers improved health outcomes with solutions such as employer-focused healthcare. We are also developing innovative technology solutions to help feed the world, putting data to work for customers in the agriculture, food and consumer goods sectors. This efficient and effective collaboration helps ensure the quality and safety of food and consumer goods.

Digitally-led customer experiences – TELUS International (DLCX)

Technology is transforming the way businesses interact with their customers at an accelerating pace and scale. This transformation is making customer experience and digital experience critically important competitive differentiators across a wide range of industries and sectors. DLCX clients and their customers have access to more information and more choices than ever before, and their expectations about brand experiences and the speed at which companies must process and respond to customer interactions are changing rapidly. Customers value a consistent and personalized experience across every channel when interacting with the companies that serve them. Businesses face pressure to engage with their customers across digital and human channels, and seek to do so by combining technology with an authentic human experience that demonstrates a genuine commitment to customer satisfaction. Brands need to move at the speed of the customer, which means rapid response and fast resolution with low customer effort, powered by next-generation technology. The opportunities that artificial intelligence (AI) presents for augmenting and enhancing CX are far-reaching.

Economic estimates

Our estimates regarding our economic and operational environment, including economic growth, inflation, unemployment, housing starts and immigration, serve as important inputs for the assumptions on which our targets are based. The extent of the impact these estimates will have on us, and the timing of that impact, will depend upon the actual future outcomes in specific sectors of the Canadian economy.

	Economic growth (percentage points)		**Inflation** (percentage points)		**Unemployment** (percentage points)			**Housing starts** (thousands of units)			**Immigration** (thousands)
	Estimated gross domestic product (GDP) growth rates	Our estimated GDP growth rates[1]	Estimated inflation rates	Our estimated annual inflation rates[1]	Unemployment rates For the month of		Our estimated annual unemployment rates[1]	Seasonally adjusted annual rate of housing starts[2] For the month of		Our estimated annual rate of housing starts on an unadjusted basis[1]	Overall planned permanent resident admissions[3]
	2024	**2024**	**2024**	**2024**	**Dec. 2023**[4]	Dec. 2022[4]	**2024**	**Dec. 2023**	Dec. 2022	**2024**	**2024**
Canada	**0.8**[5]	**0.6**	**2.8**[5]	**2.5**	**5.8**	5.0	**6.4**	**249**	249	**234**	**485**
B.C.	**0.8**[6]	**0.4**	**2.5**[6]	**2.4**	**5.6**	4.2	**6.1**	**62**	59	**42**	n/a
Alberta	**2.9**[6]	**1.1**	**2.2**[6]	**2.4**	**6.3**	5.8	**6.3**	**44**	27	**36**	n/a
Ontario	**0.8**[6]	**0.4**	**2.6**[6]	**2.4**	**6.3**	5.3	**6.7**	**71**	109	**79**	n/a
Quebec	**0.7**[6]	**0.4**	**2.7**[6]	**2.5**	**4.7**	4.0	**5.5**	**44**	33	**46**	n/a

n/a – not applicable

1 Assumptions are as of September 29, 2023 and are based on a composite of estimates from Canadian banks and other sources.

2 Source: Statistics Canada. Table 34-10-0158-01 Canada Mortgage and Housing Corporation, housing starts, all areas, Canada and provinces, seasonally adjusted at annual rates, monthly (x 1,000).

3 Source: canada.ca/en/immigration - refugees - citizenship/news/notices/supplementary - immigration - levels - 2024 - 2026.html.

4 Source: Statistics Canada Labour Force Survey, December 2023 and December 2022, respectively.

5 Source: Bank of Canada Monetary Policy Report, January 2024.

6 Source: British Columbia Ministry of Finance, First Quarterly Report, September 2023; Alberta Ministry of Treasury Board and Finance, 2023 - 24 First Quarter Fiscal Update and Economic Statement, August 2023; Ontario Ministry of Finance, 2023 - 24 First Quarter Finances, August 14, 2023; and Ministère des Finances du Québec, Update on Quebec's Economic and Financial Situation – Fall 2023, November 7, 2023, respectively.

1.3 Highlights of 2023

WillowTree™ acquisition

On January 3, 2023, subsequent to the satisfaction of the closing conditions, WillowTree was acquired by TELUS International and has been consolidated in our DLCX segment. The acquisition brings key talent and diversity to the DLCX portfolio of next-generation solutions, and further augments its digital consulting and client-centric software development capabilities.

Collective bargaining

During the year, collective agreements were successfully achieved with each of our largest three bargaining units, represented by the Telecommunications Workers Union, United Steelworkers Local 1944 (TWU), the Syndicat des agents de maîtrise (SAMT) and the Syndicat québécois des employés de TELUS (SQET). In March of 2023, a new four-year collective agreement, expiring March 31, 2027, was reached with the TWU. The renewal agreement with the SAMT is effective from October 29, 2023 to October 31, 2028. Our new contract with the SQET came into effect on July 9, 2023, and expires on June 30, 2028.

Long-term debt issues

On March 28, 2023, we issued $500 million of senior unsecured 4.95% Sustainability-Linked Notes, Series CAJ, maturing on March 28, 2033. This was our fourth offering of a sustainability-linked bond (SLB), issued pursuant to the SLB framework we announced on June 14, 2021. The net proceeds from this offering were used for the repayment of outstanding indebtedness, including the repayment of commercial paper and the reduction of cash amounts under an arm's-length securitization trust, and for other general corporate purposes.

On September 8, 2023, we completed a three-tranche note issuance of: $850 million of senior unsecured 5.75% Sustainability-Linked Notes, Series CAK, maturing on September 8, 2033; $400 million of senior unsecured 5.95% Notes, Series CAL, maturing on September 8, 2053; and $500 million of senior unsecured 5.60% Notes, Series CAM, maturing on September 9, 2030. The net proceeds from the three-tranche offering were used for the repayment of outstanding indebtedness, including the repayment of commercial paper and the reduction of cash amounts outstanding under an arm's-length securitization trust, and for other general corporate purposes.

The Series CAK notes were issued pursuant to the previously mentioned SLB framework. Cumulatively, we have issued four SLBs in Canada and one in the U.S., which solidifies our position as the largest SLB issuer in Canada, contributing to our position as a leader in social capitalism.

Spectrum

Innovation, Science and Economic Development Canada (ISED) held its auction of spectrum in the 3800 MHz band from October 24, 2023 through November 24, 2023. We acquired 72 MHz of spectrum for a total purchase price of $620 million. Combined with the 3500 MHz spectrum obtained in 2021, we have secured approximately 100 MHz of prime 5G mid-band spectrum nationally, with contiguity in 96% of the country, including all major markets, at an average price of $0.82 per MHz-pop (where pop refers to the population in a licence area). In accordance with the terms of the auction, 20% ($124 million) was remitted to ISED on its due date of January 17, 2024, while the remaining balance will be paid on, or before, May 29, 2024.

Our Board of Directors

At our 2023 annual general meeting held on May 4, 2023, the nominees listed in the TELUS 2023 information circular were elected as directors of TELUS. The Honourable John P. Manley was appointment as the new Chair of the Board and succeeded Dick Auchinleck, who retired after 20 years of service on the Board, including eight years as Chair.

In October 2023, Kathy Kinloch stepped down from our Board. Kathy joined the Board in 2017 and during her tenure, served on the Audit, Corporate Governance, and People, Culture and Compensation Committees.

We thank Dick and Kathy for their outstanding contributions and service to TELUS.

Consolidated highlights

Years ended December 31 ($ millions, except footnotes and unless noted otherwise)	**2023**	2022	Change
Consolidated statements of income			
Operating revenues and other income	**20,116**	18,412	9.3 %
Operating income	**2,362**	2,954	(20.0)%
Income before income taxes	**1,089**	2,322	(53.1)%
Net income	**867**	1,718	(49.5)%
Net income attributable to Common Shares	**841**	1,615	(47.9)%
Adjusted Net income[1]	**1,373**	1,647	(16.6)%
Earnings per share (EPS) ($)			
Basic EPS	**0.58**	1.16	(50.0)%
Adjusted basic EPS[1]	**0.95**	1.18	(19.5)%
Diluted EPS	**0.58**	1.15	(49.6)%
Dividends declared per Common Share ($)	**1.4544**	1.3557	7.3 %
Basic weighted-average Common Shares outstanding (millions)	**1,451**	1,396	3.9 %
Consolidated statements of cash flows			
Cash provided by operating activities	**4,499**	4,811	(6.5)%
Cash used by investing activities	**(4,748)**	(5,408)	(12.2)%
Acquisitions	**(1,289)**	(1,547)	(16.7)%
Capital expenditures[2]	**(2,822)**	(3,472)	(18.7)%
Cash provided by financing activities	**139**	848	(83.6)%
Other highlights			
Telecom subscriber connections[3] (thousands)	**19,339**	17,971	7.6 %
Earnings before interest, income taxes, depreciation and amortization [1] (EBITDA)	**6,431**	6,406	0.4 %
EBITDA margin[1] (%)	**32.0**	34.8	(2.8)pts.
Restructuring and other costs	**717**	240	n/m
Adjusted EBITDA[1]	**7,149**	6,643	7.6 %
Adjusted EBITDA margin[1] (%)	**35.5**	36.1	(0.6) pts.
Free cash flow[1]	**1,759**	1,274	38.1 %
Net debt to EBITDA – excluding restructuring and other costs [1] (times)	**3.71**	3.63	0.08

Notations used in MD&A: n/m – not meaningful; pts. – percentage points.

1 These are non-GAAP and other specified financial measures. See *Section 11.1 Non-GAAP and other specified financial measures.*

2 Capital expenditures include assets purchased, excluding right-of-use lease assets, but not yet paid for, and consequently differ from Cash payments for capital assets, excluding spectrum licences, as reported in the Consolidated financial statements. Refer to *Note 31* of the Consolidated financial statements for further information.

3 The sum of active mobile phone subscribers, connected device subscribers, internet subscribers, residential voice subscribers, TV subscribers and security subscribers, measured at the end of the respective periods based on information in billing and other source systems. Effective January 1, 2023, on a prospective basis, we adjusted our mobile phone and connected device subscriber bases to remove 50,000 subscribers and add 82,000 subscribers, respectively, due to a review of our subscriber bases. Effective January 1, 2023, on a prospective basis, we adjusted our internet subscriber base to add 70,000 subscribers as a result of business acquisitions.

Operating highlights

- **Consolidated Operating revenues and other income** increased by $1.7 billion in 2023.

  Service revenues increased by $1.6 billion in 2023. TTech service revenue growth was driven by growth in health services revenues inclusive of our acquisition of LifeWorks on September 1, 2022, higher mobile network revenues and an increase in fixed data service revenues. Increased DLCX revenues resulted from growth from expanded services for certain existing clients and growth from new clients, including new clients from our acquisition of WillowTree on January 3, 2023.

  Equipment revenues increased by $161 million in 2023, driven by higher mobile equipment revenues due to higher-value smartphones in the sales mix.

  Other income decreased by $9 million in 2023, largely due to lower net reversals of business combination-related provisions, the non-recurrence of a gain on acquisition of control of LifeWorks in the prior year, and lower equity income. These effects were partly offset by higher net gains on residential real estate projects with an arm's-length party.

  For additional details on Operating revenues and other income, see *Section 5.4 TELUS technology solutions segment* and *Section 5.5 Digitally-led customer experiences – TELUS International segment*.

- **Operating income** decreased by $592 million in 2023. (See *Section 5.3 Consolidated operations* for additional details.)

  EBITDA, which includes restructuring and other costs of $717 million in 2023 and other equity losses (income) related to real estate joint ventures, increased by $25 million in 2023.

  Adjusted EBITDA, which excludes restructuring and other costs and other equity losses (income) related to real estate joint ventures, increased by $506 million in 2023, driven by TTech growth. This reflected: (i) higher mobile network revenues; (ii) broad-based cost reduction efforts across both the TTech and DLCX segments; (iii) inorganic contributions from business acquisitions, predominantly from LifeWorks, in addition to its higher capitalized labour; and (iv) higher mobile equipment margins. These factors were partly offset by: (i) merit-based compensation increases; (ii) higher costs related to the scaling of our digital capabilities; (iii) declining TV and fixed legacy voice margins; (iv) higher bad debt expense; and (v) lower agriculture and consumer goods margins. (See *Section 5.3 Consolidated operations* for additional details.)

- **Income before income taxes** decreased by $1.2 billion in 2023 as a result of higher Financing costs and lower Operating income. The increase in Financing costs largely resulted from greater interest on long-term debt, excluding lease liabilities, as well as the impact of unrealized changes in virtual power purchase agreements forward element. (See *Financing costs* in *Section 5.3*.)

- **Income tax** expense decreased by $382 million in 2023. The effective income tax rate decreased from 26.0% to 20.3% in 2023, largely due to adjustments recognized in the current period for income taxes of prior periods and non-taxable amounts.

- **Net income attributable to Common Shares** decreased by $774 million in 2023, reflecting the after-tax impacts of higher Financing costs and lower Operating income.

  Adjusted Net income excludes the effects of restructuring and other costs, income tax-related adjustments, real estate rationalization-related restructuring impairments, other equity losses (income) related to real estate joint ventures and unrealized changes in virtual power purchase agreements forward element. Adjusted Net income decreased by $274 million or 16.6% in 2023.

- **Basic EPS** decreased by $0.58 or 50.0% in 2023, reflecting the after-tax impacts of higher Financing costs and lower Operating income, as well as the effect of a higher number of Common Shares outstanding.

  Adjusted basic EPS excludes the effects of restructuring and other costs, income tax-related adjustments, real estate rationalization-related restructuring impairments, other equity losses (income) related to real estate joint ventures and unrealized changes in virtual power purchase agreements forward element. Adjusted basic EPS decreased by $0.23 or 19.5% in 2023.

- **Dividends declared per Common Share** were $1.4544 in 2023, an increase of 7.3% from 2022. On February 8, 2024, the Board declared a first quarter dividend of $0.3761 per share on our issued and outstanding Common Shares, payable on April 1, 2024, to shareholders of record at the close of business on March 11, 2024. The first quarter dividend increased by $0.0250 per share or 7.1% from the dividend of $0.3511 per share declared one year earlier, consistent with our multi-year dividend growth program described in *Section 4.3 Liquidity and capital resources* .

- **During 2023, our total telecom subscriber connections** increased by 1,368,000 or 7.6%. This reflected growth of 4.1% in mobile phone subscribers, 26.2% in connected device subscribers, 8.8% in internet subscribers, 5.2% in TV subscribers and 8.0% in security subscribers, partly offset by a decline of 2.8% in residential voice subscribers. (See *Section 5.4 TELUS technology solutions segment* for additional details.)

Liquidity and capital resource highlights

- **Cash provided by operating activities** decreased by $312 million in 2023, primarily driven by other working capital changes and an increase in interest paid, partially offset by lower income taxes paid, net of recoveries received. (See *Section 7.2 Cash provided by operating activities*.)

- **Cash used by investing activities** decreased by $660 million in 2023, largely attributable to lower cash payments for capital assets, excluding spectrum licences, and a decrease in cash payments for business acquisitions. Acquisitions decreased by $258 million in 2023, primarily reflecting the impact of the LifeWorks acquisition in the prior year, partially offset by the WillowTree acquisition in 2023. Capital expenditures decreased by $650 million in 2023, mainly due to the planned slowdown of our fibre and wireless network build and systems development, consistent with 2023 build targets, when compared to accelerated investments in 2022. (See Section 7.3 Cash used by investing activities.)

- **Cash provided by financing activities** decreased by $709 million in 2023, primarily reflecting lower issuances of long-term debt, net of redemptions and repayment. (See *Section 7.4 Cash provided by financing activities.*)

- **Net debt to EBITDA – excluding restructuring and other costs** ratio was 3.71 times at December 31, 2023, up from 3.63 times at December 31, 2022. The effect of the increase, primarily due to business acquisitions, in net debt levels (which were already elevated in the current and comparative periods due to our spectrum acquisitions) exceeded the effect of growth in EBITDA – excluding restructuring and other costs. As at December 31, 2023, the acquisition of spectrum licences increased the ratio by approximately 0.45 and business acquisitions over the past 12 months increased the ratio by approximately 0.17. (See *Section 4.3 Liquidity and capital resources* and *Section 7.5 Liquidity and capital resource measures.*)

- **Free cash flow** increased by $485 million in 2023, reflecting lower capital expenditures and the timing of restructuring and other disbursements into the following year, partly offset by an increase in cash interest paid and the timing related to device subsidy repayments and associated revenue recognition and our TELUS Easy Payment® device financing program. Our definition of free cash flow, for which there is no industry alignment, is unaffected by accounting standards that do not impact cash.

1.4 Performance targets (key performance measures)

The following scorecard compares TELUS' performance to our consolidated 2023 targets.

Scorecard

	2023 performance		
	Consolidated targets[1] and growth	**Actual results and growth**	Result
Operating revenues	Growth of 9.5 to 11.5%[1a]	**$20.0 billion 9.4%**	~
Net income[2]	n/a	**$867 million (49.5)%**	n/a
Adjusted EBITDA	Growth of 7 to 8%[1b]	**$7.1 billion 7.6%**	ü
Cash provided by operating activities[2]	n/a	**$4.5 billion**	n/a
Free cash flow	Approximately $1.5 billion[1c]	**$1.8 billion**	ü
Capital expenditures[3]	Approximately $2.6 billion	**$2.7 billion**	X

~ – approximated target

ü – met target
X – missed target

n/a – not applicable

1 Represents 2023 revised targets that were announced on July 13, 2023 to reflect TELUS International's updated annual outlook, and on August 4, 2023 to reflect significantly higher restructuring and other costs related to accelerated cost efficiency programs.

   a. The original target for Operating revenues was growth of 11 to 14%.
   b. The original target for Adjusted EBITDA was growth of 9.5 to 11%.
   c. The original target for free cash flow was approximately $2.0 billion.

2. As a result of applying National Instrument 52-112, these measures are presented as the most directly comparable and similar financial measures to Adjusted EBITDA and free cash flow, respectively, and were not part of our targets for 2023.

3. Our target for 2023 excluded real estate development initiatives. Total capital expenditures in 2023, including real estate development initiatives, were $2.8 billion.

Our original targets were announced on February 9, 2023. On July 13, 2023, we updated our full-year 2023 targets for consolidated operating revenue and Adjusted EBITDA growth to reflect TELUS International's updated annual outlook. On August 4, 2023, we updated our free cash flow target to reflect significantly higher restructuring and other costs related to accelerated cost efficiency programs. The following pertains to our performance against revised targets, as applicable.

We effectively hit the low end of our consolidated operating revenues target. Our low-margin equipment revenue expectations saw a reduction in contracted volumes attributed to increased promotional activity centred around rate plans and market aggression, in addition to more customers taking advantage of bring-your-own-device (BYOD) plan offerings. While we experienced stronger growth in our mobile phones and connected devices subscriber bases, domestic average revenue per subscriber per month (ARPU) softened slightly, reflecting heightened market aggression that first escalated in the second quarter of 2023 and continued throughout the remainder of the year. Our commitment to remaining disciplined in balancing optimal economic outcomes with volume helped to ameliorate the flow-through down to margins.

We achieved our Adjusted EBITDA target as a result of broad-based cost reduction efforts across both the TTech and DLCX segments, higher-value smartphones with continued discipline in balancing economic outcomes benefiting our equipment margins, in addition to higher mobile phones and connected devices subscriber bases growth. Our focused execution on these factors helped to offset the macroeconomic headwinds and escalating competitive pressures that persisted throughout the remainder of the year.

Our free cash flow target was surpassed, attributable to the timing of restructuring and other disbursements that will partially flow into the following year, more customers adopting bring-your-own-device plan offerings with fewer contracted volumes and lower income taxes paid, as well as our disciplined focus on profitable loading in an environment with pervasive macroeconomic and competitive pressures. These factors, combined with previously mentioned broad-based cost reductions, contributed to free cash flow growth.

Our capital expenditures in 2023 exceeded our consolidated target as a result of additional investments in the areas of digitization and platform development, particularly within key growth areas of our business, along with additional investments to expand the reach of our PureFibre network within targeted communities. These additional investments will further enhance our go-to-market opportunities as we begin the new year.

Our capital structure financial policies and report on financing and capital structure management plans are included in *Section 4.3*.

We made the following key assumptions when we announced the 2023 targets in February 2023. Certain assumptions were updated in our first quarter 2023 MD&A, second quarter 2023 MD&A and third quarter 2023 MD&A.

Assumptions for 2023 targets and results

- Our economic assumptions are based on a composite of estimates from Canadian banks and other sources. Our original assumptions for 2023 economic growth in Canada, B.C., Alberta, Ontario and Quebec were 0.6%, 0.4%, 1.5%, 0.3% and 0.5%, respectively.

  In our first quarter 2023 MD&A, we revised our assumptions for economic growth in Canada, B.C., Alberta, Ontario and Quebec to 0.9%, 0.5%, 1.9%, 0.5% and 0.4%, respectively. In our third quarter 2023 MD&A, we further revised our assumptions for economic growth in Canada, B.C., Alberta, Ontario and Quebec to 1.2%, 0.8%, 2.1%, 1.2% and 0.6%, respectively.

- With respect to inflation rates, our original assumptions for 2023 in Canada, B.C., Alberta, Ontario and Quebec were 3.7%, 3.7%, 3.8%, 3.6% and 3.7%, respectively.

  In our first quarter 2023 MD&A, we revised our assumptions for inflation in Canada, B.C., Alberta, Ontario and Quebec to 3.6%, 3.6%, 3.4%, 3.5% and 3.7%, respectively. In our third quarter 2023 MD&A, we further revised our assumptions for inflation in Canada, B.C., Alberta, Ontario and Quebec to 3.9%, 3.9%, 3.4%, 3.6% and 4.2%, respectively.

- With respect to annual unemployment rates, our original assumptions for 2023 in Canada, B.C., Alberta, Ontario and Quebec were 6.1%, 5.6%, 5.9%, 6.6% and 5.5%, respectively.

  In our first quarter 2023 MD&A, we revised our assumptions for the annual unemployment rate in Canada, B.C., Alberta, Ontario and Quebec to 5.6%, 5.2%, 6.0%, 5.8% and 4.6%, respectively. In our third quarter 2023 MD&A, we further revised our assumptions for the annual unemployment rate in Canada, B.C., Alberta, Ontario and Quebec to 5.5%, 5.3%, 5.9%, 5.6% and 4.4%, respectively.

- With respect to the pace of housing starts, our original assumptions for 2023 on an unadjusted basis in Canada, B.C., Alberta, Ontario and Quebec were 212,000 units, 34,000 units, 31,000 units, 71,000 units and 50,000 units, respectively.

  In our first quarter 2023 MD&A, we revised our assumptions for the pace of housing starts on an unadjusted basis in Canada, B.C., Alberta, Ontario and Quebec to 225,000 units, 42,000 units, 34,000 units, 80,000 units and 49,000 units, respectively. In our third quarter 2023 MD&A, we further revised our assumptions for the pace of housing starts on an unadjusted basis in Canada, B.C., Alberta, Ontario and Quebec to 236,000 units, 47,000 units, 32,000 units, 86,000 units and 41,000 units, respectively.

Confirmed:

- No material adverse regulatory rulings or government actions against TELUS. See *Section 9.4* for further information.

- Continued intense mobile products and services competition and fixed products and services competition in both consumer and business markets.
- Continued increase in mobile phone penetration in the Canadian market.
- Ongoing subscriber adoption of, and upgrades to, data-intensive smartphones, as customers seek more mobile connectivity to the internet at faster speeds.
- Mobile products and services revenue growth resulting from improvements in subscriber loading, with continued competitive pressure on blended average revenue per subscriber per month (ARPU). Roaming revenues from business and consumer travel improved, primarily in the first quarter of 2023.
- Continued pressure on mobile products and services acquisition and retention expenses, dependent on gross loading and customer renewal volumes, competitive intensity and changing customer preferences, as well as continued connected devices growth. The Effects of contract asset, acquisition and fulfilment and TELUS Easy Payment device financing was a net cash outflow of $143 million.
- Continued growth in fixed products and services data revenue, reflecting an increase in internet, TV and security subscribers, speed upgrades, rate plans with larger data buckets or unlimited data usage, and expansion of our broadband infrastructure, healthcare solutions, agriculture and consumer goods solutions, and home and business security offerings.
- Continued erosion of residential voice revenues, resulting from technological substitution and greater use of inclusive long distance.
- Continued optimization of our DLCX segment's cost structure enabled by automation and generative AI solutions to mitigate near-term challenges from persistent global macroeconomic pressures.
- Continued focus on our customers first initiatives and maintaining our customers' likelihood-to-recommend.
- Our original assumptions for employee defined benefit pension plans for 2023: current service costs of approximately $62 million recorded in Employee benefits expense and interest expense of approximately $7 million recorded in Financing costs; a rate of 5.05% for discounting the obligation and a rate of 5.05% for current service costs for employee defined benefit pension plan accounting purposes; and defined benefit pension plan funding of approximately $35 million.

  In our second quarter 2023 MD&A, we revised our assumptions for defined benefit pension plan funding to approximately $28 million.

  Actual results were: $62 million recorded in Employee benefits expense for current service costs, $10 million recorded in Employee benefits expense for past service costs and interest expense of $7 million recorded in Financing costs; a rate of 4.65% for discounting the obligation and a rate of 5.05% for current service costs for employee defined benefit pension plan accounting purposes; and defined benefit pension plan funding of $28 million.
- Our original assumption for 2023 restructuring and other costs was approximately $275 million.

  In our second quarter 2023 MD&A, we revised our assumption for restructuring and other costs to up to $750 million to reflect accelerated cost efficiency programs.

  Actual restructuring and other costs were $717 million, as we incurred these costs to drive EBITDA expansion, margin accretion and accelerated cash flow growth.
- Our assumption for 2023 net Cash interest paid was approximately $1.1 billion to $1.2 billion. Actual net Cash interest paid was $1.2 billion.

- Our assumption for 2023 Depreciation and Amortization of intangible assets was approximately $4.0 billion to $4.1 billion. Actual Depreciation and Amortization of intangible assets was $4.1 billion.

- Our original assumptions for income taxes for 2023: an applicable statutory rate of 24.7 to 25.3%, and cash income tax payments of $550 million to $630 million.

  In our second quarter 2023 MD&A, we revised our assumptions for income taxes computed at an applicable statutory rate to a range of 23.3 to 23.9% and cash income tax payments to a range of $420 million to $500 million. In our third quarter 2023 MD&A, we further revised our assumptions for cash income tax payments to a range of $375 million to $425 million.

  Actual results reflected a statutory income tax rate of 23.5% and cash income tax payments of $389 million.

- Participation in ISED's 3800 MHz spectrum auction. We acquired 1,430 spectrum licences which equate to a national average of 72 MHz. See *Section 1.3 Highlights of 2023*.

- Bad debt expense returned to pre-pandemic levels, driven by macroeconomic pressures.

- Continued growth of health services revenue and contribution to EBITDA.

- Our original assumption was a 2023 U.S. dollar to European euro average exchange rate of US$1.08: €1.00 and Canadian dollar to U.S. dollar average exchange rate of C$1.32: US$1.00.

  In our second quarter 2023 MD&A, we revised our assumption for a U.S. dollar to European euro average exchange rate of US$1.09: €1.00.

  Actual results were a U.S. dollar to European euro average exchange rate of US$1.08: €1.00 and a Canadian dollar to U.S. dollar average exchange rate of C$1.35: US$1.00.

- Our agriculture and consumer goods services business continued to expand through organic growth.

- We continued our digitization efforts to simplify how our customers do business with us, introduced new products and services, responded to customer and market needs, and provided highly reliable service.

2. Core business and strategy

2.1 Core business

We provide a wide range of telecommunications technology solutions, including mobile and fixed voice and data telecommunications services and products; healthcare software and technology solutions (including employee and family assistance programs and benefits administration); agriculture and consumer goods services (software, data management and data analytics-driven smart-food chain and consumer goods technologies); and digitally-led customer experiences; as well as related equipment. Data services include: internet protocol; television; hosting, managed information technology and cloud-based services; and home and business security. Our TELUS International subsidiary provides digital customer experience and digital-enablement transformation solutions, and designs, builds and delivers next-generation digital solutions, including artificial intelligence and content management, to enhance the customer experience across targeted industry verticals. We currently earn the majority of our revenue from access to, and usage of, our telecommunications infrastructure, and from providing services and products that facilitate access to, and usage of, our infrastructure, in addition to equipment revenue.

2.2 Strategic imperatives

Since 2000, we have maintained a proven national growth strategy. Our strategic intent is to unleash the power of the internet to deliver the best solutions to Canadians at home, in the workplace and on the move.

We also developed six strategic imperatives in 2000 that remain relevant for future growth, despite changing regulatory, technological and competitive environments. Our consistent focus on these imperatives guides our actions and contributes to the achievement of our financial goals. To advance these long-term strategic imperatives and address near-term opportunities and challenges, we confirm or set new corporate priorities each year, as further described in *Section 3*. Our six strategic imperatives are listed below.

- Building national capabilities across data, IP, voice and wireless
- Providing integrated solutions that differentiate TELUS from our competitors
- Partnering, acquiring and divesting to accelerate the implementation of our strategy and focus our resources on core business
- Focusing relentlessly on the growth markets of data, IP and wireless
- Going to market as one team under a common brand, executing a single strategy
- Investing in internal capabilities to build a high-performance culture and efficient operation.

3. Corporate priorities

We confirm or set new corporate priorities each year to advance our long-term strategic imperatives (see *Section 2.2*) and address near-term opportunities and challenges. The following table provides a discussion of activities and initiatives that relate to our 2023 corporate priorities.

Elevating our customers, communities and social purpose by honouring our brand promise, Let's make the future friendly™

- Each year, we conduct a Pulsecheck engagement survey to gather confidential team member feedback about TELUS as a place to work in order to measure our progress in building and strengthening a high-performance culture. Following each survey, leaders share results with team members and use fair process to build and refine action plans focused on high-priority areas in need of improvement based on Pulsecheck results. In 2023, we achieved an engagement score of 82%, which is an encouraging accomplishment against the backdrop of the highly competitive and dynamic environment in which we operate, demonstrating the strength of the culture our team members have built together. TELUS is the most engaged organization globally compared to organizations of our size and composition according to our survey provider, Kincentric.
- Throughout 2023, we continued to leverage our Connecting for Good ® programs to support marginalized individuals by enhancing their access to both technology and healthcare, as well as our TELUS Wise® program to improve digital literacy and online safety knowledge. Since the launch of these programs, they have provided support for over 1.1 million individuals.
  - During the year, we welcomed 8,500 new households to our Internet for Good ® program. Since we launched the program in 2016, we have connected over 55,000 households and 175,000 low-income family members and seniors, persons in need who are living with disabilities, government-assisted refugees and youth leaving foster care with low-cost internet service.
  - Our Mobility for Good® program offers free or low-cost smartphones and mobile phone rate plans to all youth aging out of foster care and to qualifying low-income seniors across Canada. During the year, we added 8,600 youth and seniors, as well as Indigenous women at risk of or surviving violence, government-assisted refugees and other marginalized individuals to the program. Since we launched Mobility for Good in 2017, the program has provided support for 52,300 people.
    - In June 2023, we expanded the reach of our Internet for Good and Mobility for Good programs to help government-assisted refugees arriving in Canada get connected. Partnering with 15 resettlement assistance program service provider organizations across the country and growing, Mobility for Good for government-assisted refugees offers a free smartphone and low-cost data plan while Internet for Good for government-assisted refugees offers low-cost high-speed internet service. To date, we have provided support to over 6,200 government-assisted refugees and their family members through these programs.
    - Since launching our Mobility for Good for Indigenous Women at Risk program in 2021, we have supported 2,700 women.
  - Our Health for Good® mobile health clinics facilitated more than 56,000 patient visits during the year. Since the program's inception, we have accommodated 200,000 cumulative patient visits in 25 communities across Canada, bringing primary and mental healthcare to individuals experiencing homelessness.
    - In March 2023, we expanded our Health for Good program to support women and caregivers in need of mental health services by providing free access to TELUS Health MyCare™ counselling services. Partnering with three charitable organizations, we have provided 900 free counselling sessions this year to women and caregivers in need in British Columbia, Alberta, Saskatchewan and Ontario.
    - In April 2023, we partnered with Old Brewery Mission to launch a new mobile health clinic in Montreal. The Old Brewery Mission Mobile Health Clinic, powered by TELUS Health, is helping marginalized Montreal residents and communities with access to free healthcare services, as well as social and housing-related support.
    - In July 2023, we launched a second mobile health clinic in Victoria in partnership with Victoria Cool Aid Society to address the growing need for primary healthcare and provide support for people experiencing homelessness.

- During the year, our Tech for Good® program provided access to personalized one-on-one training, support and customized recommendations on mobile devices and related assistive technology and/or access to discounted mobile plans for over 2,300 Canadians living with disabilities, helping them improve their independence and quality of life. Since the program's inception in 2017, we have supported 8,800 individuals in Canada who are living with disabilities through the program and/or the TELUS Wireless Accessibility Discount.

- In 2023, 116,500 individuals in Canada and around the world participated in virtual TELUS Wise workshops and events to improve digital literacy and online safety, bringing total cumulative participation to 680,000 individuals since the program launched in 2013.

    - In October 2023, we celebrated 10 years of TELUS Wise with the launch of a new TELUS Wise responsible AI online workshop for youth.

- TELUS Friendly Future Foundation® (the Foundation) and Canadian TELUS Community Boards continue to direct all of their funding to charitable initiatives that promote health and well-being for youth across Canada, including the TELUS Student Bursary for post-secondary students facing financial barriers. In 2023, the Foundation supported two million youth by granting $11 million, including $2 million in bursaries, to 550 charitable and community organizations. Since its inception in 2018, the Foundation has provided $47 million in cash donations to our communities, helping 15 million youth reach their full potential.

    - In February 2023, the Foundation launched its *Livable Communities for our Youth Challenge*, providing funding to improve the lives of youth by connecting innovative entrepreneurs to Canadian charities.

    - In October 2023, the Foundation launched the TELUS Student Bursary, Canada's largest bursary fund, supporting students facing financial barriers that impact their ability to enrol in or continue their education. With bursaries valued at up to $5,000, this new $50 million fund, established through an endowment gift of $25 million from TELUS and a commitment of $25 million in fundraising from the Foundation, will help hundreds of students each year access post-secondary education leading to a brighter future. Each bursary recipient will also have access to free mobility and low-cost internet service plans through our Mobility for Good and Internet for Good programs.

      At the start of the 2023 – 2024 school year in September, the Foundation awarded its first round of bursaries to more than 400 students across the country.

- Our Canadian and global TELUS Community Boards entrust local leaders to make recommendations on the allocation of grants in their communities. These grants support registered charities that offer health, education or technology programs to help youth thrive. Since 2005, our 19 TELUS Community Boards have directed $107 million in cash donations to more than 9,600 initiatives, providing resources and support for underserved citizens, especially young people, around the world.

    - During the third quarter of 2023, we announced the expansion of five TELUS Community Boards in Alberta and Ontario, which are now providing support for millions of citizens in Alberta and Ontario.

- In May 2023, our 18th annual TELUS Days of Giving ® inspired more than 80,000 TELUS team members, retirees, family and friends in 260 communities, across 32 countries to volunteer, contributing to 1.5 million hours of service globally in 2023. Thanks to the passion and generosity of our TELUS family, 2023 was our most giving year ever.

- In November 2023, we added two new clubs in North Carolina to the TELUS Community Ambassadors program, bringing together over 5,000 current and retired team members across 25 clubs to volunteer in their local communities.

- During 2023, TELUS, our team members, customers and the Foundation have provided $12.6 million, in cash donations and in-kind contributions to support 22 humanitarian and disaster relief efforts in Canada and around the world. Our efforts in 2023 included supporting those impacted by unprecedented wildfires and hurricanes in Canada and earthquakes in Türkiye, Syria and Morocco.

- TELUS Indigenous Communities Fund offers grants for Indigenous-led social, health and community programs. In July 2023, we announced a doubling of our commitment to the Fund, raising our investment from $1 million to $2 million over the next five years. Since its inception in November 2021, the Fund has distributed $575,000 in cash donations to 29 community programs supporting food security, education, cultural and linguistic revitalization, wildfire relief efforts, and the health, mental health and well-being of Indigenous Peoples across Canada.
- TELUS Pollinator Fund for Good® made multiple equity investments during 2023. These included: Flash Forest, a Canadian reforestation company with a mission to plant one billion trees; three new clean technology startups – Climate Robotics, erthos and Plentify – to strengthen climate resilience with agricultural technologies sequestering carbon, plant-powered alternatives to plastic and cleaner energy solutions; and Dryad, a German startup that provides ultra-early wildfire detection through large-scale Internet of Things (IoT) networks and sensors to reduce the risk of fires spreading out of control. Since its inception in 2020, the Fund has invested in 30 socially innovative companies, with 40% led by women and 50% led by Indigenous or racialized founders.
    - During the first quarter of 2023, the Fund was named Funder of the Year at the 2023 B.C. Cleantech Awards for supporting cleantech ventures as they grow and scale.
- During the year, we received recognition for our global leadership in sustainability, corporate citizenship, social purpose, and environmental and social reporting, including:
    - In January 2023, we were included in the Corporate Knights 2023 Global 100 Most Sustainable Corporations in the World as the top North American telecommunications company, ranking 37th overall; this was the 11th time we have been included since inception of the recognition in 2005. Additionally, in June 2023, we were named to the Corporate Knights Best 50 Corporate Citizens in Canada for the 17th time, ranking in the top 10 and as the highest among the telecom industry in Canada.
    - In May 2023, we received the Mercure award for Sustainable Development Strategy in the Large Corporation category as part of the 2023 Mercuriades Awards, which celebrate the innovation, ambition, entrepreneurship and performance of Quebec businesses.
    - In May 2023, at the Loyalty360 Awards, we won the platinum award for corporate social responsibility, gold award for brand-to-brand partnerships and bronze award for 360 degree (brand).
    - In December 2023, we were named to the Dow Jones Sustainability North America Index for the 23rd consecutive year.
- In April 2023, we were recognized for the second consecutive year as one of Canada's top 10 most valuable brands by Brand Finance. In its *Canada 100 2023* report, it valued our 2023 brand at $10.3 billion, a $200 million year-over-year increase.
- In January 2024, we were recognized as the highest-valued telecom brand in Canada. In Brand Finance's *Global 500 2024* most valuable brands report, it valued our 2024 brand at US$8.6 billion (C$11.5 billion), up 12.4% year-over-year, moving up 37 spots in its ranking, representing our highest third-party brand valuation ever.
- In June 2023, we were recognized by Gustavson Brand Trust Index as the most trusted telecom brand in Canada, for the fifth consecutive year.
- In June 2023, we won Best Eco-Loyalty Initiative and Best Corporate Social Responsibility (CSR) Initiative for our TELUS Rewards® program at the International Loyalty Awards held in London, England.
- In October 2023, we ranked fifth in Kantar BrandZ 2023 Most Valuable Canadian Brands.
- In November 2023, we released our fifth annual Indigenous Reconciliation and Connectivity Report, detailing our progress on the reconciliation commitments in our 2021 Indigenous Reconciliation Action Plan (IRAP) and announcing a new commitment to incorporate Indigenous perspectives into our data ethics and artificial intelligence (AI) strategy.

- For our leadership in economic reconciliation, in November 2023, we were honoured to be a recipient of the Indigenomics 10 to Watch award, presented by the Indigenomics Institute.
- We were recognized by Mediacorp Canada Inc. during 2023 as one of Canada's Top Employers for Young People (2023) in January, Canada's Best Diversity Employers (2023) in March and Canada's Greenest Employers (2023) in April.

Leveraging TELUS' world-leading technology to drive superior growth across mobile, home and business services

- We continued to invest in our leading-edge broadband technology, which has enabled the success of our internet, TV and security offerings and business services, as well as our mobility solutions, and helped us deploy our 5G technology beginning in 2020.
    - At December 31, 2023, our 4G LTE technology covered 99% of Canada's population and our LTE advanced technology covered approximately 95% of Canada's population. Our 5G network connected more than 31.6 million Canadians, representing approximately 86% of Canada's population at December 31, 2023.
    - As at December 31, 2023, we had connected approximately 3.2 million households and businesses in B.C., Alberta and Eastern Quebec with fibre-optic cable, which provides immediate access to our fibre-optic infrastructure. This is up from approximately 3.0 million households and businesses at December 31, 2022.
- We received a number of accolades from independent global analytics company Opensignal throughout 2023. These results make us Canada's most awarded network by Opensignal since 2017.
    - In the *2023 Canada Mobile Network Experience Report* released in February 2023, we were recognized as winning outright for Core Consistent Quality and Voice App Experience, and tied for first place in Excellent Consistent Quality, Games Experience, Upload Speed Experience and 4G Coverage Experience.
    - In the *2023 Canada 5G Experience Report* also released in February 2023, we won outright for 5G Video Experience and tied for first in 5G Availability, 5G Reach, 5G Games Experience and 5G Voice App Experience.
    - In the *Mobile Network Experience: Canada Report (August 2023)*, we earned the top spot in the Voice App Experience category and tied for first in three categories (Games Experience, Download Speed Experience and Availability).
    - In the *5G Experience: Canada Report (August 2023)*, we tied for first place in the 5G Voice App Experience category.
- We were also recognized by U.S.-based PCMag in 2023.
    - In March 2023, PCMag published its Readers' Choice Awards 2023 and Business Choice Awards 2023 in its Best Mobile Phones and Service Providers in North America study. The awards, based entirely on reader rankings, rate overall satisfaction with major and mobile virtual network operator (MVNO) carriers in Canada. TELUS won both the Readers' Choice and Business Choice Awards for Top Major Carrier and Public Mobile won the Readers' Choice Award for MVNOs in Canada.
    - In the report *The Best ISPs 2023: Canada*, released in August 2023, we were ranked as the fastest nationwide internet service provider (ISP) in Canada among major ISPs for the fourth consecutive year and best ISP in B.C. and Alberta.
- In January 2023, we announced a partnership with the University of Windsor to launch a 5G-connected campus and commercial lab to support advanced research with 5G technology and establish the university as a go-to centre for innovation. The collaboration will support multidisciplinary research in the agriculture, advanced manufacturing, and connected and autonomous vehicles sectors.
- In February 2023, we announced a new collaboration with Amazon Web Services, Inc. (AWS) to create a new TELUS smart living solution that will use the latest advancements in cloud technologies, IoT, machine learning and AI to create automation experiences using all of a customer's connected devices. This smart living solution will reduce the complexity of installing and managing connected home devices and services from multiple vendors, device manufacturers and service providers.

- In May 2023, we were named the first North American communications service provider (CSP) to be awarded the "Running on ODA" status by industry association TM Forum, recognizing the progress we are making in our open digital architecture (ODA) and delivery capabilities, using cloud-native, vendor-agnostic solutions and TM Forum's industry standard open application programming interfaces (APIs) to deliver value to customers. We are the fourth CSP globally to gain this recognition. TM Forum is an industry association of over 850 global companies that collaboratively solve complex industry-wide challenges, deploy new services and create technology breakthroughs to accelerate change.
- In June 2023, our #StandWithOwners program returned for the fourth consecutive year, championing innovative, growing Canadian businesses. Five owners each received a grand prize valued at over $125,000 in funding, advertising and technology, as well as additional prizes to help their business grow and thrive.
- In June 2023, we announced that we had signed an agreement with the École de Technologie Supérieure (ÉTS) and iBwave, a Montreal-based software developer, to stimulate innovation in the construction and telecom industries using 5G technology. The collaboration includes the development of a 5G laboratory at ÉTS, which will serve as a multidisciplinary platform for researchers, students and companies to drive innovation in telecommunications, construction, engineering and architecture through 5G networks.
- In June 2023, we announced a strategic partnership with JOLT, an Australian electric vehicle (EV) charging company, to install up to 5,000 public DC fast chargers across Canada, running on the TELUS network. This partnership accelerates the development of critical infrastructure to meet public demand, helping to drive the adoption of EVs and support the reduction of greenhouse gas emissions.
- In August 2023, we announced the accelerated deployment of our Smart Building technologies across residential and commercial buildings throughout Canada to help organizations reduce energy consumption and adopt technology solutions that assist them in aligning with net-zero carbon emission mandates.
- During the third quarter of 2023, we became the first telecommunications company in Canada to sign the *Voluntary Code of Conduct on the Responsible Development and Management of Advanced Generative AI Systems* introduced by Innovation, Science and Economic Development Canada (ISED). Our approach to responsible AI is grounded in our commitment to putting customers and communities first, as well as the TELUS Trust Model, which encourages the use of data in ways that build trust by generating value, promoting respect and delivering security.
- We were the first company in the world to achieve ISO 31700-1 Privacy by Design certification for our Data for Good program, an award-winning insights platform that gives researchers access to high-quality, strongly de-identified data for projects that support social good. The reporting, which was conducted by KPMG, confirms the program meets international privacy criteria and illustrative controls established and harmonized under the 7 Foundational Principles of Privacy by Design developed by Dr. Ann Cavoukian and the ISO 31700 Privacy by Design standard.
- In October 2023, we announced an agreement with FLO, a leading North American EV charging network operator and a smart charging solutions provider, to bring our connectivity to FLO chargers. FLO will leverage our dedicated IoT network solutions and connectivity platforms in FLO public and commercial Level 2 and DC fast chargers across North America. Our innovative technology is expected to enhance reliability and uptime and increase operational efficiency by providing real-time visibility on at least 60,000 of FLO's chargers in Canada and the U.S., including the new FLO ultra-fast charger.
- We were the successful auction participant for 1,430 spectrum licences in the recent 3800 MHz spectrum auction. Combined with the spectrum we secured in the 3500 MHz band in 2021, we have secured approximately 100 MHz of prime 5G mid-band spectrum nationally, with contiguity in 96% of the country, including all major markets, at an average price of $0.82 per MHz-pop. This contiguous spectrum provides wider channels and enables a superior network experience for customers.
- In November 2023, TELUS and TerreStar Solutions announced the successful use of satellite connectivity to conduct voice calls, and in partnership with Skylo, a global non-terrestrial-network service provider, send text messages between smartphones and connect to IoT devices. This successful trial paves the way to eliminating no-coverage zones and providing ubiquitous connectivity.
- In 2023, we completed copper retirement initiatives in 14 targeted central offices and sites, which are aligned with unlocking the significant value in real estate monetization and optimization.

Scaling our innovative digital capabilities in TELUS Health and TELUS Agriculture & Consumer Goods to build assets of consequence

TELUS Health

- In January 2023, the Canadian Centre for Agricultural Wellbeing welcomed us as its exclusive provider for mental health services. These services help break down barriers to mental health support for farmers who may not have considered reaching out for help before, such as when experiencing catastrophic events, as well as for farmers who do not have access to provincial and federal programming.
- In January 2023, the Canadian Men's Health Foundation expanded its MindFit Toolkit to support more men living with anxiety and depression. CMHF is working with TELUS Health MyCare counsellors to help men and their families improve their mental wellness. The MindFit Toolkit offers men up to three virtual counselling sessions at a reduced rate, or at no cost for those who qualify.
- In February 2023, the Government of Nova Scotia announced the launch of Access Wellness, a pilot program that provides free one-on-one supportive counselling for general mental health concerns. It was also announced that TELUS Health was contracted to deliver the service, which is being administered by Nova Scotia Health.
- In March 2023, we announced a collaboration with Beneva to expand its group insurance offering, namely its employee assistance program. This collaboration enables Beneva to enhance the customer experience of its plan sponsors and members across the country by expanding the type of care and assistance they can access to improve their mental, physical and financial health.
- In April 2023, we brought virtual veterinary care to dogs and cats in Ontario with TELUS Health MyPet, a virtual pet care platform bringing experienced local veterinarians together with dog and cat owners to provide care for a range of health issues, from nutritional management and parasite control to behavioural challenges and prescription of certain medications. This follows the initial launch of TELUS Health MyPet in B.C. in August 2022.
- In April 2023, The Hazelden Betty Ford Foundation and TELUS Health announced a collaboration to expand access to substance use disorder treatment for people across the United States and Canada. The collaboration introduced substance use disorder-specific programming to TELUS Health's AbilitiCBT solution, which is currently being used by corporations, healthcare institutions and health insurance companies.
- In April 2023, we announced a collaboration with Baycrest, an academic health sciences centre providing a continuum of care for older adults aiming to defeat dementia. This collaboration introduced Baycrest's Goal Management Training (GMT) program to our AbilitiCBT platform, which is currently being used by corporations, healthcare institutions and health insurance companies. GMT is a therapist-guided, cognitive rehabilitation and training program that can be tailored to users for the treatment of conditions with associated cognitive impairment, such as mental illness, post-COVID-19 brain fog, ADHD and substance use.
- In May 2023, we launched Total Mental Health for organizations across Canada and the United States. This digital-first solution provides employees with access to a team of care professionals who curate personal care journeys with unlimited mental health counselling, therapist-led internet-based cognitive behavioural therapy (iCBT) programs, digital tools, assessments, and ongoing tracking and feedback that is accessible by employees through their company's health benefits. Employees can connect with mental health professionals 24/7 if they are experiencing a mental health concern, with the flexibility of meeting in person, via telephone/audio or through video or online chat. These digital-first solutions also allow employees to practice and learn on their own or between sessions, track their mental health progress and receive regular feedback from their care team.
- In July 2023, we launched TELUS Health Wellbeing in the U.K. to provide working individuals with personalized and flexible workplace health benefits plans. Through digital tools, including the ability to measure overall health with a well-being score and collaboration tools to connect with colleagues, employees can feel educated, engaged, and inspired to improve their health and achieve personal well-being goals.

- On August 31, 2023, we completed the rebrand of LifeWorks to TELUS Health. This transformation marks one of the largest rebrands in TELUS' history as we embark on our journey as a unified global brand.
- In October 2023, we were recognized as Best Add-on or Support Service (Third Party Provider) at the U.K. Health & Protection Awards. This year, 10 health and well-being companies were shortlisted for this honour across mental health, telemedicine and women's health.
- In October 2023, we announced our collaboration with Mindyra Health to increase mental health accessibility and affordability for students, athletes, employees and their dependents across the United States. Through this collaboration, individuals receive the support they need via tele-counselling services with experienced healthcare professionals.
- In October 2023, Healix announced the delivery of mental health services to support clients' employees whenever they travel for business via experienced counsellors from TELUS Health. The service provides confidential mental health support 24/7 in times of crisis to support their mental well-being wherever they are in the world.
- In November 2023, we launched our next-generation medical alert system to support aging in place across Canada. Our new TELUS Health Medical Alert Pendant comes with a connected Caregiver app that offers advanced GPS-enabled location tracking and 24/7 access to live emergency support.
- In November 2023, we announced a pilot program giving Nova Scotia's volunteer firefighters and volunteer members of ground search and rescue teams and their families access to a range of health and wellness services, including personal and family counselling, stress management, nutrition support and more. The services are similar to those offered through employee and family assistance programs for career first responders.
- On December 4, 2023, the federal government announced the Canadian Business Disability Network, a national network of businesses supporting an accessible Canada for all, and TELUS Health was named as a founding member to help advance the inclusion of persons with disabilities in the workforce.

TELUS Agriculture & Consumer Goods

- In the first quarter of 2023, Ignition by TELUS, our supply chain software division, announced that it was a recipient of the Food Logistics 2022 Top Software & Technology Providers award. This award recognizes companies working not only to minimize supply chain disruptions, but also to promote supply chain resilience, ensuring a safe, efficient and reliable global cold food and beverage supply chain.
- The Minnesota chapter of the Public Relations Society of America recognized us for the best overall public relations campaign for launching our North Carolina Community Board, which has committed to donating US$1 million to grassroots projects and charities until 2026.
- In the third quarter of 2023, the Promotion Optimization Institute awarded TELUS Consumer Goods with the Best-In-Class distinction in four categories: (i) data management; (ii) enterprise planning integrated business planning/sales and operations planning capabilities; (iii) food service; and (iv) trade promotion management excellence.
- In the third quarter of 2023, we harmonized 11 acquired legacy brands for a consolidated go-to-market strategy under the TELUS umbrella. This digital-first approach will enable an optimized, efficient path to capitalize on market opportunities.
- In October 2023, Decisive Farming® by TELUS Agriculture announced a new partnership with GrainFox to bring more digital grain trade and sell options to Canadian farmers, providing technology-based solutions to support the ongoing transformation of agriculture in Canada. GrainFox, a provider of digital agricultural and financial tools, delivers personalized, data-driven insights to farmers through a mobile or desktop interface.
- In the third and fourth quarters of 2023, we celebrated notable customer wins and renewals that resulted in the highest annual sales in the consumer goods business since inception of TELUS Agriculture & Consumer Goods.

Scaling our innovative digital capabilities in TELUS International to build an asset of consequence

- As described in *Section 1.3*, TI closed its acquisition of WillowTree in January 2023, now rebranded as WillowTree, a TELUS International Company. WillowTree, a full-service digital product provider that is focused on end-user experiences, brings key tech talent and capabilities to TI's portfolio of next-generation solutions, and further augments its digital consulting and innovative client-centric software development capabilities. In addition, WillowTree enhances TI's ability to accelerate TELUS' own ongoing digital transformation and support key product development across our business, particularly within health and agriculture and consumer goods.
- In April 2023, TI published its first stand-alone sustainability report, outlining its environmental, social and governance priorities, strategy and progress.
- TI continued to enhance its board of directors by welcoming two new directors, thereby increasing the board's diversity, increasing the number of independent directors and exceeding its goal of having 30% female representation prior to its 2023 annual general meeting of shareholders.
- During the second quarter of 2023, TI expanded its global operations to South Africa and Morocco, fulfilling near-term client demand for greater diversification in offshore and nearshore delivery capabilities, with additional growth expected in the region over the longer term. In the fourth quarter of 2023, TI announced the official opening of its latest site in Casablanca, Morocco, designed with numerous sustainable features and constructed to multiple green certification standards.
- In October 2023, TI announced the launch of Fuel iX, backed by the power of generative AI (GenAI) to deliver end-to-end customer experience (CX) innovation and AI-fuelled intelligent experience (iX). Fuel iX brings together the full spectrum of intelligent experiences across customer, digital, voice, user, employee and human experience.
- In November 2023, TI announced it had partnered with Five9 to launch the next evolution of the Five9 Intelligent CS Platform, an end-to-end contact-centre-as-a-service (CCaaS) solution that provides brands with AI-driven, actionable customer insights to help them deliver best-in-class CX.
- In December 2023, TI announced the launch of Experts Engine, a fully managed, tech-enabled experts-on-demand sourcing solution for generative AI model builders, to address more complex and customized dataset requirements.
- TELUS increasingly benefits from the lower TI cost structure and receives growing amounts of value-generating digital, AI, telecommunications, health and consumer goods solutions from TI, while being able to maintain control over the quality of the associated services delivered. TELUS technology solutions (TTech) continues to grow business with Digitally-led customer experiences –TELUS International (DLCX) and remains one of its three largest clients.
- TI remains top of mind among its clients and peers, receiving various industry accolades. In 2023, TI was:
  - Named a winner of the 2023 Achievers 50 Most Engaged Workplaces Award for the fifth consecutive year. This award recognizes top employers who display leadership and innovation in employee engagement. TI was also the Elite 8 winner in the category of Purpose and Leadership.
  - Named on IAOP's Global Outsourcing 100 list for the seventh consecutive year, which ranks the best outsourcing providers across categories of size and growth, customer references, awards and certifications, programs for innovation and corporate social responsibility.
  - The winner in the Best Informational Bot Solution category at the AI Breakthrough Awards, for the third consecutive year, for its intelligent Bot Platform. These awards recognize trailblazing companies, technologies, products and services in the field of AI around the world.
  - A winner of the Webby Award for Best Public Service and Activism in the General Apps category developed through WillowTree's partnership with Meals on Wheels of Charlottesville/Albemarle.

- Ranked a Leader on the Everest Group's PEAK Matrix for Customer Experience Management (the Americas) and recognized as a global provider on Everest Group's inaugural 2023 Global PEAK Matrix assessment.
- Ranked a Leader in the NelsonHall 2023 NEAT assessment for content transformation services and its sub-categories for cost optimization and revenue generation.
- Included in the 2023 Constellation ShortList for Customer Experience Operations Services (Global), for leading delivery of critical transformation initiatives for early adopters and fast-follower organizations.
- Named a finalist of Fast Company's 2023 Best Workplaces for Innovators (International), among the world's most innovative and successful brands, and recognized in several categories of the 2023 Stevie Awards for Great Employers.
- Named a Leader in the IDC MarketScape: Worldwide Data Labelling Software 2023 Vendor Assessment. This global assessment evaluated vendors offering data labelling software technologies and capabilities and recognized TI's comprehensive capabilities in this area, including its proprietary Ground Truth Studios platform.

Our 2024 corporate priorities are set out below.

2024 corporate priorities

- Elevating our customers, communities and social purpose by honouring our brand promise, Let's make the future friendly
- Leveraging TELUS' world-leading technology to drive superior growth across mobile, home and business services
- Scaling our innovative digital capabilities in TELUS International, TELUS Health and TELUS Agriculture & Consumer Goods to build assets of consequence.

4. Capabilities

The forward-looking statements in this section, including statements regarding our dividend growth program and our financial objectives in *Section 4.3*, are qualified by the *Caution regarding forward-looking statements* at the beginning of this MD&A.

4.1 Principal markets addressed and competition

TELUS technology solutions (TTech): Mobile products and services for consumers and businesses across Canada. Fixed products and services, including residential services in British Columbia, Alberta and Eastern Quebec; business services across Canada; automation and security solutions across Canada; global healthcare and financial well-being solutions; and global agriculture and consumer goods solutions

Our mobile products and services

- Data and voice – Fast internet access (via our 4G and 5G network available to over 99% and approximately 86% of Canadians, respectively) for video, social networking, messaging and mobile applications, such as My TELUS, TELUS SmartHome, TELUS TV+ and virtual care apps; mobile voice service with features such as Call Control; clear and reliable voice services, including TELUS Business Connect®; and international roaming.
- Devices – The latest smartphones, tablets, mobile internet keys, mobile Wi-Fi devices, machine-to-machine (M2M) modems, digital life devices and wearable technology, such as smart watches and our LivingWell Companion®.
- Suite of Internet of Things (IoT) solutions and managed connectivity services to support Canadian businesses, including device estate management, asset tracking, fleet management, connected worker, remote monitoring, digital signage, premises security, intelligent traffic solutions and data analytics.

Our fixed products and services

- Internet – Comprehensive high-speed internet access with TELUS PureFibre®; fixed high-speed internet access (HSIA) service, with email and a comprehensive suite of security solutions; and wireless HSIA, with reliable Wi-Fi and cloud-based storage. We offer multiple plans, including plans with symmetrical 3.0 Gbps download and upload speeds.

- Television – High-definition entertainment service with Optik TV®, as well as our Stream+ bundle. Optik TV offers extensive content options, including 4K and 4K HDR live TV, on-demand content and streaming services such as Prime Video (included in the Amazon Prime membership), Netflix, Disney+, YouTube and hayu. Optik TV also delivers innovative features, including a voice assistant that allows customers to control their TV, a wireless digital box, unlimited cloud-based PVR capacity and the ability to restart live TV in progress or from the past 30 hours. In addition, our TELUS TV+ app allows customers to watch live TV, set recordings and access on-demand content from a smartphone, tablet, computer, Chromecast, Apple TV or from several other devices.

- Voice – Reliable fixed phone service with long distance and calling features such as Call Control, wireless home phone, and voice over IP (VoIP) supporting voice services into the future.

- Home and business security and automation – Real-time 24/7 central monitoring station, guard response service (where available), and wireless and hard-wired security technology, integrated with smart internet-connected devices. These services are enabling smart homes and smart businesses by allowing customers to remotely monitor and manage their premises using their cameras, smoke detectors, lights, door locks, environmental controls, appliances and other devices for enhanced security, comfort, convenience and energy efficiency.

- Secured IP connectivity for businesses – Converged voice, video and data services and internet access, offered on a high-performing network. Also includes software-defined wide area network (SD-WAN) and secure access service edge (SASE) offerings.

- Cloud and managed information technology (IT) services – Suite of hybrid IT solutions offers traditional and cloud technologies, network connectivity, security, managed IT and cloud-based advisory services.

- Security consulting and managed services – Cloud-based and on-premises solutions ensuring security for data, email, websites, networks and applications.

- Unified communications conferencing and collaboration – Full range of equipment and application solutions, including unified communications as a service (UCaaS), to support meetings and webcasts over phone, video and internet. Recent acquisitions are bolstering our capabilities in the small and mid-market business segments.

- Total healthcare and financial well-being – Our core areas of focus in the global marketplace are employers (small, medium and large enterprise), payors (insurers and public sector), providers (physicians, clinicians and pharmacists) and consumer solutions. We offer a variety of integrated health and well-being products, solutions and services, including employee and family assistance programs (EFAP), internet-based cognitive behavioural therapy (iCBT), and absence and disability management, corporate reward, recognition and perks programs, pension and benefits administrative solutions, retirement and financial solutions, virtual care (comprehensive primary care, mental health support, wellness offerings for employees and citizens, pet care), remote patient monitoring and personal emergency response services, medication management (virtual pharmacy, pharmacy management systems), health records management (personal health records, electronic medical records (EMR)), claims management solutions, and curation of health content.

- Agriculture and consumer goods – Agronomy record-keeping and recommendations, rebate management services, supplier management, order management, index labelling, compliance management, animal agriculture solutions, food traceability and quality assurance, data management solutions and software solutions for trade promotion management, optimization and analytics (TPx), retail execution, supply chain solutions and analytics capabilities.

Our capabilities supporting mobile and fixed products and services

- Licensed gross national mobile spectrum holdings averaging 271 MHz.
- Coast-to-coast digital 4G LTE access technology and growing 5G deployment:
  - Overall coverage of 99% of Canada's population, with LTE advanced (LTE - A) technology covering more than 95% of Canada's population and 5G covering approximately 86% of Canada's population at December 31, 2023. Coverage includes domestic network sharing agreements.
  - Manufacturer's rated download speeds: 5G, up to 3 Gbps; LTE-A, up to 1.5 Gbps; LTE, up to 150 Mbps; HSPA+, up to 42 Mbps. Average expected speeds: 5G, up to 450 Mbps; LTE-A, up to 390 Mbps; LTE, up to 45 Mbps; HSPA+, up to 14 Mbps.[1]
  - Reverts to LTE technology and speeds when customers are outside 5G coverage areas.
- International voice and data roaming capabilities in more than 225 destinations, including voice over LTE (VoLTE) roaming and 5G roaming. As of the date of this MD&A, VoLTE roaming is available in 75 international destinations and 5G roaming is available in 94 international destinations.
- IoT technology:
  - LTE-machine (LTE-M) technology across Canada and 5G at selected sites, which supports large quantities of devices that continually collect and transmit data, or that transmit data in infrequent short bursts.
  - Multi-service multi-billing capabilities, which provide the ability to separately classify, rate and bill data traffic across IoT devices.
  - Specialized IoT solutions that support municipalities, construction, utilities and transportation.
- Ongoing connection of households and businesses directly to fibre-optic cable; approximately 3.2 million households and businesses were connected with TELUS PureFibre in B.C., Alberta and Eastern Quebec at December 31, 2023.
- Broadcasting distribution licences allowing us to offer television services in incumbent territories, as well as licences to offer on-demand services.
- Security technology to support central monitoring and guard response service (where available), integrated with automated smart devices. Field services capabilities to install, upgrade and repair security technology at customers' premises.
- An IP-based national network overlaying an extensive switched network in B.C., Alberta and Eastern Quebec, as well as global interconnection arrangements.
- Seven data centres in six communities directly connected to the national TELUS IP network, creating an advanced and regionally diverse computing infrastructure in Canada.
- Provide access for businesses across Canada through our extensive managed fibre network, and product capabilities supported by our national delivery teams.
- Technology solutions to assist regional health authorities, hospitals, insurers, consumers and employers, as well as solutions to improve connectivity and collaboration among healthcare providers, including physicians, nurses, pharmacists and physiotherapists.

[1] Network speeds vary with location, signal and customer device and customer rate plan. Compatible device required.

- Technology solutions to assist agribusinesses, farmers, ranchers, commodity aggregators, processors, distributors, retailers and consumer packaged goods companies in sustainably improving the efficiency, traceability and responsiveness of the food system.
- Our leading customer service, which enhances customer loyalty and lowers churn rates for mobile and fixed services. Having DLCX team members assist with customer service strengthens our ability to continue delivering an exceptional customer experience.

Competition overview for mobile products and services

- Facilities-based national competitors Rogers Wireless, Bell Mobility and Quebecor, as well as provincial or regional telecommunications companies SaskTel, Eastlink and Tbaytel.
- Fixed wireless services.
- Resellers of competitors' services on mobile networks.
- Services offered by cable and mobile competitors over mobile and metropolitan Wi-Fi networks.
- Competitors for our IoT solutions include other providers of LTE, LTE-M and 5G network capabilities, IoT connectivity management platforms, and automated vehicle location and transportation solutions.

Competition overview for fixed products and services

- Cable competitors for internet, telephone and entertainment services, such as Rogers (upon its acquisition of Shaw, in B.C. and Alberta) and Cogeco Cable and Videotron (in Eastern Quebec).
- Our national telecommunications competitors Rogers and BCE also offer telecommunications services for business and enterprise customers, as do various suppliers that are increasingly selling directly to customers.
- Competitors for home and business security range from local to national companies, such as BCE, Rogers, Chubb-Edwards, Securitas Technology and Fluent Home. Competitors also include do-it-yourself security providers such as Lorex and home automation service providers such as Ring, Nest and Wyze.
- Various other small, non-traditional companies offering over-the-top (OTT) business solutions, including SD-WAN and UCaaS solutions. These competitors are more prevalent in the small and medium-sized business segments.
- Various others offering VoIP-based local and long distance voice services, as well as internet and data services, or reselling those services.
- OTT and direct-to-consumer voice and/or entertainment services.
- Satellite-based entertainment and internet services offered by BCE, Rogers (upon its acquisition of Shaw), Xplore, Starlink and Telesat.

- Competitors for TELUS Health include: providers of EMR and pharmacy management products, such as Omnimed, Familiprix, Medfar, Fillware, ARI and Logipharm. Competitors also include systems integrators; health service providers, such as Loblaw, McKesson, WELL Health and the Jean Coutu Group, that have also become vertically integrated and own a mix of health services delivery, IT solutions and related services; and potentially, global providers, such as EPIC and Cerner, that could achieve an expanded Canadian footprint. Competitors for virtual care services include Tia Health, CloudMD, MD Connected, AppleTree VC, Cover Health, Dialogue, Maple, Vetster, MarsVCA and Smart.Vet. Competitors for TELUS Health's corporate and preventative health service offerings include Medcan, Cleveland Clinic, Loblaw, Homewood, Harrison Healthcare and Wellpoint. Competitors for the employer and employee-focused well-being space include: EFAP competitors such as Dialogue and Homewood in Canada, and Compsych, WPO and Magellan in the United States. TELUS Health also competes against digital mental health players in the United States, including Lyra, Modern Health and Virgin Pulse. Pension and benefits administration and retirement and financial solutions competitors include Alight, Willis Towers Watson, Fidelity, Conduent, Aon and Mercer, among others.
- TELUS Agriculture & Consumer Goods is unique – a global provider of agriculture and consumer goods technology and data solutions, serving customers across the entire food value chain, connecting producers to consumers. Our ability to provide solutions across the chain provides us with the capability to drive insights through connecting data at various stages of production. The chain broadly displays strong competition across a high volume of smaller competitors. TELUS Agriculture & Consumer Goods has competitors at each stage along the chain:
  - In the consumer goods business, competitors include Accenture, Oracle and Kantar's trade promotion management solutions.
  - In the agriculture business, competitors range from local to global companies, such as AgData, Ever.Ag, Semios, Trimble, Growmark, Agvance and Smartwyre.
  - In the animal agriculture business, competitors include companies such as Performance Livestock Analytics.

Digitally-led customer experiences – TELUS International (DLCX): A digital customer experience innovator that designs, builds and delivers high-tech, high-touch next-generation solutions, including artificial intelligence (AI) and content moderation, for global and disruptive brands.

Our products and services

- Our services support the full life cycle of our clients' AI-led transformation journeys, enabling them to more quickly embrace disruptive or emerging digital technologies that deliver more compelling business outcomes.
- AI data solutions – AI with human-powered data backed by the latest AI training data technology. Our data annotation solutions cover 500 languages and dialects across all major data types, including sensor fusion for advanced computer vision models.
- Customer experience (CX) – Our CX solutions include work from home, customer care, tech support, sales growth, collections and healthcare/patient experience.
- Digital experience (DX) – Our DX solutions include AI and bots, omnichannel CX, mobility, cloud contact centre, platform transformation and user experience (UX) and user interface (UI) design.
- Trust and safety – Our solutions include social media and content moderation, as well as fraud prevention and detection services, such as know your customer and anti-money laundering solutions, identity verification and fraud investigation.
- Advisory services – Specialized services are available to support AI advisory, digital strategy, CX process consulting, data and customer analytics, workforce management, learning excellence and business and process transformation.

- Transformation life cycle – Solutions include digital product engineering, cloud-based and platform services, application development and management, quality assurance (QA) and testing, system operations, IT service desk, IoT and enterprise platform services.
- Back office and automation – Solutions that address robotic process automation (RPA), talent acquisition, finance and accounting and supply chain/procurement outsourcing.
- We believe we are uniquely positioned to serve these markets and capture significant market opportunities, given the overall industry growth rate, low penetration to date and our extensive experience in the markets.
- We serve client demands that have grown substantially in recent years, such as content moderation, which includes review and compliance services applied to user-generated content on social media and other digital platforms. The need to moderate content on digital platforms has prompted enterprises to seek providers of specialized services that can help them navigate through changes in an uncertain, highly regulated environment. Generative AI is expected to accelerate content creation, driving greater demand for these services. AI data solutions, including advanced computer vision models, are additional offerings experiencing growing demand, especially with larger investments in foundational model development, which involves supervised fine tuning and reinforcement learning via human feedback solutions.
- GenAI – In October 2023, we announced the launch of Fuel iX, our solution incorporating generative AI (GenAI) to deliver end-to-end CX innovation and AI-fuelled intelligent experiences (iX). With Fuel iX, we are providing a comprehensive suite of services, combining digital consulting, data services and analytics, web and mobile application development, and an AI-fueled platform. The solution enables companies to overcome disjointed data and organization silos, and embeds AI in day-to-day CX operations and workflows.

Our capabilities

We believe we have the right combination of people, capabilities and technology to help companies address the continuum of designing, building and delivering integrated end-to-end customer experience systems.

Strategy and innovation – Understand and define client needs to innovate and develop plans . With our intuitive digital design approach, we help our clients design next-generation business solutions based not only on transformative technology, but also on transformative processes and culture.

- AI advisory
- Next-generation digital strategy
- Ideation on innovation
- UX/UI design
- CX process consulting, including customer, employee and system journey mapping.

Next-gen tech and transformation services – Building digital customer experience systems with next-gen technologies . Our clients often need to re-engineer their customer experience systems to provide a seamless, contextual, consistent and personalized CX across all channels – digital or human. This involves bringing their core systems and applications up to date, while at the same time design and build new digital solutions that leverage technologies such as cloud, mobile, AI, automation, IoT, analytics and more. The key capabilities underlying our next-gen tech and transformation services solutions are:

- Digital product engineering, application development and QA
- Data annotation, AI/ML and intelligent automation – including RPA and chatbots
    - We help clients improve their CX with data annotation in domains such as search relevance, image/video labelling for smart cities and audio transcription, as well as facial recognition for clients working with AI technologies. We also use AI-based conversation bots in customer engagement situations to augment or simulate human interactions, enabling 24/7 personalized responses to customers. Through TELUS International AI Data Solutions (TIAI), we collect, annotate and validate data in text, images, videos and audio in more than 500 languages and dialects, including support for computer vision capability, for technology companies operating in the social media, search, retail and mobile sectors.
    - We use advanced analytics and AI techniques to analyze structured and unstructured consumer datasets that can provide a unified data view of end-customers' complete transaction history with our clients, generating real-time insights to enable the delivery of a personalized customer experience.
    - Intelligent Insights is a diagnostic platform tool that aligns human and digital workforces to manage the end-to-end life cycle of digital co-workers.
- Managed cloud services – Including migration, implementation and managed services for public cloud, private cloud and multi-cloud hybrid environments
- Workforce transformation.

CX process and delivery – Delivering exceptional customer experience . We have extensive CX process expertise, as well as highly skilled, empathetic and engaged teams, that can enable exceptional, integrated customer experiences. Our global delivery platform allows us to service clients across geographic regions and develop a customized delivery strategy that will address their evolving needs.

- Managed solutions, including learning services, workforce management, contact centre
- Learning excellence solutions
- Workforce management services
- Contact centre-as-a-service
- Omnichannel customer experience, including customer care, sales and tech support
- 360-degree customer analytics.

Trust and safety

We combine automated digital moderation tools with human support to provide a robust trust and safety framework to monitor our clients' digital businesses. Our customizable and scalable digital content management solutions can also help clients raise their social media profile, expand their user base and attract more customers through social and eCommerce channels.

Adjacent to content moderation and part of our broader trust and safety program, fraud prevention has become more critical across all industries. Our services are focused on promoting ethical conduct, protecting digital assets from misappropriation with identify verification and profile validation procedures, managing fraudulent statements and preventing corruption or any other unlawful activity, such as account takeovers.

Competition overview

- The sectors in which we compete are global, fragmented and rapidly evolving. We face competition primarily from:
  - In-house technology and CX management teams
  - Digital transformation services providers such as Endava, EPAM and Globant
  - Globally diversified IT and business process outsourcing (BPO) service providers such as Accenture, Cognizant, Genpact and WNS
  - Customer experience providers such as Concentrix, TaskUs, Teleperformance S.A. and TTEC
  - Providers with a primary focus on data annotation such as Appen Limited and ScaleAI, Inc.
  - Software solutions such as conversational AI platforms emerging as competition.
- We believe that the main areas of competition in our markets include digital capabilities, comprehensiveness of offerings, vertical and process expertise, global delivery capabilities, team member engagement and retention, reputation, track record and financial stability. We believe that we have a competitive advantage in each of those areas.

4.2 Operational resources

Our team

- We had approximately 106,400 employees at December 31, 2023, including 75,300 at TI. Of our 106,400 employees, 30,900 were located in Canada and 75,500 were located in other countries. We also use external consultants and contractors, including crowdsourced providers engaged through TIAI.
- Approximately 5,385 of our employees are covered by collective agreements. The agreement with the Telecommunications Workers Union, United Steelworkers Local 1944 (TWU), which covers approximately 3,980 employees, expires on March 31, 2027. The agreement with the Syndicat québécois des employés de TELUS (SQET), which covers approximately 625 employees, expires on June 30, 2028. The agreement with the Syndicat des agents de maîtrise de TELUS (SAMT), which covers approximately 470 employees, expires on October 31, 2028. Our TELUS Employer Solutions Inc. subsidiary is signatory to a collective agreement with the B.C. Government and Services Employees' Union, which expired on July 31, 2023. The contract, which covers fewer than 100 employees, remains in effect while the parties are bargaining, until a new agreement is reached.
- Approximately 250 employees within our ADT Security Services Canada, Inc. subsidiary (ADT Canada) are unionized. These employees are covered by 12 separate collective agreements between ADT Canada and a number of different unions in multiple provinces. The expiry dates of these collective agreements vary.
- TI has access to labour across 32 countries for both management and support. Digital solutions are primarily sourced from North America, India, Philippines, Central America and Europe.
- Our objective is to attract, develop and retain talented team members in Canada and internationally. We strive to achieve this objective by investing in our people throughout their careers, and by offering diverse and inclusive employment prospects and development opportunities.
- Team member engagement was measured again through our annual fall Pulsecheck survey, resulting in an engagement score of 82%, which is an encouraging accomplishment against the backdrop of the highly competitive and dynamic environment in which we work, demonstrating the strength of the culture our team members have built together. TELUS is the most engaged organization globally compared to organizations of our size and composition according to our survey provider, Kincentric.
- In our team member surveys, we continue to include questions that assess our team's health and well-being and gather their insights about our work environment. Key highlights include team members confirming they know how to access well-being resources in our organization, their leader is providing the support they need, and their work arrangements allow them to collaborate productively while also meeting the needs of customers.
- An engaged teams results in a better team member experience, which in turn drives an improved customer service experience – our customers are more satisfied, resulting in a lower churn rate for our products and services.
- In 2023, reinforcement of our culture continued to focus on diversity and inclusion, human capital development and team member engagement, through:
  - Leveraging our strong culture with a focus on listening to team members
  - Putting customers first and having our leaders engage with their teams through fair process, and
  - Utilizing Pulsecheck feedback, including our Inclusion Index results, to develop and implement action plans for improvements.

- We aim to attract and retain key team members through both monetary and non-monetary approaches. Our compensation and benefits program supports our high-performance culture and is both market-driven and performance-based. Where necessary, we implement targeted retention solutions for team members with critical skills or talents that are scarce in the marketplace, and we have a succession planning process to identify top talent for senior-level positions.

- For further details related to our team, see the description under *Mitigation* in *Section 10.12 Our team*.

Our major brands and distribution channels

- TELUS – A national communications and information technology company serving customers across mobile, data, IP, voice, television, entertainment, video and security, driven by our social purpose to leverage our global-leading technology and compassion to drive social change and enable remarkable human outcomes.
- Koodo Mobile – A national provider of postpaid and prepaid mobile voice and data services with a broad distribution network, including TELUS-owned stores, dealers and third-party electronics retailers.
- Public Mobile – A prepaid mobile service provider with web-based and physical distribution, providing customers with a SIM-only service.
- Mobile Klinik – A provider of device performance and professional smartphone and tablet repair, offering high-quality, certified pre-owned mobile devices.
- Optik TV – High-definition entertainment services offering television shows, on-demand content and streaming services.
- TELUS PureFibre – Our next-generation fibre-optic network, which delivers fast internet access and serves as the backbone for our 5G network.
- TELUS SmartHome Security and TELUS Secure Business – Full-service security offerings for residential and business customers.
- TELUS International – A digital customer experience innovator that designs, builds and delivers high-tech, high-touch next-generation solutions, including AI and content moderation, for global and disruptive brands.
- TELUS Health – Supporting our customers and solving some of the most pressing issues facing citizens, patients, healthcare professionals, payors, employers and employees.
- TELUS Agriculture & Consumer Goods – A global provider of agriculture and consumer goods technology and data solutions, serving customers across the food value chain.
- TELUS Ventures – A corporate venture capital fund that has invested in more than 100 market-transforming companies since 2001.
- GoCo – An agile entity that brings next-generation unified communications and managed network solutions to the business market in a highly differentiated and entrepreneurial manner.
- Social purpose initiatives – TELUS Wise (national digital safety education program), TELUS Pollinator Fund for Good (impact fund), and Connecting for Good programs that help bridge the digital divide: Mobility for Good (free or low-cost mobility plans and phones), Internet for Good (low-cost internet plans), Tech for Good (support and training, including assistive technology for Canadians living with disabilities), and Health for Good (mobile health clinics that bring care to those experiencing homelessness).

- Our sales and support distribution channels:
  - Mobile services are supported through a broad network of TELUS-owned and branded stores, including our 50% ownership of the kiosk channel WOW! Mobile, and an extensive distribution network of exclusive dealers and large third-party national retail partners (e.g. Best Buy, Walmart and London Drugs), as well as online self-serve applications, intuitive virtual-assistant chatbots, mass marketing campaigns and customer care telephone agents. Through Mobile Klinik, we offer professional smartphone and tablet repair, refurbishment and resale.
  - Fixed residential services (including automation and security) are supported through TELUS-owned and branded stores, customer care telephone agents, independent dealers and agents, digital home technicians and partners and online and TV-based self-serve applications.
  - **telus.com** is our primary e-commerce channel that promotes and sells products, accessories and services across multiple lines of our business in mobility, home solutions, business-to-business (B2B), health, and agriculture and consumer goods. It also acts as a core account management platform to enable customers of those product lines to access self-serve account features and services, as well as unique customer support channels such as chat and virtual consultations with technicians.
  - National direct-to-consumer sales team, dedicated to rapid expansion of our customer base through face-to-face and virtual conversations.
  - Business services, including healthcare and security, across mobile and fixed service offerings are supported through dedicated stores for business, TELUS sales representatives, product specialists, independent dealers, direct business channels and online self-serve applications for small and medium-sized businesses.
  - TELUS International's solutions are supported through sales representatives, client relationship management teams, data annotation and content moderation teams, and digital engineers, developers and architects.
  - TELUS Health provides some of its services – personal health records and home health monitoring – in partnership with provincial governments. We improve lives by supporting the whole person's well-being of mental, financial, social and physical health, combining technology and deep expertise in mental health via our Total Mental Health offering. We also provide EFAP and absence and disability management services through certain channel partners (including insurance companies and brokers).
  - TELUS Agriculture & Consumer Goods' solutions are supported through online self-serve applications, sales representatives and customer relationship management teams.

Our technology, systems and properties

- We are a technology-enabled company with a multitude of IT systems and processes. We are focused on driving innovation and making generational investments to deliver state-of-the-art broadband solutions in an increasingly digital society.
- Broadband consumer and business networks
  - We launched our 4G LTE network in 2012, and today it covers 99% of Canada's population. This network evolved in 2017 when we adopted LTE-A technology, which now covers more than 95% of Canada's population and offers peak theoretical speeds of up to 1.5 Gbps. Our LTE CAT-M1 IoT network covers 96% of Canada's population. See *Leveraging TELUS' world-leading technology to drive superior growth across mobile, home and business services* in *Section 3 Corporate priorities* for additional information.
  - We have made significant investments in heterogeneous network (HetNet) technology, one of the key building blocks for 5G. HetNet combines multiple types of cells, such as outdoor macrocells and microcells, as well as indoor pico cells, to enhance coverage and capacity in crowded urban areas and inside buildings. By taking continuous strides to evolve our small-cell technology, concurrent with the evolution of network technologies to LTE-A pro (i.e. 4.5G), in 2017, we became the first operator in Canada to introduce licensed assisted access (LAA) small cells for both outdoor and indoor environments, capable of speeds of up to 970 Mbps. In 2019, we continued advancing LAA technology with speeds of up to 1.2 Gbps, and we have deployed more than 400 LAA sites to date.
  - In 2018, we became the first operator globally to introduce LTE FDD massive multiple-input-multiple-output (MIMO) 32TRx technology on the 2600 MHz band as part of the LTE-A pro technology evolution, and in 2020, we introduced dual-band massive MIMO technology in the 1900 MHz and AWS bands, also a global first. This technology further enhances the capacity of our wireless infrastructure, enables a stronger customer experience, helping us sustain our long-term wireless leadership.
  - In 2019, we advanced the virtualization of our core network infrastructure with the voice core, providing a stepping stone into 5G service readiness. The network virtualization improves our network scalability, resiliency and cost efficiency.
  - In 2020, we launched our 5G technology capable of speeds of up to 1.7 Gbps.
  - In 2021, we increased the speeds of our 5G network, capable of speeds pf up to 1.9 Gbps, through the deployment of incremental 5G spectrum.
  - In 2023, our 5G network evolved and is now capable of speeds of up to 3.1 Gbps. Our 5G network covered approximately 86% of Canada's population by December 31, 2023.
  - In 2023, we launched our 5G stand-alone network, utilizing the full potential of our 3.5 GHz, 600 MHz and 2.1 GHz 5G spectrum. This network is built on a solid foundation that enables us to unlock new 5G capabilities, such as network slicing, multi-access edge computing (MEC) and low-latency critical communications. A significant improvement to our 5G network in 2021 was our deployment of the 3.5 GHz spectrum with MIMO technology. By the end of 2023, our 3.5 GHz coverage extended to 40% of the Canadian population.

- Our investments to deploy our TELUS PureFibre technology have brought fibre-optic connectivity further into our infrastructure and directly to homes and businesses. At the end of 2023, approximately 3.2 million homes and businesses in communities across B.C., Alberta and Quebec had access to ultra-fast symmetrical internet speeds ranging from 150 Mbps to 1 Gbps, including approximately 2.0 million premises in B.C. and Alberta that had access to symmetrical internet speeds of up to 2.5 Gbps with TELUS PureFibre. Recognizing the need for highly reliable connectivity with low latency throughput to support emerging services such as virtualized networks and IoT applications, we have also begun rolling out new equipment for enhanced speeds and services.

    - We continue to deploy the next evolution of our fixed IP and optical core/edge technology, smart edge architecture. This architecture enables significant automation and per-port cost improvement to support network growth and evolution.

    - We continue to roll out our third-generation national dense wavelength division multiplexing transport backbone (packet transport 3.0) colourless, directionless and contentionless (CDC) network overlay, which is connected from B.C. to Quebec and into the United States. This architecture allows network growth without the need for costly re-generation, enables optimal optical rerouting during a fibre cut and improves network growth costs.

    - In 2023, we continued evolving our PureFibre and HSIA technologies to deliver a superior customer experience, advancing our market leadership in home and business services by launching 3.0 Gbps symmetrical service in major markets in B.C. and Alberta, while continuing to bring broadband network speeds to thousands of homes in rural and Indigenous communities in B.C., Alberta and Quebec.

    - In 2023, we continued to bring broadband network speeds to homes in rural and Indigenous communities in B.C., Alberta and Quebec, enabling connectivity for approximately 24,000 premises across 112 communities, including 120 Indigenous lands. To date, we have enabled 715,000 rural premises with access to PureFibre across 406 communities, and by December 31, 2023, 86% of homes, communities, small businesses and government buildings on Indigenous lands had access to our advanced broadband networks.

    - In 2023, we were awarded $36 million in government subsidies that will help bring TELUS PureFibre to over 5,000 premises spread across more than 17 rural communities, including expanding our broadband networks to more than 20 Indigenous lands between now and 2026.

    - In 2022, we acquired Fully Managed Inc. to continue building on our differentiated capabilities for the business market with cloud-based software and remote network monitoring technology that enables customer assistance without the need for on-site support personnel. This acquisition also included a senior care division, which offers effortless automation for senior care providers looking to modernize critical processes.

    - We continue to evolve our world-class emergency services to harness the power of IP through our implementation of next-generation 9-1-1.

    - In 2022, we launched Wi-Fi Plus, a service that ensures reliable Wi-Fi coverage in every corner of a home, with professional installation, ongoing expert support and network security for the peace of mind of our internet customers.

    - In 2022, we introduced self-install capabilities for our internet services in B.C. and Alberta, enabling a simple, hassle-free installation experience without requiring a technician visit.

  - In 2023, we expanded our PureFibre network to a number of older condominium buildings in B.C. and Alberta through micro distribution point unit (DPU) technology. Condominium residents now have access to PureFibre speeds without major modification to their buildings' electrical network.
  - In 2023, we launched new Optik TV on our new TV platform, enabling an integration of streaming services, cloud-based DV, and customer self-installation options, improving our customer lifetime value and further differentiating our video services.
  - In 2023, we successfully completed the migration of our legacy Pik TV ® and Optik on the go services to the new Optik platform, enabling us to turndown the legacy platform and realize new efficiencies.
  - We are continually enhancing our customer applications across Optik TV, TELUS SmartHome and TELUS Connect, giving customers more control over their services and devices. By investing in innovative applications and the cloudification of video infrastructure, we are continuing to advance our priority of enabling "anytime, everywhere" access to content and entertainment, thereby continuing to deliver an exceptional customer experience.
- We are continuing to monitor traffic requirements and invest in our network to maintain high levels of service and support for Canadians:
  - Expanding streaming capacity for Optik TV video-on-demand and new solutions to enable scaling to support the ongoing growth in video-on-demand and broadcast viewing consumption.
  - Continuing to migrate voice traffic from legacy 3G, with 90% of calls now processed as VoLTE.
  - Augmenting our wireless network to support a 37% year-over-year increase in mobility traffic and an 11% year-over-year increase in wireless HSIA traffic in 2023.
  - Deploying mission-critical environment pods (self-contained units with HVAC and power) to quickly provision our critical network equipment and reduce the risk of equipment outages.
- Real estate – Our network facilities are constructed under or along streets and highways, pursuant to rights-of-way granted by the owners of land, including municipalities and the Crown, or on freehold land we own.
  - Our real estate properties (owned or leased) also include administrative office space and mixed-use office, commercial and residential properties, all of which may be developed through joint ventures, as well as other real estate development projects that advance our social purpose, work centres and space for telecommunications equipment. Some buildings are constructed on leasehold land and the majority of wireless radio antennae are on towers that are situated on lands or on buildings held under leases or licences with varying terms. We currently participate in a number of real estate joint ventures. (See *Section 7.11*.)
  - Plans to redevelop real estate assets will require regulatory approvals, and also the need to work cohesively with our network teams to manage reliability and operational business considerations.
- Intangible assets – Our intangible assets include spectrum licences from Innovation, Science and Economic Development Canada (ISED), which are essential to providing mobile services. We have assets averaging 271 MHz nationally. We have deployed 3500 MHz, 600 MHz, 700 MHz, 2300 MHz, 2500 MHz, 1900 MHz, AWS and 850 MHz spectrum to evolve our wireless infrastructure. Further, we acquired a national average of 71 MHz in the 3800 MHz auction, which concluded in November 2023; this spectrum will be vacated by its current users between 2025 to 2027 in most of the country. We intend to continue acquiring spectrum within the rules set out by ISED to meet our future capacity requirements.

- Intellectual property, which we own or have been granted the right to use, is an essential asset for us. Intellectual property enables us to be known and recognized in the marketplace through our brand style, trade dress, domain names and trademarks. It protects our know-how and software, systems, processes and methods of doing business through copyrights, patents and confidential information, including trade secrets. It also helps us improve our competitiveness by fostering an innovative work environment. Each form of intellectual property is important to our success. For instance, the TELUS brand plays a key role in product positioning and our Company's reputation. To protect our intellectual property assets, we rely on a combination of legal protections afforded under copyright, trademark, patent and other intellectual property laws, as well as contractual provisions under licensing arrangements. We aim to maximize the value of our intangible assets in the areas of innovation and invention by ensuring they are appropriately used, protected and valued. Further information on our tangible and intangible assets can be found in *Section 8.1 Critical accounting estimates and judgments*.

- Our broadcasting distribution licences enable us to provide entertainment services. See *Broadcasting-related issues* in *Section 9.4*, which discusses developments relating to these licences.

- Future technologies – In addition to evolving our existing infrastructure, we are investing in the technologies of the future that will serve as the foundation to provide next-generation services to Canadians.

  - We continue to invest in enabling systems such as our Jasper connected device platform (CDP) and our dedicated M2M mobility core has been upgraded to support both 4G and 5G and will power next-generation IoT applications.

  - We continue to invest in both technology and talent across TELUS to harness the competitive capabilities, flexibility and resilience of digital and cloud technologies. Our ongoing digitization efforts enable TELUS to rapidly introduce new products and services, swiftly respond to customer and market needs, and provide highly reliable service.

  - Advancing our drive to simplify and consolidate systems across several fronts, such as unlocking customer relationship management (CRM)/billing systems in Quebec, with LivingWell Companion and SmartHome products now supported for Quebec incumbent local exchange carrier (ILEC) and new fibre customers, opening new Quebec territory growth opportunities, automating copper-to-fibre (C2F) processes to create a one-click C2F order, reducing call handling time and billing errors, and completing copper on CRM/billing system trials, each paving the way for consolidating consumer ordering within a single system stack.

  - Modernizing our enterprise communication platform to be fully cloud-enabled and improve system redundancy while processing millions of messages, including mobile e-Bill short message service (SMS) reminders, Koodo data threshold SMS and upsell messages, and mobile number portability messages.
  - We completed the migration of our internet customers to our new cloud-based email platform. This service, leveraging our partnership with Google, provides an exceptional customer experience, improved reliability and expanded features for our customers.
  - Reducing manual work through automation and advancing Agile and DevOps capabilities:
    - Leading to improved agility, cost to serve and speed to market, while also driving reliability, including expanding test automation capabilities
    - Scaling deploy-on-demand release frameworks, enabling faster speed to market and mitigating risks early in the release cycle, expanding automated software development and self-serve test data management capabilities to improve quality of software
    - Standardizing test case and defect management toolset, mitigating reliability risk related to unsupported tools.
  - Improving our data analytics and AI capabilities to deliver business outcomes through enhanced customer targeting, visualization and business intelligence tools, while also making significant improvements in the accuracy and reliability of our geo-analytics platform to support new and personalized/targeted market campaigns.

- Through TI, we are a digital customer experience innovator that designs, builds and delivers high-tech, high-touch next-generation solutions, including AI and content moderation, for global and disruptive brands, as described in *Section 4.1*. These services are provided from facilities located in Europe, North America, Asia-Pacific, and Central America and others.
- TELUS Health technology solutions offer employer and employee-focused well-being solutions through the provision of global well-being and EFAP services, iCBT, absence and disability management, as well as workers' compensation and retirement and financial administrative solutions. TELUS Health also facilitates the integration of electronic health records including pharmacy management, EMRs, personal health records, clinical information systems, remote patient monitoring, virtual care offerings and online claims settlement management software solutions, encompassing the online renewal of prescriptions, e-prescribing services and MedDialog®. In addition, our TELUS Health Care Centres provides executive benefits, occupational health, employee health and wellness services and individual preventive health services.
- Our TELUS Agriculture & Consumer Goods technology solutions meaningfully impact primary production and sustainability across the food value chain, by empowering value chain participants with solutions that leverage advanced data systems and AI to streamline operations, improve food traceability, and provide consumers with fresher and healthier food.

4.3 Liquidity and capital resources

Capital structure financial policies

Our objective when managing financial capital is to maintain a flexible capital structure that optimizes the cost and availability of capital at acceptable risk. In our definition of financial capital, we include:

- Common equity (excluding Accumulated other comprehensive income);
- Non-controlling interests;
- Long-term debt (including long-term credit facilities, commercial paper backstopped by long-term credit facilities and any hedging assets or liabilities associated with Long-term debt items, net of amounts recognized in Accumulated other comprehensive income);
- Cash and temporary investments;
- Short-term borrowings (including those arising from securitized receivables); and
- Other long-term debts (including those arising from securitized receivables).

We manage our financial capital structure and make adjustments to it in light of changes in economic conditions and the risk characteristics of our business. In order to maintain or adjust our financial capital structure, we may:

- Adjust the amount of dividends paid to holders of Common Shares;
- Purchase Common Shares for cancellation pursuant to normal course issuer bid (NCIB) programs;
- Issue new shares (including Common Shares and TELUS International Subordinate Voting Shares);
- Issue new debt, issue new debt to replace existing debt with different characteristics;
- Increase or decrease the amount of receivables sold to an arm's-length securitization trust; and/or
- Enter into a new arm's-length securitization trust to replace an existing arm's-length securitization trust with different characteristics.

We monitor financial capital utilizing a number of measures, including net debt to EBITDA – excluding restructuring and other costs ratio, coverage ratios and dividend payout ratios. (See definitions in *Section 11.1 Non-GAAP and other specified financial measures*.)

Financing and capital structure management plans

Report on financing and capital structure management plans

Pay dividends to the holders of the common shares of TELUS Corporation (Common Shares) under our multi-year dividend growth program

- In May 2022, we announced our intention to target ongoing semi-annual dividend increases, with the annual increase in the range of 7 to 10% from 2023 through to the end of 2025, thereby extending the policy first announced in May 2011. Notwithstanding this target, dividend decisions will continue to be subject to our Board's assessment and the determination of our financial position and outlook on a quarterly basis. Our long-term Common Share dividend payout ratio guideline is 60 to 75% of free cash flow on a prospective basis. (See *Section 7.5 Liquidity and capital resource measures.*) There can be no assurance that we will maintain a dividend growth program or that it will be unchanged through 2025. (See *Caution regarding forward-looking statements - Lower than planned free cash flow could constrain our ability to invest in operations, reduce leverage or return capital to shareholders* and *Section 10.15 Financing, debt and dividends*.)

- Dividends declared in 2023 totalled $1.4544 per share, an increase of $.0987 per share or 7.3% compared to the dividends declared in 2022. On February 8, 2024, the Board elected to declare a first quarter dividend of $0.3761 per share, payable on April 1, 2024, to shareholders of record at the close of business on March 11, 2024. The first quarter dividend for 2024 reflects a cumulative increase of $0.0250 per share or 7.1% from the $0.3511 per share dividend declared one year earlier.

- Our dividend reinvestment and share purchase (DRISP) plan trustee acquired shares from Treasury for the DRISP plan, rather than acquiring Common Shares in the stock market. We may, at our discretion, offer Common Shares at a discount of up to 5% from the market price under the DRISP. Effective with the dividends paid beginning on October 1, 2019, we offered Common Shares from Treasury at a discount of 2%. During 2023, our DRISP plan trustee acquired from Treasury approximately 30 million dividend reinvestment Common Shares for $748 million. For the dividends paid on January 2, 2024, the DRISP participation rate, calculated as the DRISP investment of $191 million (including the employee share purchase plan) as a percentage of gross dividends, was approximately 35%.

- TELUS International currently intends to retain all available funds and any future earnings to support operations and to finance the growth and development of its business.

Purchase Common Shares

- We did not purchase any shares pursuant to the 2022 NCIB, which concluded on June 5, 2023.

Use proceeds from securitized receivables (Short-term borrowings), bank facilities and commercial paper as needed, to supplement free cash flow and meet other cash requirements

- Our issued and outstanding commercial paper was $1.0 billion at December 31, 2023, all of which was denominated in U.S. dollars (US$0.8 billion), compared to $1.5 billion (US$1.1 billion) at December 31, 2022. During the third quarter of 2023, our unsecured revolving credit facility, with uses that include the backstop of commercial paper, was renewed and expiry was extended approximately two years to July 14, 2028. See *Section 7.6* for additional details.
- Net draws due to a syndicate of financial institutions (excluding TELUS Corporation) on the TI credit facility were US$1.4 billion at December 31, 2023, compared to US$689 million at December 31, 2022. The TI credit facility is non-recourse to TELUS Corporation.
- Proceeds from securitized trade receivables were $100 million at December 31, 2023, unchanged from December 31, 2022.

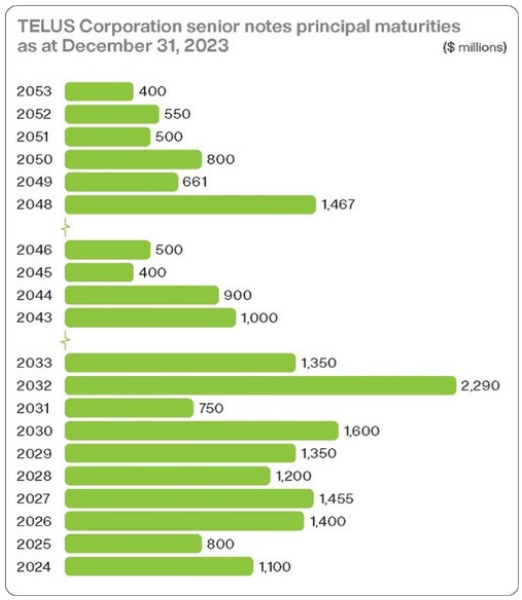
Maintain compliance with financial objectives

- Maintain investment-grade credit ratings – On February 9, 2024, investment-grade credit ratings from all rating agencies that cover TELUS were in the desired range. (See *Section 7.8 Credit ratings*.)
- Net debt to EBITDA – excluding restructuring and other costs ratio of 2.20 to 2.70 times – As measured at December 31, 2023, this ratio was 3.71 times, outside of the objective range, primarily due to the acquisition of spectrum licences (as spectrum is our largest indefinite life asset) and business acquisitions. Given the cash demands of the 600 MHz auction in 2019, the 3500 MHz auction in 2021, the 3800 MHz auction in 2023 and the expected upcoming spectrum auction in 2024 for millimetre wave, the assessment of the guideline and timing of return to the objective range remains to be determined; however, it is our intent to return to a ratio below 2.70 times in the medium term (following the spectrum auctions in 2021 and 2023, and the spectrum auction upcoming in 2024), consistent with our long-term strategy. (See *Section 7.5 Liquidity and capital resource measures*.)
- Common Share dividend payout ratio of 60 to 75% of free cash flow on a prospective basis – Our objective range is on a prospective basis. The Common Share dividend payout ratio[1] we present in this MD&A is a historical measure utilizing the dividends declared in the most recent four quarters, net of dividend reinvestment plan effects, and free cash flow, and is disclosed on a retrospective basis for illustrative purposes in evaluating our target guideline. As at December 31, 2023, the ratio was 77%, outside of the objective range. We estimate the ratio will be within the objective range on a prospective basis. (See *Section 7.5 Liquidity and capital resource measures* .)
- Generally maintain a minimum of $1 billion in available liquidity – As at December 31, 2023, our available liquidity [1] was approximately $3.1 billion. (See *Section 7.6 Credit facilities* and *Liquidity risk* in *Section 7.9*.)

1 These are non-GAAP and other specified financial measures. See *Section 11.1 Non-GAAP* and other specified financial measures.

Financing and capital structure management plans for 2024

At the end of 2023, our senior unsecured debt (excluding unamortized discount) was $22.8 billion. For our long-term debt, the weighted average term to maturity was approximately 11.3 years (excluding commercial paper, TELUS bank credit facilities, the revolving components of the TI credit facility, lease liabilities and other long-term debt). Our weighted average interest rate on long-term debt (excluding commercial paper, TELUS bank credit facilities, the revolving components of the TI credit facility, lease liabilities and other long-term debt) was 4.33% at December 31, 2023, up from 4.03% one year ago. Aside from Short-term borrowings of $100 million, commercial paper of $1.0 billion (US$0.8 billion), the $1.1 billion bank credit facility, of which $1.1 billion was drawn at December 31, 2023 (see *Section 7.6* for further details), the utilized revolving component of the TI credit facility (excluding TELUS Corporation) of $378 million (US$286 million) and lease liabilities of $2.6 billion, all of our debt was on a fixed-rate basis.



During 2024, we may issue notes to fund spectrum purchases, to accelerate future debt reduction by prepaying certain notes, to refinance maturing debt or to use for general corporate purposes. Anticipated free cash flow and sources of capital are expected to be more than sufficient to meet requirements. For the related risk discussion, see *Section 10.15 Financing, debt and dividends*.

4.4 Disclosure controls and procedures, changes in internal control over financial reporting and limitations on scope of design

Disclosure controls and procedures

Disclosure controls and procedures are designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and Chief Executive Officer (CEO) and the Executive Vice-President and Chief Financial Officer (CFO), on a timely basis so that appropriate decisions can be made regarding public disclosure.

The CEO and the CFO have assessed the effectiveness of our disclosure controls and procedures related to the preparation of this MD&A and the December 31, 2023, Consolidated financial statements. They have concluded that our disclosure controls and procedures were effective, at a level of reasonable assurance, in ensuring that material information relating to TELUS and its consolidated subsidiaries would be made known to them by others within those entities, particularly during the period in which the MD&A and the Consolidated financial statements were being prepared.

Internal control over financial reporting

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with IFRS-IASB and the requirements of the Securities and Exchange Commission in the United States, as applicable. TELUS' CEO and CFO have assessed the effectiveness of our internal control over financial reporting as of December 31, 2023, in accordance with the criteria established in *Internal Control – Integrated Framework (2013)*, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, TELUS' CEO and CFO have concluded that our internal control over financial reporting is effective as of December 31, 2023, and have certified TELUS' annual filings within our annual report on Form 40 - F, as required by the United States' *Sarbanes-Oxley Act of 2002*, and TELUS' Annual Information Form, as required by National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings*.

Deloitte LLP, our auditor, has audited our internal control over financial reporting as of December 31, 2023.

Changes in internal control over financial reporting

There were no changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting in 2023.

Limitations on scope of design

In our assessment of the scope of disclosure controls and procedures and internal control over financial reporting, we have excluded the controls, policies and procedures of WillowTree, which was acquired on January 3, 2023. This scope limitation is in accordance with National Instrument 52 - 109 *Certification of Disclosure in Issuers' Annual and Interim Filings* , which allows an issuer to limit its design of internal controls over financial reporting and disclosure controls and procedures to exclude the controls, policies and procedures of a company acquired not more than 365 days before the end of the financial period to which the certificate relates.

From January 3, 2023 (the acquisition date) to December 31, 2023, WillowTree contributed revenues of $254 million and generated net loss of $127 million, such amounts as measured at the end of the period based on information in source systems for the consolidated legal entity. As at December 31, 2023, WillowTree's current assets and current liabilities represented approximately 1% and 1% of TELUS' consolidated current assets and current liabilities, respectively, while WillowTree's non-current assets and non-current liabilities represented approximately 3% and 5% of TELUS' consolidated non-current assets and non-current liabilities, respectively, based on information in source systems. The amounts recognized for the assets acquired and liabilities assumed as at the acquisition date are described in *Note 18* of the Consolidated financial statements.

5. Discussion of operations

This section contains forward-looking statements, including those with respect to mobile phone average revenue per subscriber per month (ARPU) growth, products and services trends regarding loading and retention spending, equipment margins, subscriber growth and various future trends. There can be no assurance that we have accurately identified these trends based on past results or that these trends will continue. See *Caution regarding forward-looking statements* at the beginning of this MD&A.

5.1 General

Operating segments are components of an entity that engage in business activities from which they earn revenues and incur expenses (including revenues and expenses related to transactions with the other component(s)), the operations of which can be clearly distinguished and for which the operating results, and in particular, Adjusted EBITDA, are regularly reviewed by a chief operating decision-maker to make resource allocation decisions and to assess performance. Effective September 1, 2022, we embarked upon the modification of our internal and external reporting processes, systems and internal controls concurrent with the acquisition and integration of LifeWorks, and correspondingly we are assessing our segmented reporting structure. Segmented information in *Note 5* of the Consolidated financial statements is regularly reported to our Chief Executive Officer (CEO) (our chief operating decision-maker).

The TELUS technology solutions (TTech) segment includes: network revenues and equipment sales arising from mobile technologies; data revenues (which include internet protocol; television; hosting, managed information technology and cloud-based services; and home and business security); healthcare services, software and technology solutions (including employee and family assistance programs and benefits administration); agriculture and consumer goods services (software, data management and data analytics-driven smart - food chain and consumer goods technologies); voice and other telecommunications services revenues; and equipment sales.

The digitally-led customer experiences – TELUS International (DLCX) segment, which has the U.S. dollar as its primary functional currency, is comprised of digital customer experience and digital-enablement transformation solutions, including artificial intelligence (AI) and content management, provided by TELUS International.

Selected annual information

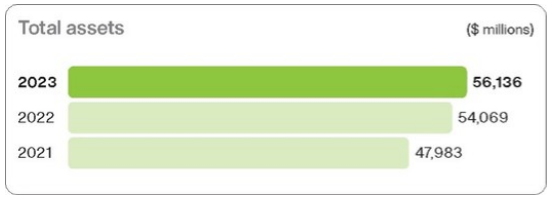
Years ended December 31 ($ in millions, except per share amounts)	**2023**	2022	2021
Operating revenues and other income	**20,116**	18,412	17,258
Net income	**867**	1,718	1,698
Net income attributable to TELUS Corporation Common Shares (Common Shares)	**841**	1,615	1,655
Net income per Common Share			
Basic earnings per share (EPS)	**0.58**	1.16	1.23
Diluted EPS	**0.58**	1.15	1.22
Dividends declared per Common Share	**1.4544**	1.3557	1.2710

At December 31 ($ millions)	**2023**	2022	2021
Total assets	**56,136**	54,069	47,983
Current maturities of long-term debt	**3,994**	2,541	2,927
Non-current financial liabilities[1]			
Provisions	**345**	201	51
Long-term debt	**23,355**	22,496	17,925
Other long-term financial liabilities	**334**	161	181
Total non-current financial liabilities	**24,034**	22,858	18,157
Deferred income taxes	**4,390**	4,455	4,045
Common equity	**16,112**	16,569	15,116

1 In our specific current instance, financial liabilities do not include liabilities that are excluded by definition (e.g. employee benefits) or liabilities that do not involve a future outlay of economic resources (e.g. deferred recognition of customer activation and connection fees; deferred gains on sale-leaseback of buildings).

Operating revenues and other income: Consolidated Operating revenues and other income increased by $1,704 million in 2023 and $1,154 million in 2022. These increases were largely attributable to increased health services revenues, higher mobile and fixed data service revenues, and growth in DLCX operating revenues.

Total assets: Growth in Total assets includes increases in Property, plant and equipment and Intangible assets, which increased by a combined $646 million in 2023 and $2,912 million in 2022. These increases resulted primarily from business acquisitions, our ongoing investments in broadband infrastructure, connecting additional homes and businesses directly to our fibre-optic technology and accelerating our 5G network roll - out. See *Section 7.3 Cash used by investing activities*.



For changes in **Long-term debt**, see *Section 6 Changes in financial position* and *Section 7.4 Cash provided by financing activities*.

5.2 Summary of consolidated quarterly results, trends and fourth quarter recap

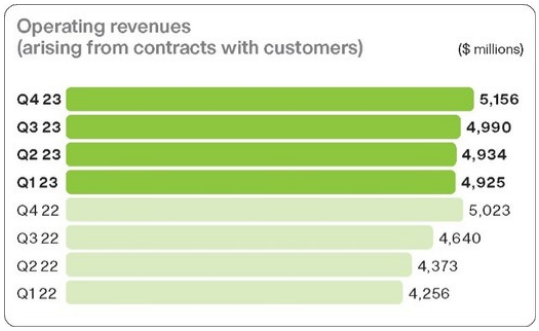
Summary of quarterly results

($ millions, except per share amounts)	2023 Q4	2023 Q3	2023 Q2	2023 Q1	2022 Q4	2022 Q3	2022 Q2	2022 Q1
Operating revenues and other income	**5,198**	**5,008**	**4,946**	**4,964**	5,058	4,671	4,401	4,282
Operating expenses								
Goods and services purchased[1]	**2,086**	**1,858**	**1,790**	**1,803**	2,082	1,794	1,637	1,594
Employee benefits expense[1]	**1,407**	**1,633**	**1,568**	**1,540**	1,378	1,231	1,171	1,119
Depreciation and amortization	**1,041**	**1,000**	**1,006**	**1,022**	929	850	831	842
Total operating expenses	**4,534**	**4,491**	**4,364**	**4,365**	4,389	3,875	3,639	3,555
Operating income	**664**	**517**	**582**	**599**	669	796	762	727
Financing costs	**278**	**352**	**323**	**320**	322	34	97	179
Income before income taxes	**386**	**165**	**259**	**279**	347	762	665	548
Income taxes	**76**	**28**	**63**	**55**	82	211	167	144
Net income	**310**	**137**	**196**	**224**	265	551	498	404
Net income attributable to Common Shares	**288**	**136**	**200**	**217**	248	514	468	385
Net income per Common Share:								
Basic EPS	**0.20**	**0.09**	**0.14**	**0.15**	0.17	0.37	0.34	0.28
Adjusted basic EPS[2]	**0.24**	**0.25**	**0.19**	**0.27**	0.24	0.34	0.32	0.30
Diluted EPS	**0.20**	**0.09**	**0.14**	**0.15**	0.17	0.37	0.34	0.28
Dividends declared per Common Share	**0.3761**	**0.3636**	**0.3636**	**0.3511**	0.3511	0.3386	0.3386	0.3274
Additional information:								
EBITDA	**1,705**	**1,517**	**1,588**	**1,621**	1,598	1,646	1,593	1,569
Restructuring and other costs	**140**	**303**	**115**	**159**	94	78	29	39
Other equity losses (income) related to real estate joint ventures	**2**	**—**	**—**	**(1)**	(3)	—	—	—
Adjusted EBITDA	**1,847**	**1,820**	**1,703**	**1,779**	1,689	1,724	1,622	1,608
Cash provided by operating activities	**1,314**	**1,307**	**1,117**	**761**	1,126	1,300	1,250	1,135
Free cash flow	**590**	**355**	**279**	**535**	323	331	205	415

1 Goods and services purchased and Employee benefits expense amounts include restructuring and other costs.
2 See *Section 11.1 Non-GAAP and other specified financial measures*.

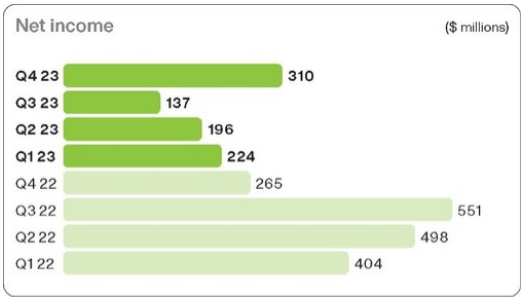
Trends

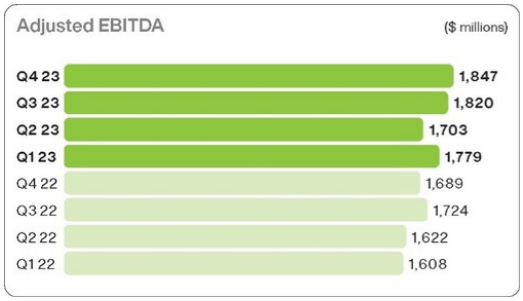
For trends discussions related to revenues, EBITDA and Adjusted EBITDA, see *Section 5.4 TELUS technology solutions segment* and *Section 5.5 Digitally-led customer experiences – TELUS International segment*.



The trend of year-over-year increases in Depreciation and amortization reflects increases related to capital assets acquired in business acquisitions; growth in capital assets in support of the expansion of our broadband footprint, including our generational investment to connect homes and businesses to TELUS PureFibre and 5G technology coverage; and growth in internet, TV and security subscriber loading. The investments in our fibre-optic technology also support our technology strategy to improve network coverage and capacity, including the ongoing build-out of our 5G network.

The trend of general year-over-year increases in Financing costs reflects greater long-term debt outstanding and increases in effective interest rates attributed to floating-rate debt and for recent fixed-rate issuances, mainly associated with our investments in spectrum and fibre technology, as well as business acquisitions. Financing costs are net of capitalized interest related to spectrum licences acquired during the 600 MHz spectrum auction, which we commenced deploying into our existing network in 2021, and during the 3500 MHz spectrum auction. Financing costs also include Interest accretion on provisions (asset retirement obligations and written put options) and Employee defined benefit plans net interest. Additionally, for the eight periods shown, Financing costs include varying amounts of foreign exchange gains or losses, varying amounts of interest income and, effective for the second quarter of 2022, unrealized changes in virtual power purchase agreements forward element, which contributed to income up to the third quarter of 2022 and to losses thereafter.





Fourth quarter recap

Results for the fourth quarter of 2023 (three-month period ended December 31, 2023) are discussed in our February 9, 2024 news release and are compared with results from the fourth quarter of 2022 (three-month period ended December 31, 2022).

- Consolidated Operating revenues and other income were $5,198 million in the fourth quarter of 2023, an increase of $140 million.
  - Service revenues were $4,417 million in the fourth quarter of 2023, an increase of $131 million. TTech service revenue increased due to: (i) higher mobile network revenues attributable to subscriber and moderating roaming revenue growth; (ii) an increase in fixed data service revenues, resulting from subscriber growth and higher, albeit moderating, revenue per internet customer; and (iii) growth in health services revenues. These factors were partly offset by lower TV and fixed legacy voice services revenues, primarily due to technological substitution, as well as macroeconomic and competitive pressures impacting consumer purchasing decisions across various products. Higher DLCX operating revenues resulted from expanded services for certain existing clients and growth from new clients, including new clients from our acquisition of WillowTree on January 3, 2023, and favourable foreign exchange impacts, which collectively more than offset the impact of some DLCX clients managing their own costs thus reducing our revenue.
  - Equipment revenues increased by $2 million in the fourth quarter of 2023, driven by higher mobile equipment revenues attributable to higher-value smartphones in the sales mix, partly offset by a reduction in contracted volumes.
  - Other income was $42 million in the fourth quarter of 2023, an increase of $7 million, largely due to gains on residential real estate projects with an arm's-length party, as well as a decrease in provisions arising from business acquisition-related written put options when compared to the prior year. These effects were partly offset by lower equity income.

- Consolidated operating expenses were $4,534 million in the fourth quarter of 2023, an increase of $145 million.
    - Depreciation was $665 million in the fourth quarter of 2023, an increase of $76 million, primarily due to growth in capital assets over the past 12 months, including business acquisitions and our expanded broadband footprint, increased depreciation on network leases, and the impact of our continuing program of asset life studies.
    - Amortization of intangible assets was $376 million in the fourth quarter of 2023, an increase of $36 million, arising from business acquisitions and higher expenditures associated with the intangible asset base over the past 12 months.
    - Financing costs were $278 million in the fourth quarter of 2023, a decrease of $44 million, mainly due to the following factors:
    - Interest expense was $336 million in the fourth quarter of 2023, an increase of $71 million.
    - Gross interest expense on long-term debt, excluding lease liabilities, was $272 million in the fourth quarter of 2023, an increase of $38 million, primarily driven by an increase in average long-term debt balances outstanding, attributable in part to business acquisitions, in addition to an increase in the effective interest rate.
    - Interest on lease liabilities was $38 million in the fourth quarter of 2023, an increase of $16 million, resulting from increases in both lease principal and the effective interest rate.
    - Unrealized changes in virtual power purchase agreements forward element was a recovery of $59 million in the fourth quarter of 2023, and represents the estimated unrealized appreciation recorded from our virtual power purchase agreements (VPPAs) with renewable energy projects as of December 31, 2023.
    - Total income tax expense was $76 million in the fourth quarter of 2023, a decrease of $6 million. The effective tax rate decreased from 23.6% to 19.4%, primarily driven by non-taxable amounts and adjustments recognized in the current period for income taxes of prior periods.
- EBITDA, which includes restructuring and other costs and other equity losses (income) related to real estate joint ventures, was $1,705 million in the fourth quarter of 2023, an increase of $107 million.
- Adjusted EBITDA, which excludes restructuring and other costs and other equity losses (income) related to real estate joint ventures, was $1,847 million in the fourth quarter of 2023, an increase of $158 million. This reflected: (i) broad-based cost reduction efforts across both the TTech and DLCX segments, including workforce reductions, synergies achieved between LifeWorks and our legacy Health business, and increased TTech outsourcing to DLCX, as well as savings in marketing, discretionary and administrative costs; (ii) higher mobile network, residential internet and security revenues largely driven by subscriber growth; (iii) higher mobile equipment margins; and (iv) organic health services growth. These factors were partly offset by: (i) merit-based compensation increases; (ii) higher bad debt expense; (iii) declining TV and fixed legacy voice margins; (iv) higher costs related to the scaling of our digital capabilities, inclusive of increased subscription-based software licences, contractor and cloud usage costs; and (v) lower agriculture and consumer goods margins.
- Net income attributable to Common Shares was $288 million in the fourth quarter of 2023, an increase of $40 million, primarily reflecting the after-tax impacts of lower Financing costs. Adjusted Net income excludes the effects of restructuring and other costs, income tax-related adjustments, other equity losses related to real estate joint ventures and unrealized changes in virtual power purchase agreements forward element. Adjusted Net income in the fourth quarter of 2023 was $341 million, an increase of $2 million or 0.6%.
- Basic EPS was $0.20 in the fourth quarter of 2023, an increase of $0.03, primarily reflecting the after-tax impacts of lower Financing costs, as well as the effect of a higher number of Common Shares outstanding. Adjusted basic EPS excludes the effects of restructuring and other costs, income tax-related adjustments, other equity losses related to real estate joint ventures and unrealized changes in virtual power purchase agreements forward element. Adjusted basic EPS was $0.24 in the fourth quarter of 2023, unchanged compared to the fourth quarter of 2022.

- Cash provided by operating activities was $1,314 million in the fourth quarter of 2023, an increase of $188 million, primarily driven by other working capital changes and a decrease in income taxes paid, net.

- Cash used by investing activities was $716 million in the fourth quarter of 2023, a decrease of $138 million, largely attributable to lower cash payments for capital assets. Capital expenditures were $533 million in the fourth quarter of 2023, a decrease of $127 million, primarily due to the planned slowdown of our fibre and wireless network build and systems development, consistent with 2023 build targets, when compared to accelerated investments in the fourth quarter of 2022.

- Cash used by financing activities was $938 million in the fourth quarter of 2023, an increase of $200 million, primarily reflecting lower issuances of long-term debt, net of redemptions and repayment.

- Free cash flow was $590 million in the fourth quarter of 2023, an increase of $267 million, reflecting lower capital expenditures and lower income taxes paid, partly offset by an increase in cash interest paid.

5.3 Consolidated operations

The following is a discussion of our consolidated financial performance. Segment information in *Note 5* of the Consolidated financial statements is regularly reported to our CEO. We discuss the performance of our segments in *Section 5.4 TELUS technology solutions segment* and *Section 5.5 Digitally-led customer experiences – TELUS International segment*.



Operating revenues

Years ended December 31 ($ in millions)	**2023**	2022	Change
Operating revenues			
Service	**17,508**	15,956	9.7 %
Equipment	**2,497**	2,336	6.9 %
Operating revenues (arising from contracts with customers)	**20,005**	18,292	9.4 %
Other income	**111**	120	(7.5)%
Operating revenues and other income	**20,116**	18,412	9.3 %

Consolidated Operating revenues and other income increased by $1,704 million in 2023.

- **Service revenues** increased by $1,552 million in 2023. TTech service revenue increased due to: (i) growth in health services revenues, mainly driven by our acquisition of LifeWorks on September 1, 2022 and organic growth; (ii) higher mobile network revenues attributable to subscriber and roaming revenue growth, partly offset by the impact of lower base rate plan prices; and (iii) an increase in fixed data service revenues, resulting from subscriber growth and higher, albeit moderating, revenue per internet customer. These factors were partly offset by lower TV and fixed legacy voice services revenues, primarily due to technological substitution, as well as macroeconomic and competitive pressures impacting consumer purchasing decisions across various products. Higher DLCX operating revenues resulted from expanded services for certain existing clients and growth from new clients, including new clients from our acquisition of WillowTree on January 3, 2023, and favourable foreign exchange impacts, which collectively more than offset the impact of some DLCX clients managing their own costs thus reducing our revenue.

- **Equipment revenues** increased by $161 million in 2023, largely driven by higher mobile equipment revenues due to higher-value smartphones in the sales mix, partly offset by a reduction in contracted volumes.

- **Other income** decreased by $9 million in 2023, largely due to lower net reversals of business combination-related provisions, the non-recurrence of a gain on acquisition of control of LifeWorks in the prior year, and lower equity income. These effects were partly offset by gains on residential real estate projects with an arm's-length party.

Operating expenses

Years ended December 31 ($ in millions)	**2023**	2022	Change
Goods and services purchased	**7,537**	7,107	6.1 %
Employee benefits expense	**6,148**	4,899	25.5 %
Depreciation	**2,514**	2,226	12.9 %
Amortization of intangible assets	**1,555**	1,226	26.8 %
Operating expenses	**17,754**	15,458	14.9 %

Consolidated operating expenses increased by $2,296 million in 2023.

- **Depreciation** increased by $288 million in 2023, primarily due to growth in capital assets over the past 12 months, including business acquisitions and our expanded broadband footprint, increased depreciation on network leases, and increased depreciation from impairments arising from real estate rationalization.

- **Amortization of intangible assets** increased by $329 million in 2023, arising from business acquisitions and higher expenditures associated with the intangible asset base over the past 12 months.

Operating income

Years ended December 31 ($ in millions)	**2023**	2022	Change
TTech EBITDA[1] (see *Section 5.4*)	**5,722**	5,697	0.4 %
DLCX EBITDA[1] (see *Section 5.5*)	**709**	709	— %
EBITDA	**6,431**	6,406	0.4 %
Depreciation and amortization (discussed above)	**4,069**	3,452	17.9 %
Operating income (consolidated earnings before interest and income taxes (EBIT))	**2,362**	2,954	(20.0)%

1 See *Section 11.1 Non-GAAP and other specified financial measures*.

Operating income decreased by $592 million in 2023, while EBITDA increased by $25 million. As a partial offset to the growth drivers discussed within *Adjusted EBITDA* below, EBITDA also reflects higher restructuring and other costs of $477 million in 2023, primarily related to efficiency and effectiveness programs, including workforce reduction, real estate rationalization, and one-time amounts recorded of $68 million for the ratification of the new collective agreement between the Telecommunications Workers Union, United Steelworkers Local 1944 (TWU) and ourselves.

Adjusted EBITDA

Years ended December 31 ($ in millions)	**2023**	2022	Change
TTech Adjusted EBITDA[1] (see *Section 5.4*)	**6,375**	5,874	8.5 %
DLCX Adjusted EBITDA[1,2] (see *Section 5.5*)	**774**	769	0.9 %
Adjusted EBITDA	**7,149**	6,643	7.6 %

1 See *Section 11.1 Non-GAAP and other specified financial measures*.
2 For certain financial metrics, there are definitional differences between TELUS and TELUS International reporting. These differences largely arise from TELUS International adopting definitions consistent with practice in its industry.

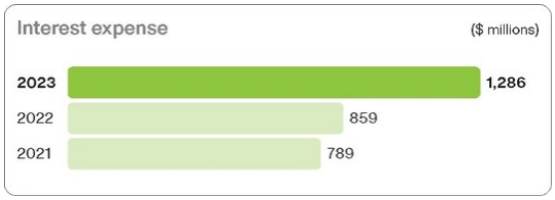
Adjusted EBITDA increased by $506 million or 7.6% in 2023, primarily driven by TTech growth, reflecting: (i) higher mobile network, residential internet and security revenues, largely driven by subscriber growth; (ii) broad-based cost reduction efforts across both the TTech and DLCX segments, including workforce reductions, synergies achieved between LifeWorks and our legacy Health business, and increased TTech outsourcing to DLCX, as well as savings in marketing, discretionary and administrative costs; (iii) inorganic contributions from acquisitions, predominantly from LifeWorks, in addition to its higher capitalized labour; and (iv) higher mobile equipment margins. These factors were partly offset by: (i) merit-based compensation increases; (ii) higher costs related to the scaling of our digital capabilities, inclusive of increased subscription-based software licences, contractor and cloud usage costs; (iii) declining TV and fixed legacy voice margins; (iv) higher bad debt expense; and (v) lower agriculture and consumer goods margins.

Financing costs

Years ended December 31 ($ in millions)	**2023**	2022	Change
Interest on long-term debt, excluding lease liabilities – gross	**1,081**	779	38.8 %
Interest on long-term debt, excluding lease liabilities – capitalized	**(6)**	(30)	(80.0)%
Interest on lease liabilities	**133**	74	79.7 %
Interest on short-term borrowings and other	**48**	16	n/m
Interest accretion on provisions	**30**	20	50.0 %
Interest expense	**1,286**	859	49.7 %
Employee defined benefit plans net interest	**7**	8	(12.5)%
Foreign exchange losses (gains)	**3**	(25)	n/m
Unrealized changes in virtual power purchase agreements forward element	**—**	(193)	(100.0)%
Interest income	**(23)**	(17)	35.3 %
Financing costs	**1,273**	632	101.4 %

Financing costs increased by $641 million in 2023, mainly due to the following factors:

- **Interest expense** increased by $427 million in 2023, largely resulting from:
  - Gross interest expense on long-term debt, excluding lease liabilities, increased by $302 million in 2023, primarily driven by an increase in average long-term debt balances outstanding, attributable in part to business acquisitions, in addition to an increase in the effective interest rate. Our weighted average interest rate on long-term debt (excluding commercial paper, TELUS bank credit facilities, the revolving components of the TI credit facility, lease liabilities and other long-term debt) was 4.33% at December 31, 2023, compared to 4.03% one year earlier. (See *Long-term debt issued and Redemptions and repayments of long-term debt* in *Section 7.4*.)
  - Capitalized long-term debt interest, excluding lease liabilities, is in respect of debt incurred for the purchase of spectrum licences during the 3500 MHz spectrum auction held in June to July 2021 by Innovation, Science and Economic Development Canada (ISED).
  - Interest on lease liabilities increased by $59 million in 2023, resulting from increases in both lease principal and the effective interest rate.
- **Foreign exchange losses** changed by $28 million in 2023, primarily reflecting changes in the value of the U.S. dollar relative to the Canadian dollar and the European euro relative to the Canadian dollar.
- **Unrealized changes in virtual power purchase agreements forward element** represents the estimated unrealized amounts recorded from our virtual power purchase agreements (VPPAs) with renewable energy projects as of December 31, 2023. We have entered into VPPAs with renewable energy projects that develop solar and wind power facilities as part of our commitment to reduce our carbon footprint.



Income taxes

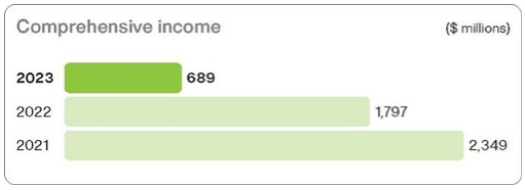
Years ended December 31 ($ in millions, except tax rates)	**2023**	2022	Change
Income taxes computed at applicable statutory rates (%)	**23.5**	25.6	(2.1) pts.
Adjustments recognized in the current period for income taxes of prior periods (%)	**(4.0)**	0.5	(4.5) pts.
(Non-taxable) non-deductible amounts, net (%)	**(1.7)**	0.1	(1.8) pts.
Withholding and other taxes (%)	**2.1**	1.3	0.8 pts.
Foreign tax differential (%)	**(1.3)**	(1.7)	0.4 pts.
Other (%)	**1.7**	0.2	1.5 pts.
Effective tax rate (%)	**20.3**	26.0	(5.7) pts.
Income taxes computed at applicable statutory rates	**255**	595	(57.1)%
Adjustments recognized in the current period for income taxes of prior periods	**(44)**	11	n/m
(Non-taxable) non-deductible amounts, net	**(19)**	1	n/m
Withholding and other taxes	**24**	31	(22.6)%
Foreign tax differential	**(13)**	(39)	(66.7)%
Other	**19**	5	n/m
Income taxes	**222**	604	(63.2)%

Total income tax expense decreased by $382 million in 2023. The effective tax rate decreased from 26.0% to 20.3%, primarily driven by adjustments recognized in the current period for income taxes of prior periods and non-taxable amounts.

Comprehensive income

Years ended December 31 ($ in millions)	**2023**	2022	Change
Net income	**867**	1,718	(49.5)%
Other comprehensive income (net of income taxes):			
Items that may be subsequently reclassified to income	**(167)**	(60)	n/m
Items never subsequently reclassified to income	**(11)**	139	n/m
Comprehensive income	**689**	1,797	(61.7)%

Comprehensive income decreased by $1.1 billion in 2023, primarily as a result of the decrease in Net income and employee defined benefit plan re-measurement amounts. Items that may subsequently be reclassified to income are composed of changes in the unrealized fair value of derivatives designated as cash flow hedges and foreign currency translation adjustments arising from translating financial statements of foreign operations. Items never subsequently reclassified to income are composed of employee defined benefit plans re-measurement amounts and changes in measurement of investment financial assets.



5.4 TELUS technology solutions segment

Mobile phone subscribers	Connected device subscribers	Internet subscribers	TV subscribers	Security subscribers	Healthcare lives covered
2023: 10,084,000	**2023: 3,114,000**	**2023: 2,626,000**	**2023: 1,394,000**	**2023: 1,056,000**	**2023: 69,500,000**
2022: 9,691,000	2022: 2,468,000	2022: 2,413,000	2022: 1,325,000	2022: 978,000	2022: 67,700,000
+ 4.1%	+ 26.2%	+ 8.8%	+ 5.2%	+ 8.0%	+2.7%

TTech trends and seasonality

The historical trend over the past eight quarters in mobile network revenue primarily reflects growth in our mobile phone subscriber base, as well as an increase in Internet of Things (IoT) connections. Supplementing this, the trend of mobile phone ARPU has been supported by the recovery of international roaming revenues from increasing travel volumes. Domestic ARPU declines were largely attributable to customers having greater access to higher network speeds and larger allotments of data for a given price point, as well as heightened market aggression that first escalated in the second quarter of 2023 and continued throughout the remainder of the year.

Mobile equipment revenues have been increasing largely as a result of higher-value smartphones in the sales mix. As a partial offset, mobile devices sales volumes have been slowly decreasing, reflecting improvements in durability but also increases in cost, resulting in customers deferring upgrades and increasing adoption of bring-your-own-device (BYOD) plans. We continue to offer certified pre-owned devices and our Bring-It-Back® program to provide customers with alternative options for handset upgrades, thereby contributing to a circular economy.

Our spectrum investments and capital expenditures in network improvements increase capacity, reliability and coverage, allowing us to grow revenue through net additions of new mobile phone and connected device subscribers. The growth in our mobile phone subscriber base is attributable to: (i) industry-leading product offerings with continuous improvements in the speed, performance and reliability of our network, as well as our enhanced digital capabilities; (ii) the success of our promotions, including our bundling of mobility and home services; (iii) our ability to capture a proportion of the growing population, changing population demographics and an increasing number of customers with multiple devices; and (iv) our relatively low churn rate, which reflects our customers first efforts and upgrade volume programs.

Our connected device subscriber base has been growing, primarily in response to our expanded IoT offerings. Growth within our IoT subscriber base is attributable to increased demand for IoT solutions across various industries, including healthcare, agriculture, transportation, smart buildings and smart cities, energy and retail. Our investments in network infrastructure and expanding our IoT product portfolio have also allowed us to provide reliable and scalable IoT solutions to our customer base.

Growth in our internet subscriber base has been supported by our continued investments in building out our fibre-optic infrastructure, supplemented by our relatively low customer churn rate. The total number of TV subscribers has increased (in contrast to market-reported declines in conventional television viewing habits), reflecting net subscriber additions in response to our diverse and flexible product offerings, combined with our relatively low customer churn rate. Our security subscriber base growth is increasing as a result of organic growth, acquisitions and bundling of home services, including our bundling of mobility and home services. Adoption increases our services per home and positively impacts churn for most services, in addition to the effectiveness of our self-install and virtual-install models. Residential voice subscriber losses have remained low as a result of the success of our bundled services and lower-priced offerings, as well as strong retention efforts to mitigate the ongoing substitution to mobile and internet-based services.

The trend of growing fixed data services revenues is attributable to the sustained demand for faster internet speeds and larger bandwidth, home and business security offerings and other advanced applications, which are enabled by investments in our fibre-optic footprint. The trend of declining TV revenues and legacy fixed voice revenues is due to technological substitution and intensification of competition in the small and medium-sized business market. However, we are mitigating this trend with our bundled product and lower-priced offerings, product diversification and successful retention efforts. The migration of business product and service offerings to IP services and the entry of new competitors have yielded inherently lower margins compared to some legacy business product and service offerings; however, we are continually refining and diversifying our portfolio of innovative business offerings.

The trend of growth in health services revenues has been propelled by the acquisition of LifeWorks in the third quarter of 2022, as well as organic growth in our existing health offerings, which include virtual care, virtual and traditional pharmacy solutions, collaborative health records, health benefits management, personal health monitoring solutions, and employee and family assistance programs and benefits administration. The LifeWorks acquisition immediately enabled the opportunity for health services to operate and grow internationally through long-standing corporate relationships globally, with notable areas of focus in employee health and wellness programs, mental and physical health solutions, pensions and benefits management, and retirement solutions. We are well-positioned to continue improving health and wellness outcomes for people around the world. Our competencies and assets in health, combined with the trend in digitization and automation, position us well to bolster the global healthcare system in a complementary fashion. With our technology heritage, we see the trend moving the healthcare system to improved efficiency and outcomes through better insights. We also believe Canadians and others will have greater control of their healthcare outcomes through the integration of disparate data (better flow of information across the system) and consent-based data management. Our diversified virtual care offerings continue to grow to meet the healthcare needs of Canadians and drive better health outcomes, including the accelerated adoption of virtual consultations, as reflected in the growing number of virtual care members. Our growing number of lives covered is largely driven by the expansion of our employee and family assistance programs, in addition to our health benefits management solutions correlated with the number of benefit claims captured in our digital health transactions.

The trend of moderating growth in agriculture and consumer goods services can be attributed to business acquisitions to meet the growing demand for digital solutions in the agriculture industry, though tempered by macroeconomic headwinds slowing down subscription growth and sales funnel opportunities. Through our global team and cloud-based solutions, we are able to service our diverse client base, including growers, producers, agronomists, advisors, processors and retailers, by helping to drive more effective and agile decision-making that will address changing consumer demands, improve profitability and generate a better flow of information across the value chain. This improves the safety and sustainability of our outputs and drives efficiencies in the way we produce, distribute and consume food and consumer goods.

TTech operating indicators

At December 31	**2023**	2022	Change
Subscriber connections (thousands):			
Mobile phone[1]	**10,084**	9,691	4.1 %
Connected device[1]	**3,114**	2,468	26.2 %
Internet[2]	**2,626**	2,413	8.8 %
TV	**1,394**	1,325	5.2 %
Residential voice	**1,065**	1,096	(2.8)%
Security	**1,056**	978	8.0 %
Total telecom subscriber connections	**19,339**	17,971	7.6 %
LTE population coverage[3] (millions)	**36.7**	36.7	— %
5G population coverage[3] (millions)	**31.6**	30.2	4.6 %

Years ended December 31	**2023**	2022	Change
Mobile phone gross additions (thousands):	**1,676**	1,475	13.6 %
Subscriber connection net additions (losses) (thousands):			
Mobile phone	**443**	401	10.5 %
Connected device	**564**	368	53.3 %
Internet	**143**	142	0.7 %
TV	**69**	60	15.0 %
Residential voice	**(31)**	(27)	(14.8)%
Security	**78**	99	(21.2)%
Total telecom subscriber connection net additions	**1,266**	1,043	21.4 %
Mobile phone ARPU, per month[4] ($)	**58.78**	58.10	1.2 %
Mobile phone churn, per month[5] (%)	**1.05**	0.95	0.10 pts.

Health services (millions)			
At December 31	**2023**	2022	Change
Healthcare lives covered	**69.5**	67.7	2.7 %
Virtual care members	**5.6**	4.5	24.4 %
Years ended December 31	**2023**	2022	Change
Digital health transactions	**610.3**	580.5	5.1 %

1 Effective January 1, 2023, on a prospective basis, we adjusted our mobile phone and connected device subscriber bases to remove 50,000 subscribers and add 82,000 subscribers, respectively, due to a review of our subscriber bases.
2 Effective January 1, 2023, on a prospective basis, we adjusted our internet subscriber base to add 70,000 subscribers as a result of business acquisitions.
3 Including network access agreements with other Canadian carriers.
4 This is an other specified financial measure. See *Section 11.1 Non-GAAP and other specified financial measures* . This is an industry measure useful in assessing operating performance of a mobile products and services company, but is not a measure defined under IFRS-IASB.
5 See *Section 11.2 Operating indicators*.

- **Mobile phone gross additions** were 1,676,000 in 2023, an increase of 201,000, driven by growth in postpaid gross additions due to continued market-driven promotional activity, which first escalated in the second quarter of 2023 and continued through the remainder of the year, particularly during the heightened seasonal promotional periods, in addition to increased retail and digital traffic, and growth in the Canadian population.

- **Our mobile phone churn rate** was 1.05% in 2023, compared to 0.95% in 2022, largely due to higher customer switching activity corresponding with increased market-driven promotions, as discussed above. These factors have been partly mitigated by our continued focus on customer retention through our industry-leading service and network quality, successful promotions and bundled offerings.

- **Mobile phone net additions** were 443,000 in 2023, an increase of 42,000, driven by higher mobile phone gross additions, partially offset by higher mobile phone churn, as described above.

- **Mobile phone ARPU** was $58.78 in 2023, an increase of $0.68 or 1.2%, due to higher, albeit moderating, roaming revenues as a result of increased travel, partly offset by aforementioned lower base rate plans due to increased promotional activity and market aggression affecting both new and existing customers, which first escalated in the second quarter of 2023 and continued through the remainder of the year, and lower overage revenues as described above.

- **Connected device net additions** were 564,000 in 2023, an increase of 196,000, attributable to increased IoT connections from customers in the transportation, healthcare and home security industries.

- **Internet net additions** were 143,000 in 2023, an increase of 1,000, due to our success in driving strong gross additions in both the consumer and business markets through diversified product offerings, partly offset by a higher churn rate from macroeconomic and competitive pressures impacting consumer purchasing decisions.

- **TV net additions** were 69,000 in 2023, an increase of 9,000, due to our diverse offerings, partly offset by higher churn related to the same factors as internet.

- **Residential voice net losses** were 31,000 in 2023, an increased loss of 4,000. Our bundled product and lower-priced offerings have been successful in mitigating losses and minimizing substitution to mobile and internet-based services.

- **Security net additions** were 78,000 in 2023, a decrease of 21,000, due to higher churn related to the same factors as internet, partly offset by increased demand for our bundled product offerings and diverse suite of products and services.

- **Healthcare lives covered** were 69.5 million as of the end of 2023, an increase of 1.8 million over the past 12 months, mainly due to robust growth in our employee and family assistance programs from both new and existing clients across all of our regions, in addition to continued demand for virtual solutions.

- **Virtual care members** were 5.6 million as of the end of 2023, an increase of 1.1 million over the past 12 months, attributable to the continued adoption of virtual solutions that keep Canadians and others safely connected to health and wellness care.

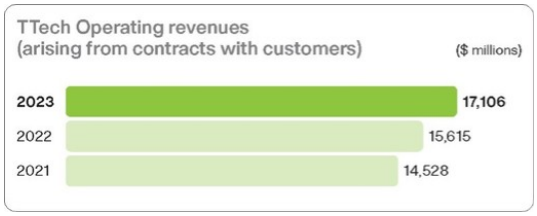
- **Digital health transactions** were 610.3 million in 2023, an increase of 29.8 million, largely driven by increased paid exchange of healthcare data between our health benefits management system and care providers resulting from higher patient demand for elective health services.

Operating revenues and other income – TTech segment

Years ended December 31 ($ in millions)	**2023**	2022	Change
Mobile network revenue	**6,927**	6,591	5.1 %
Mobile equipment and other service revenues	**2,290**	2,132	7.4 %
Fixed data services[1]	**4,583**	4,351	5.3 %
Fixed voice services	**761**	793	(4.0)%
Fixed equipment and other service revenues	**493**	481	2.5 %
Health services	**1,705**	913	86.7 %
Agriculture and consumer goods services	**347**	354	(2.0)%
Operating revenues (arising from contracts with customers)	**17,106**	15,615	9.5 %
Other income	**84**	120	(30.0)%
External Operating revenues and other income	**17,190**	15,735	9.2 %
Intersegment revenues	**15**	17	(11.8)%
TTech Operating revenues and other income	**17,205**	15,752	9.2 %

1 Excludes health services and agriculture and consumer goods services.

TTech Operating revenues and other income increased by $1,453 million in 2023.



Mobile network revenue increased by $336 million or 5.1% in 2023, largely due to growth in our mobile phone and connected device subscriber base, as well as roaming revenue growth. These impacts were partly offset by the impact of lower base rate plan prices and lower overage revenues, as previously discussed in mobile phone ARPU.

Mobile equipment and other service revenues increased by $158 million in 2023, due to higher-value smartphones in the sales mix. This was partly offset by a reduction in contracted volumes attributed to increased promotional activity centred around rate plans and market aggression, in addition to more customers taking advantage of BYOD plan offerings.

Fixed data services revenues increased by $232 million in 2023, driven by an increase in our internet, security and TV subscribers and higher, albeit moderating, revenue per customer as a result of internet speed upgrades and rate changes. This growth was partially offset by lower TV revenue per customer, reflecting an increased mix of customers selecting smaller TV combination packages and technological substitution.

Fixed voice services revenues decreased by $32 million in 2023, reflecting the ongoing decline in legacy voice revenues as a result of technological substitution and price plan changes. Declines were partly mitigated by the success of our bundled product offerings, our retention efforts and the migration from legacy to IP services offerings.

Fixed equipment and other service revenues increased by $12 million in 2023, reflecting higher business and consumer sales volumes and lower discounts on consumer premises equipment, partly offset by a reduction in residential and business development project work resulting from the non-recurrence of large projects in 2022 and rising interest rates that softened the property development market in 2023.

Health services revenues increased by $792 million in 2023, driven by: (i) our acquisition of LifeWorks on September 1, 2022, inclusive of organic growth in demand for our integrated health, productivity, retirement and benefit solutions; (ii) the continued adoption of our virtual care solutions; and (iii) increased pharmacy management software revenue.

Agriculture and consumer goods services revenues decreased by $7 million in 2023, reflecting transient headwinds and macroeconomic challenges, including subscription demand softness and customer churn for our software-as-a-service (SaaS)-based revenue management software for consumer goods manufacturers. These effects were partly offset by increased animal agriculture pharmacy and research revenues. Our agriculture and consumer goods revenues are largely earned in U.S. dollars, and in 2023 compared to 2022, the Canadian dollar weakened against the U.S. dollar, resulting in favourable impacts to revenues in the year.

Other income decreased by $36 million in 2023, largely due to lower net reversals of business combination-related provisions in the current period, the non-recurrence of a gain on acquisition of control of LifeWorks in the prior year, and lower equity income. These effects were partly offset by gains on residential real estate projects with an arm's-length party.

Intersegment revenues represent services provided to the DLCX segment that are eliminated upon consolidation, together with the associated DLCX expenses.

Direct contribution – TTech segment

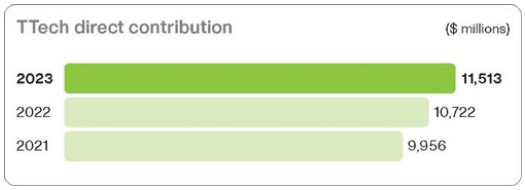
	Mobile products and services			Fixed products and services[1]			Total TTech		
Years ended December 31 ($in millions)	**2023**	2022	Change	**2023**	2022	Change	**2023**	2022	Change
Revenues									
Service	**7,059**	6,697	5.4 %	**7,550**	6,582	14.7 %	**14,609**	13,279	10.0 %
Equipment	**2,158**	2,026	6.5 %	**339**	310	9.4 %	**2,497**	2,336	6.9 %
Operating revenues (arising from contracts with customers)	**9,217**	8,723	5.7 %	**7,889**	6,892	14.5 %	**17,106**	15,615	9.5 %
Expenses									
Direct expenses	**2,911**	2,792	4.3 %	**2,682**	2,101	27.7 %	**5,593**	4,893	14.3 %
Direct contribution	**6,306**	5,931	6.3 %	**5,207**	4,791	8.7 %	**11,513**	10,722	7.4 %

1 Includes health services and agriculture and consumer goods services.

The direct expenses included in the direct contribution calculations in the preceding tables represent components of the Goods and services purchased and Employee benefits expense totals included in the table below and have been calculated in accordance with the accounting policies used to prepare the totals presented in the financial statements. TTech direct contribution increased by $791 million or 7.4% in 2023.

TTech mobile products and services direct contribution increased by $375 million or 6.3% in 2023, largely reflecting mobile subscriber growth, higher roaming margins associated with increased international travel volumes and higher equipment margins. These were partly offset by the impact of lower base rate plan prices and lower overage revenues as previously discussed in mobile phone ARPU, and higher commissions attributed to increased levels of retail traffic.

TTech fixed products and services direct contribution increased by $416 million or 8.7% in 2023, reflecting growth in health, inclusive of business acquisitions and organic growth; increased internet and security margins, driven by subscriber growth and higher, albeit moderating, revenue per customer as a result of internet speed upgrades and rate changes; and organic health services growth. These were partly offset by technological substitution driving declines in TV and legacy voice margins, as well as lower agriculture and consumer goods margins as a result of transient headwinds and macroeconomic challenges.



Operating expenses – TTech segment

Years ended December 31 ($ in millions)	**2023**	2022	Change
Goods and services purchased[1]	**7,649**	7,016	9.0 %
Employee benefits expense[1]	**3,834**	3,039	26.2 %
TTech operating expenses	**11,483**	10,055	14.2 %

1 Includes restructuring and other costs.

TTech operating expenses increased by $1,428 million in 2023. See *TTech Adjusted EBITDA* below for further details.

EBITDA – TTech segment

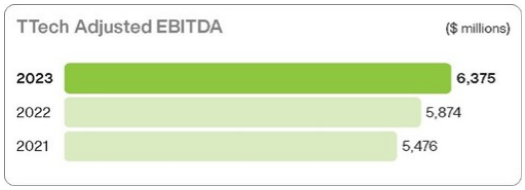
Years ended December 31 ($ in millions, except margins)	**2023**	2022	Change
EBITDA	**5,722**	5,697	0.4 %
Add restructuring and other costs included in EBITDA	**652**	180	n/m
Add (deduct) other equity losses (income) related to real estate joint ventures	**1**	(3)	n/m
Adjusted EBITDA	**6,375**	5,874	8.5 %
EBITDA margin[1] (%)	**33.3**	36.2	(2.9) pts.
Adjusted EBITDA margin[1] (%)	**37.1**	37.3	(0.2) pts.

1 These are non-GAAP and other specified financial measures. See *Section 11.1 Non-GAAP and other specified financial measures*.

TTech EBITDA increased by $25 million or 0.4% in 2023. As a partial offset to the growth drivers discussed within *TTech Adjusted EBITDA* below, EBITDA also reflects higher restructuring and other costs of $472 million in 2023, primarily related to efficiency and effectiveness programs, inclusive of real estate rationalization, as well as one-time amounts recorded of $68 million for the ratification of the new collective agreement between the TWU and ourselves.

TTech Adjusted EBITDA increased by $501 million or 8.5% in 2023, reflecting: (i) higher mobile network, residential internet and security revenues, largely driven by subscriber growth; (ii) broad-based cost reduction efforts, including workforce reductions, synergies achieved between LifeWorks and our legacy Health business, and increased TTech outsourcing to DLCX, as well as savings in marketing, discretionary and administrative costs; (iii) inorganic contributions from acquisitions, predominantly from LifeWorks, in addition to its higher capitalized labour; and (iv) higher mobile equipment margins. These factors were partially offset by: (i) merit-based compensation increases; (ii) higher costs related to the scaling of our digital capabilities, inclusive of increased subscription-based licences, contractor and cloud usage costs; (iii) lower TV and legacy voice margins driven by technological substitution; (iv) higher bad debt expense; and (v) lower agriculture and consumer goods margins.

Adjusted EBITDA margin decreased by 0.2 percentage points in 2023. This decline was largely due to our continued diversification into emerging sectors that are generally lower margin – and less capital intensive – than traditional telecommunications, inclusive of our LifeWorks acquisition, in addition to rising subscription-based software licence and cloud infrastructure costs as we scale our digital capabilities while working in the early stages of decommissioning certain on-premises servers and other organizational processes. These impacts were partly offset by our broad-based cost efficiency and effectiveness programs as described above.



Adjusted EBITDA less capital expenditures – TTech segment

Years ended December 31 ($ in millions)	**2023**	2022	Change
Adjusted EBITDA	**6,375**	5,874	8.5 %
Capital expenditures	**(2,697)**	(3,337)	(19.2)%
Adjusted EBITDA less capital expenditures [1]	**3,678**	2,537	45.0 %

1 See *Section 11.1 Non-GAAP and other specified financial measures* .

TTech Adjusted EBITDA less capital expenditures increased by $1,141 million in 2023. See *Section 7.3* for further discussion on capital expenditures.

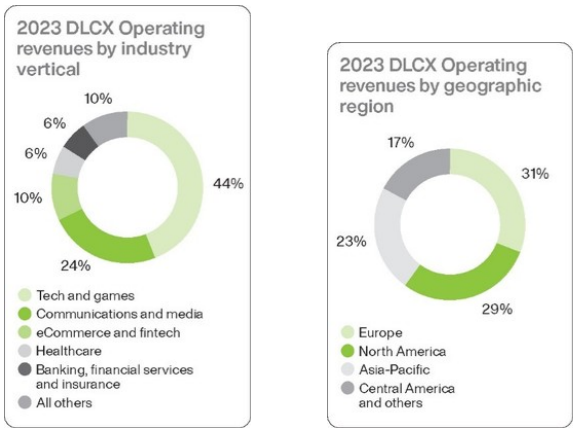
EBIT – TTech segment

Years ended December 31 ($ in millions)	**2023**	2022	Change
EBITDA	**5,722**	5,697	0.4 %
Depreciation	**(2,328)**	(2,064)	12.8 %
Amortization of intangible assets	**(1,309)**	(1,051)	24.5 %
EBIT[1]	**2,085**	2,582	(19.2)%

1 See *Section 11.1 Non-GAAP and other specified financial measures* .

TTech EBIT decreased by $497 million in 2023. Depreciation and amortization increased, reflecting business acquisitions and growth in capital assets over the past 12 months, including our expanded fibre footprint and 5G network roll-out, and increased depreciation on network leases, in addition to higher depreciation arising from real estate rationalization.

5.5 Digitally-led customer experiences – TELUS International segment



DLCX trends

The historical trend over the past eight quarters in DLCX revenue reflects growth in our organic customer base, increases in new service programs provided to existing clients and growth from acquisitions, including our acquisition of WillowTree on January 3, 2023. The higher revenue also includes revenue from internal services provided to the TTech segment. During the year ended December 31, 2023, we experienced a greater-than-expected reduction in service volume demand from some of our larger technology clients, particularly in Europe, which became more significant beginning in the second quarter of 2023. At the same time, several of our key clients also began to aggressively reduce their costs, which has created delays and near-term reductions in spend commitments.

Goods and services purchased and Employee benefits expense increased due to the expansion of our DLCX team member base to service growing volumes from both our existing and new customers, including those arising from our acquisition of WillowTree, and higher average salaries and wages over time, cost efficiency programs, changes in external labour requirements to support the growth in our digital services business, changes in our crowdsourced enabled workforce to support our AI business, increases in our software licensing costs associated with our growing team member base and increases in administrative expenses and facility costs to support overall business growth and acquisitions. Beginning in the second quarter of 2023, Employee benefits expense was positively impacted by employee-related cost efficiency initiatives resulting in decreases in our team member count in response to the reduction in service volume demand from some of our clients, a favourable mix of labour sourced from lower-cost geographies, and adjustments to performance-based variable compensation.

Depreciation and amortization have increased due to growth in our capital assets to support the expansion of our delivery sites required to service customer demand, and growth in intangible assets recognized in connection with our business acquisitions, including our acquisition of WillowTree.

DLCX operating indicators

Years ended December 31 ($ in millions)	**2023**	2022	Change
Operating revenues by industry vertical			
Tech and games	**1,594**	1,495	6.6 %
Communications and media	**871**	755	15.4 %
eCommerce and fintech	**386**	380	1.6 %
Healthcare	**215**	76	n/m
Banking, financial services and insurance	**202**	207	(2.4)%
All others[1]	**387**	301	28.6 %
	3,655	3,214	13.7 %
Operating revenues by geographic region			
Europe	**1,108**	1,146	(3.3)%
North America	**1,070**	808	32.4 %
Asia-Pacific	**852**	770	10.6 %
Central America and others[2]	**625**	490	27.6 %
	3,655	3,214	13.7 %

1 All others includes, among others, travel and hospitality, energy and utilities, retail and consumer packaged goods industry verticals.
2 Others includes South America and Africa geographic regions.

Across all of our verticals, the reported revenue growth rates were positively impacted by the strengthening of both the U.S. dollar and the European euro against the Canadian dollar compared to the prior year.

Revenue from our tech and games industry vertical increased by $99 million in 2023, due to continued growth experienced with a number of our technology clients and the addition of new clients, which was partially offset by lower revenue from one of our largest clients, a leading social media company. Revenue from our communications and media industry vertical increased by $116 million in 2023, driven primarily by more services provided to the TTech segment and the addition of new clients from our acquisition of WillowTree. Revenue from our eCommerce and fintech industry vertical increased by $6 million in 2023, due to the strengthening of the U.S. dollar against the Canadian dollar and higher service volumes from our eCommerce clients, partially offset by a decline in service volumes from fintech clients. Revenue from our healthcare industry vertical increased by $139 million in 2023, primarily due to more services provided to the healthcare business unit of the TTech segment. Revenue from our banking, financial services and insurance industry vertical decreased by $5 million in 2023, due to lower service volumes from a global financial institution client, partially offset by the addition of new clients from our acquisition of WillowTree.

We serve our clients, who are primarily domiciled in North America and Europe, from multiple delivery locations across various geographic regions. In addition, our TELUS International AI Data Solutions (TIAI) clients are largely supported by crowdsourced contractors that are globally dispersed and not limited to the physical locations of our delivery centres. In general, revenue growth in each geographic region, excluding Europe, corresponds with the overall growth of the business and our consolidated revenue. The decline in revenue in Europe during the year ended December 31, 2023, compared to the prior year, was primarily due to lower service volumes from our technology clients serviced from this region. The table above presents the revenue generated in each geographic region, based on the location of our delivery centre or where the services were provided from, for the periods presented.

Operating revenues and other income – DLCX segment

Years ended December 31 ($ in millions)	**2023**	2022	Change
Operating revenues (arising from contracts with customers)	**2,899**	2,677	8.3 %
Other income	**27**	—	n/m
External Operating revenues and other income	**2,926**	2,677	9.3 %
Intersegment revenues	**756**	537	40.8 %
DLCX Operating revenues and other income	**3,682**	3,214	14.6 %

DLCX Operating revenues and other income increased by $468 million in 2023.

Our **digital and customer experience solutions revenues** increased by $222 million in 2023, primarily attributable to growth in our tech and games, eCommerce and fintech and other industry vertical clients, arising from additional services provided to certain existing clients and new clients added since the prior year, including new clients from the acquisition of WillowTree. This growth was partially offset by lower revenues from one of our largest clients, a leading social media company, as well as a global financial institution client. In addition, the strengthening of both the U.S. dollar and the European euro against the Canadian dollar resulted in a favourable foreign currency impact on our DLCX operating results. Revenues from contracts denominated in U.S. dollars, European euros and other currencies will be affected by changes in foreign exchange rates.

Other income increased by $27 million in 2023, due to a downward revision to our estimates of certain performance-based criteria tied to the WillowTree business and a reduction of our provisions for written put options to acquire the remaining non-controlling interest of WillowTree.



Intersegment revenues represent services provided to the TTech segment, including those from the TELUS master services agreement. Such revenue is eliminated upon consolidation, together with the associated TTech expenses. The increase in intersegment revenues reflects the competitive benefits TELUS derives from the lower cost structure in the DLCX segment and the significant amounts of value-generating digital, customer experience, telecommunications, health and consumer goods solutions TELUS receives, while maintaining control over the quality of the associated services delivered and, on a consolidated basis, retaining the margin that a third-party vendor would otherwise earn.

Operating expenses – DLCX segment

Years ended December 31 ($ in millions)	**2023**	2022	Change
Goods and services purchased[1]	**659**	645	2.2 %
Employee benefits expense[1]	**2,314**	1,860	24.4 %
DLCX operating expenses	**2,973**	2,505	18.7 %

1 Includes restructuring and other costs.

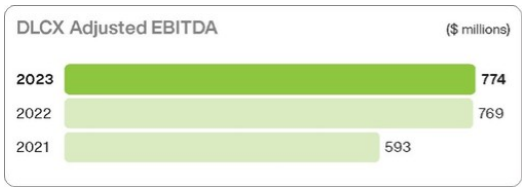
DLCX operating expenses increased by $468 million in 2023. See *DLCX Adjusted EBITDA* below for further details.

EBITDA – DLCX segment

Years ended December 31 ($ in millions, except margins)	**2023**	2022	Change
EBITDA	**709**	709	— %
Add restructuring and other costs included in EBITDA	**65**	60	n/m
Adjusted EBITDA[1]	**774**	769	0.9 %
EBITDA margin[2] (%)	**19.3**	22.1	(2.8) pts.
Adjusted EBITDA margin[2] (%)	**21.0**	23.9	(2.9) pts.

1 For certain metrics, there are definitional differences between TELUS and TELUS International reporting. These differences largely arise from TELUS International adopting definitions consistent with practice in its industry.
2 These are non-GAAP and other specified financial measures. See *Section 11.1 Non-GAAP and other specified financial measures*.

DLCX EBITDA was unchanged at $709 million in 2023. DLCX Adjusted EBITDA increased by $5 million or 0.9% in 2023, while Adjusted EBITDA margin decreased by 2.9 percentage points. The increase in Adjusted EBITDA was primarily due to other income arising from the revaluation of our provisions for written put options, positive impacts realized from cost efficiency efforts initiated in the second quarter of 2023, changes in our revenue mix, and lower share-based compensation, which were partially offset by cost imbalances arising from reductions in service demand, principally in Europe, from some of our larger technology clients, with the impacts being more significant beginning in the second quarter of 2023. Notably, Adjusted EBITDA and Adjusted EBITDA margin have shown sequential improvement in both the third and fourth quarters of 2023, reflecting the positive impacts realized from cost efficiency efforts, including decreases in our team member count within DLCX in response to the reduction in service demand from some of our clients.



Adjusted EBITDA less capital expenditures – DLCX segment

Years ended December 31 ($ in millions)	**2023**	2022	Change
Adjusted EBITDA	**774**	769	0.9 %
Capital expenditures	**(125)**	(135)	(7.4)%
Adjusted EBITDA less capital expenditures [1]	**649**	634	2.4 %

1 See *Section 11.1 Non-GAAP and other specified financial measures* .

DLCX Adjusted EBITDA less capital expenditures increased by $15 million in 2023. See *Section 7.3* for further discussion on capital expenditures.

EBIT – DLCX segment

Years ended December 31 ($ in millions)	**2023**	2022	Change
EBITDA	**709**	709	— %
Depreciation	**(186)**	(162)	14.8 %
Amortization of intangible assets	**(246)**	(175)	40.6 %
EBIT[1]	**277**	372	(25.5)%

1 See *Section 11.1 Non-GAAP and other specified financial measures* .

DLCX EBIT decreased by $95 million in 2023, primarily due to higher depreciation and amortization related to the acquisition of WillowTree, and corresponding intangible assets acquired on January 3, 2023.

6. Changes in financial position

Financial position at: ($ millions)	December 31 **2023**	2022	Change	Change includes:
Current assets				
Cash and temporary investments, net	**864**	974	(110)	See *Section 7 Liquidity and capital resources*
Accounts receivable	**3,597**	3,316	281	An increase primarily driven by higher fixed and mobile product customer receivables associated with increased revenues and increase in external receivables due to recent acquisitions
Income and other taxes receivable	**205**	124	81	Instalments to date are more than the expense
Inventories	**484**	537	(53)	A decrease primarily driven by seasonal promotions and timing of inventory in transit
Contract assets	**445**	441	4	Refer to description in non-current contract assets
Prepaid expenses	**682**	617	65	An increase due to costs incurred to obtain or fulfill contracts with customers and prepayment of maintenance contracts net of amortization
Current derivative assets	**36**	83	(47)	A decrease in the notional amount of hedging items.
Current liabilities				
Short-term borrowings	**104**	104	—	See *Note 22* of the Consolidated financial statements
Accounts payable and accrued liabilities	**3,391**	3,952	(561)	A decrease primarily driven by a reduction in liabilities associated with trade accounts payable and capital expenditures. See *Note 23* of the Consolidated financial statements
Income and other taxes payable	**126**	112	14	Instalments to date are less than the expense
Dividends payable	**550**	502	48	Effects of increases in the dividend rate and number of shares outstanding
Advance billings and customer deposits	**971**	891	80	An increase in advance billings primarily due to business growth during the period. See *Note 24* of the Consolidated financial statements
Provisions	**317**	166	151	An increase primarily driven by employee-related provisions
Current maturities of long-term debt	**3,994**	2,541	1,453	An increase from the reclassification of long-term debt related to the upcoming maturity of $1.1 billion Notes, Series CK, in April 2024, and the upcoming maturity of a TELUS bank credit facility of $1.1 billion in July 2024; partly offset by the maturity of $500 million Notes, Series CJ, in March 2023 and a decrease in outstanding commercial paper
Current derivative liabilities	**25**	18	7	An increase in the notional amount of hedging items.
Working capital (Current assets subtracting Current liabilities)	**(3,165)**	(2,194)	(971)	TELUS normally has a negative working capital position. See *Financing and capital structure management plans* in *Section 4.3* and *Note 4(c)* of the Consolidated financial statements.

Financial position at: ($ millions)	December 31 2023	2022	Change	Change includes:
Non-current assets				
Property, plant and equipment, net	**17,248**	17,084	164	See *Capital expenditures* in *Section 7.3 Cash used by investing activities* and *Depreciation* in *Section 5.3 Consolidated operations*
Intangible assets, net	**19,721**	19,239	482	See *Capital expenditures* in *Section 7.3 Cash used by investing activities* and *Amortization of intangible assets* in *Section 5.3 Consolidated operations*
Goodwill, net	**10,058**	9,131	927	An increase primarily due to the acquisition of WillowTree and individually immaterial business acquisitions. See *Note 18* of the Consolidated financial statements
Contract assets	**303**	320	(17)	A decrease driven by lower subsidized devices offset with our Bring-It-Back and TELUS Easy Payment programs
Other long-term assets	**2,493**	2,203	290	See *Note 20* of the Consolidated financial statements.
Non-current liabilities				
Provisions	**744**	538	206	A net increase primarily driven by business acquisitions
Long-term debt	**23,355**	22,496	859	See *Section 7.4 Cash provided by financing activities*
Other long-term liabilities	**867**	636	231	An increase primarily due to derivative liabilities and pension benefit liabilities. See *Note 27* of the Consolidated financial statements
Deferred income taxes	**4,390**	4,455	(65)	An overall decrease in temporary differences between the accounting and tax basis of assets and liabilities.
Owners' equity				
Common equity	**16,112**	16,569	(457)	See *Consolidated statements of changes in owners' equity* in the Consolidated financial statements
Non-controlling interests	**1,190**	1,089	101	See *Consolidated statements of changes in owners' equity* in the Consolidated financial statements.

7. Liquidity and capital resources

This section contains forward-looking statements, including those in respect of our TELUS Corporation Common Share (Common Share) dividend payout ratio and net debt to EBITDA – excluding restructuring and other costs ratio. See *Caution regarding forward-looking statements* at the beginning of this MD&A.

7.1 Overview

Our capital structure financial policies and financing and capital structure management plans are described in *Section 4.3*.

Cash flows

Years ended December 31 ($ millions)	**2023**	2022	Change
Cash provided by operating activities	**4,499**	4,811	(312)
Cash used by investing activities	**(4,748)**	(5,408)	660
Cash provided by financing activities	**139**	848	(709)
Increase (decrease) in Cash and temporary investments, net	**(110)**	251	(361)
Cash and temporary investments, net, beginning of period	**974**	723	251
Cash and temporary investments, net, end of period	**864**	974	(110)

7.2 Cash provided by operating activities

Analysis of changes in cash provided by operating activities

Years ended December 31 ($ millions)	**2023**	2022	Change
Operating revenues and other income (see *Section 5.3*)	**20,116**	18,412	1,704
Goods and services purchased (see *Section 5.3*)	**(7,537)**	(7,107)	(430)
Employee benefits expense (see *Section 5.3*)	**(6,148)**	(4,899)	(1,249)
Restructuring and other costs, net of disbursements	**206**	69	137
Share-based compensation expense, net of payments	**117**	122	(5)
Net employee defined benefit plans expense	**72**	101	(29)
Employer contributions to employee defined benefit plans	**(28)**	(44)	16
Unrealized changes in virtual power purchase agreements forward element (VPPAs) (see *Section 5.3*)	**—**	(193)	193
Interest paid	**(1,196)**	(816)	(380)
Interest received	**23**	17	6
Income taxes paid, net of recoveries received	**(389)**	(519)	130
Other operating working capital changes	**(747)**	(332)	(415)
Cash provided by operating activities	**4,499**	4,811	(312)

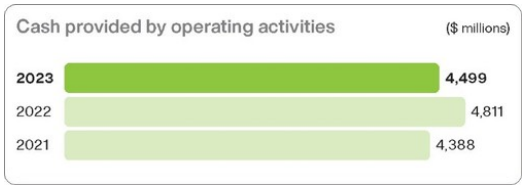
Cash provided by operating activities decreased by $312 million in 2023.

- Restructuring and other costs, net of disbursements, represented a net change of $137 million in 2023, and was largely related to cost efficiency and effectiveness initiatives. We had a greater number of real estate rationalization initiatives where payments of executory costs will be disbursed over multiple years, in addition to the timing of disbursements for personnel-related costs expected to partially flow into the following year. Restructuring and other costs, net of disbursements also included $68 million in one-time amounts for the ratification of the new collective agreement between the Telecommunications Workers Union, United Steelworkers Local 1944 (TWU) and ourselves that was paid in the second quarter of 2023.

- Interest paid increased by $380 million in 2023, largely due to: (i) the issuances of the first quarter 2023 Series CAJ notes and the third quarter 2023 three-tranche notes described in *Section 7.4*; (ii) increased draws on the TELUS International (TI) credit facility used to fund the acquisition of WillowTree; (iii) the unsecured non-revolving $1.1 billion bank credit facility maturing July 9, 2024, which was first drawn during the third quarter of 2022; and (iv) increased interest paid on commercial paper driven by higher interest rates.

- Income taxes paid, net of recoveries received, decreased by $130 million in 2023, primarily related to lower required income tax instalments attributable to lower income before income taxes.

- For a discussion of Other operating working capital changes, see *Section 6 Changes in financial position* and *Note 31(a)* of the Consolidated financial statements.



7.3 Cash used by investing activities

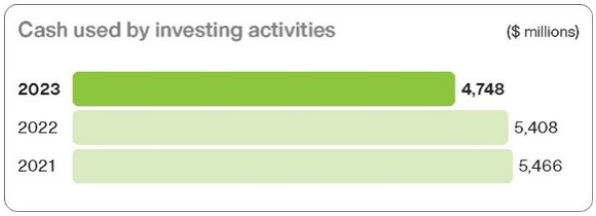
Analysis of changes in cash used by investing activities

Years ended December 31 ($ millions)	**2023**	2022	Change
Cash payments for capital assets, excluding spectrum licences	**(3,182)**	(3,647)	465
Cash payments for spectrum licences	**(29)**	—	(29)
Cash payments for acquisitions, net	**(1,289)**	(1,547)	258
Advances to, and investment in, real estate joint ventures and associates	**(138)**	(21)	(117)
Real estate joint venture receipts	**10**	5	5
Proceeds on disposition	**12**	16	(4)
Investment in portfolio investments and other	**(132)**	(214)	82
Cash used by investing activities	**(4,748)**	(5,408)	660

Cash used by investing activities decreased by $660 million in 2023.

- The decrease in Cash payments for capital assets, excluding spectrum licences in 2023 was primarily composed of:
  - Higher capital expenditure payments of $185 million in 2023 with respect to payment timing differences.
  - A decrease in capital expenditures of $650 million (see *Capital expenditure measures* table and discussion below).
- Cash payments for spectrum licences increased by $29 million in 2023, related to the acquisition of AWS-1 and broadband radio service (BRS) bands.
- Cash payments for acquisitions, net decreased by $258 million in 2023 as we made cash payments for the acquisition of WillowTree, as noted in *Section 1.3*, and other individually immaterial business acquisitions that are complementary to our existing lines of business. This is compared to business acquisition activity in 2022 that included Fully Managed Inc., Vivint Smart Home, Inc. and LifeWorks, as well as other individually immaterial business acquisitions that were complementary to our existing lines of business.
- Advances to, and investments in, real estate joint ventures and associates increased by $117 million in 2023, primarily related to our equity interest in Miovision Technologies Incorporated. See *Note 21* of the Consolidated financial statements for further details.

- Investment in portfolio investments and other decreased by $82 million in 2023, primarily from a decrease of capital inventory, as well as investments in a greater number of portfolio investments in 2022.



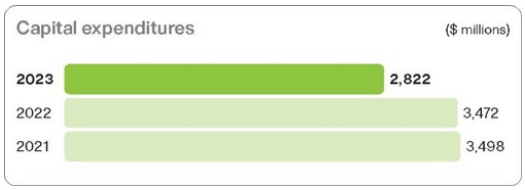
Capital expenditure measures

Years ended December 31 ($ millions, except capital intensity)	**2023**	2022	Change
Capital expenditures[1]			
TELUS technology solutions (TTech) segment TTech operations	**2,611**	3,269	(20.1)%
TTech real estate development	**86**	68	26.5 %
	2,697	3,337	(19.2)%
Digitally-led customer experiences – TELUS International (DLCX) segment	**125**	135	(7.4)%
Consolidated	**2,822**	3,472	(18.7)%
TTech segment capital expenditure intensity [2] (%)	**15**	21	(6)pts.
DLCX segment capital expenditure intensity [2] (%)	**3**	4	(1)pt.
Consolidated capital expenditure intensity [2] (%)	**14**	18	(4)pts.

1 Capital expenditures include assets purchased, excluding right-of-use lease assets, but not yet paid for. Consequently, capital expenditures differ from Cash payments for capital assets, excluding spectrum licences, as reported in the Consolidated statements of cash flows. Refer to *Note 31* of the Consolidated financial statements for further information.

2 See *Section 11.1 Non-GAAP and other specified financial measures*.

Consolidated capital expenditures decreased by $650 million in 2023. TTech operations drove $658 million of the decrease, primarily due to the planned slowdown of our fibre and wireless network build and systems development, which is consistent with 2023 build targets when compared to our accelerated investments in 2022. Our capital investments have enabled: (i) our internet, TV and security subscriber growth, as well as more premises connected to our fibre network; (ii) increased coverage of our 5G network; (iii) the expansion of our health product offerings and capabilities, as well as to support business integration; and (iv) enhancement of our product and digital development to increase our system capacity and reliability. TTech real estate development capital expenditures increased by $18 million in 2023, due to increased capital investment to support construction of multi-year development projects, including TELUS Ocean and other commercial buildings in B.C. By December 31, 2023, our 5G network covered more than 31.6 million Canadians, representing approximately 86% of the population.

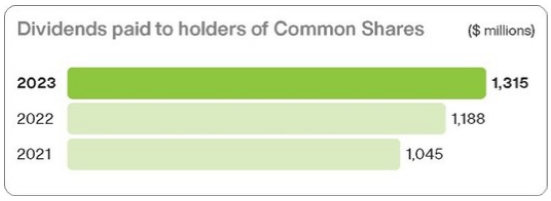


7.4 Cash provided by financing activities

Analysis of changes in cash provided by financing activities

Years ended December 31 ($ millions)	**2023**	2022	Change
Dividends paid to holders of Common Shares	**(1,315)**	(1,188)	(127)
Issue (repayment) of short-term borrowings, net	**(2)**	(17)	15
Long-term debt issued	**9,223**	10,271	(1,048)
Redemptions and repayment of long-term debt	**(7,690)**	(8,049)	359
Shares of subsidiary purchased from non-controlling interests, net	**(57)**	(123)	66
Other	**(20)**	(46)	26
Cash provided by financing activities	**139**	848	(709)

Cash provided by financing activities decreased by $709 million in 2023.



Dividends paid to holders of Common Shares

Our dividend reinvestment and share purchase (DRISP) plan trustee acquired shares from Treasury for the DRISP plan, rather than acquiring Common Shares in the stock market. Effective with the dividends paid on October 1, 2019, we offered Common Shares from Treasury at a discount of 2%. Cash payments for dividends increased by $127 million in 2023, which reflected higher dividend rates under our dividend growth program (see *Section 4.3*) and an increase in the number of shares outstanding. This was partly offset by a higher discounted DRISP issuance. During 2023, our DRISP plan trustee acquired Common Shares for $748 million.

In January 2024, we paid dividends of $359 million to the holders of Common Shares and the trustee acquired dividend reinvestment Common Shares from Treasury for $191 million, totalling $550 million.

Issue (repayment) of short-term borrowings, net

In the first quarter of 2023, we drew down amounts advanced to us from an arm's-length securitization trust to finance working capital. These amounts were repaid in the third quarter of 2023.

By comparison, we drew down amounts in the second quarter of 2022 and early in the third quarter of 2022, before repaying those amounts later in the third quarter of 2022.

Long-term debt issued and Redemptions and repayment of long-term debt

In 2023, long-term debt issued decreased by $1,048 million, while redemptions and repayment of long-term debt decreased by $359 million. These changes were primarily composed of:

- A net decrease in commercial paper outstanding, including foreign exchange effects, of $437 million to a balance of $1.0 billion (US$0.8 billion) at December 31, 2023, from a balance of $1.5 billion (US$1.1 billion) at December 31, 2022. Our commercial paper program, when utilized, provides lower-cost funds than our revolving credit facility and is fully backstopped by the revolving credit facility (see *Section 7.6 Credit facilities*).

- An increase in net draws on the TI credit facility, including foreign exchange effects, of $867 million. As at December 31, 2023, net draws due to a syndicate of financial institutions (excluding TELUS Corporation) were US$1.4 billion, whereas as at December 31, 2022, net draws were US$689 million. The increase in net draws on the TI credit facility was used to fund the acquisition of WillowTree. The TI credit facility is non-recourse to TELUS Corporation.

- The March 28, 2023 issue of $500 million of senior unsecured 4.95% Sustainability-Linked Notes, Series CAJ, maturing on March 28, 2033. The net proceeds were used for the repayment of outstanding indebtedness, including the repayment of commercial paper and the reduction of cash amounts under an arm's-length securitization trust, and for other general corporate purposes.

- The September 8, 2023 three-tranche note issuance of $850 million of senior unsecured 5.75% Sustainability-Linked Notes, Series CAK, maturing on September 8, 2033; $400 million of senior unsecured 5.95% Notes, Series CAL, maturing on September 8, 2053; and $500 million of senior unsecured 5.60% Notes, Series CAM, maturing on September 9, 2030. The net proceeds from the three-tranche offering will be used for the repayment of outstanding indebtedness, including the repayment of commercial paper and the reduction of cash amounts under an arm's-length securitization trust, and for other general corporate purposes.

- The repayment upon maturity of $500 million of 3.35% Notes, Series CJ due March 2023.

By comparison, in 2022, long-term debt issued increased by $5,380 million, while redemptions and repayment of long-term debt increased by $3,077 million. These changes were primarily composed of:

- A net decrease in commercial paper outstanding, including foreign exchange effects, of $442 million from a balance of $1.9 billion (US$1.5 billion) at December 31, 2021.

- A decrease in net draws on the TI credit facility, including foreign exchange effects, of $148 million. As at December 31, 2021, net draws were US$854 million.

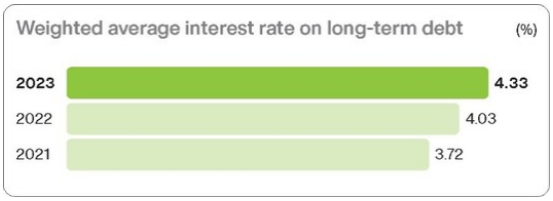
- The February 28, 2022 issue of US$900 million of our senior unsecured 3.40% U.S. Dollar Sustainability-Linked Notes, due May 13, 2032.

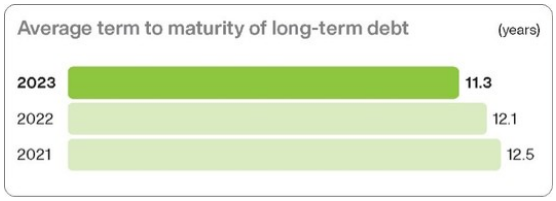
- The September 13, 2022 three-tranche note issuance of: $1.1 billion of senior unsecured 5.25% Sustainability-Linked Notes, Series CAG, maturing on November 15, 2032; $550 million of senior unsecured 5.65% Notes, Series CAH, maturing on September 13, 2052; and $350 million of senior unsecured 5.00% Notes, Series CAI, maturing on September 13, 2029.

- The draw-down of the unsecured non-revolving $1.1 billion bank credit facility, maturing July 9, 2024, with a syndicate of financial institutions, which was used for general corporate purposes.

- The repayment upon maturity of $249 million of Series 5, 9.65% debentures of TELUS Communications Inc. (TCI) due April 2022.

The average term to maturity of our long-term debt (excluding commercial paper, TELUS bank credit facilities, the revolving components of the TI credit facility, lease liabilities and other long-term debt) was 11.3 years at December 31, 2023, a decrease from 12.1 years at December 31, 2022. Additionally, the weighted average cost of our long-term debt (excluding commercial paper, TELUS bank credit facilities, the revolving components of the TI credit facility, lease liabilities and other long-term debt) was 4.33% at December 31, 2023, an increase from 4.03% at December 31, 2022.





Shares of subsidiary issued and sold to (purchased from) non-controlling interests, net

In the second quarter of 2023, we acquired 2.5 million multiple voting shares of TELUS International from a non-controlling interest. As at December 31, 2023, TELUS held approximately 56.0% of the outstanding shares, 1.3% of the outstanding subordinate voting shares, 90.8% of the outstanding multiple voting shares and 85.4% of the outstanding voting rights of TELUS International.

By comparison, in the second quarter of 2022, we acquired shares of TELUS International from a non-controlling interest. And, in the fourth quarter of 2022, we acquired additional shares of TELUS International by way of market purchases.

Other

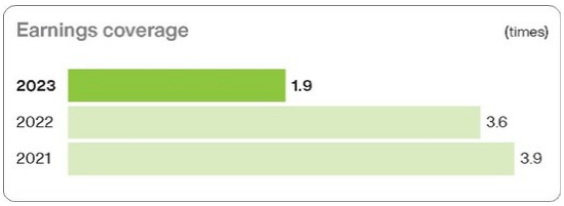
In 2023, we incurred debt issuance costs in connection with the first quarter issuance of our senior unsecured 4.95% Sustainability-Linked Notes, Series CAJ and the September 8, 2023 issuance of our three-tranche note. This was less than the debt issuance costs incurred during 2022 in connection with February 2022 3.40% U.S. Dollar Sustainability-Linked Notes issuance and the September 2022 three-tranche note issuance.

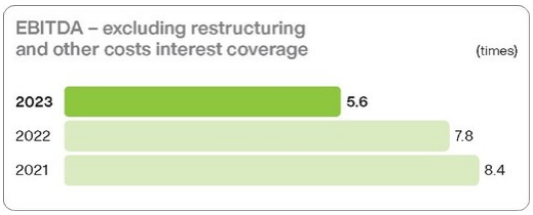
7.5 Liquidity and capital resource measures

Net debt was $26.5 billion at December 31, 2023, an increase of $2.3 billion compared to one year earlier, resulting mainly from: the third quarter 2023 three-tranche issuance of $1.75 billion of notes as described in *Section 7.4*; an increase in net draws due to a syndicate of financial institutions (excluding TELUS Corporation) on the TI credit facility, which is non-recourse to TELUS Corporation; and the first quarter 2023 issuance of $500 million of Sustainability-Linked Notes, Series CAJ, as described in *Section 7.4*; and less Cash and temporary investments. These factors were partially offset by: a decrease in commercial paper outstanding and the repayment upon maturity of 3.35% Notes, Series CJ in the first quarter of 2023.

Fixed-rate debt as a proportion of total indebtedness, which excludes lease liabilities and other long-term debt, was 87% as at December 31, 2023, up from 86% one year earlier. The increase was primarily due to: (i) the third quarter 2023 three-tranche issuance of $1.75 billion of notes and the first quarter 2023 issuance of $500 million of Sustainability-Linked Notes, Series CAJ, both as described in *Section 7.4*; and (ii) a decrease in commercial paper outstanding, which is classified as floating-rate debt in this calculation. These factors were partially offset by: (i) an increase in net draws due to a syndicate of financial institutions (excluding TELUS Corporation) on the TI credit facility; and (ii) the repayment upon maturity of 3.35% Notes, Series CJ in the first quarter of 2023.

Our Net debt to EBITDA – excluding restructuring and other costs ratio supports our financial objective of maintaining investment-grade credit ratings, which facilitates reasonable access to capital. This ratio was 3.71 times, as measured at December 31, 2023, up from 3.63 times one year earlier. The effect of the increase, primarily due to business acquisitions, in net debt levels (which were already elevated in the current and comparative periods due to our acquisitions of spectrum licences, our largest indefinite life asset) exceeded the effect of growth in EBITDA – excluding restructuring and other costs. As at December 31, 2023, the acquisition of spectrum licences increased the ratio by approximately 0.45 and business acquisitions over the past 12 months increased the ratio by approximately 0.17. Our recent acquisitions of spectrum licences have increased our national spectrum holdings and represent an investment to extend our network capacity to support continuing growth in demand for data, as well as growth in our mobile subscriber base. Given the cash demands of the 600 MHz auction in 2019, the 3500 MHz auction in 2021, the 3800 MHz auction in 2023 and the upcoming spectrum auction in 2024 for millimetre wave, the assessment of the guideline and timing of return to the objective range remains to be determined; however, it is our intent to return to a ratio below 2.70 times in the medium term (following the spectrum auctions in 2021 and 2023, and the upcoming spectrum auction expected in 2024), consistent with our long-term strategy. While this ratio exceeds our long-term objective range, we are well in compliance with the leverage ratio covenant in our credit facilities, which states that we may not permit our leverage ratio to exceed 4.25 to 1.00 at December 31, 2023 (see *Section 7.6 Credit facilities*).





Liquidity and capital resource measures

As at, or for the 12-month periods ended, December 31	**2023**	2022	Change
Components of debt and coverage ratios ($ millions)			
Long-term debt	**27,349**	25,037	2,312
Net debt[1]	**26,494**	24,152	2,342
Net income	**867**	1,718	(851)
EBITDA – excluding restructuring and other costs [1]	**7,148**	6,646	502
Financing costs	**1,273**	632	641
Net interest cost[1]	**1,272**	847	425
Debt ratios			
Fixed-rate debt as a proportion of total indebtedness (excluding lease liabilities and other long-term debt) (%)	**87**	86	1 pt.
Average term to maturity of long-term debt (excluding commercial paper, TELUS bank credit facilities, the revolving components of the TI credit facility, lease liabilities and other long-term debt) (years)	**11.3**	12.1	(0.8)
Weighted average interest rate on long-term debt (excluding commercial paper, TELUS bank credit facilities, the revolving components of the TI credit facility, lease liabilities and other long-term debt) (%)	**4.33**	4.03	0.30 pts.
Net debt to EBITDA – excluding restructuring and other costs [1] (times)	**3.71**	3.63	0.08
Coverage ratios[1] (times)			
Earnings coverage	**1.9**	3.6	(1.7)
EBITDA – excluding restructuring and other costs interest coverage	**5.6**	7.8	(2.2)
Other measures[1] (%)			
Determined using most comparable IFRS-IASB measures			
Ratio of Common Share dividends declared to cash provided by operating activities less capital expenditures	**126**	142	(16) pts.
Determined using management measures			
Common Share dividend payout ratio – net of dividend reinvestment plan effects	**77**	95	(18) pts.

1 See *Section 11.1 Non-GAAP and other specified financial measures*.

Earnings coverage ratio for the 12-month period ended December 31, 2023 was 1.9 times, down from 3.6 times one year earlier. A decrease in income before borrowing costs and income taxes lowered the ratio by 0.9, while an increase in borrowing costs lowered the ratio by 0.8. Restructuring and other costs impacted the ratio by 0.4.

EBITDA – excluding restructuring and other costs interest coverage ratio for the 12-month period ended December 31, 2023 was 5.6 times, down from 7.8 times one year earlier. Growth in EBITDA – excluding restructuring and other costs increased the ratio by 0.6 and an increase in net interest costs of $425 million decreased the ratio by 2.8.

Common Share dividend payout ratios: Actual Common Share dividend payout decisions will continue to be subject to our Board's assessment of our financial position and outlook, as well as our long-term Common Share dividend payout objective range of 60 to 75% of prospective free cash flow. So as to be consistent with the way we manage our business, our Common Share dividend payout ratio is presented as a historical measure calculated as the sum of the dividends declared in the most recent four quarters for Common Shares, as recorded in the financial statements, net of dividend reinvestment plan effects, divided by the sum of the most recent four quarters' free cash flow amounts for interim reporting periods. For fiscal years, the denominator is annual free cash flow. The historical measure for the 12-month period ended December 31, 2023 is presented for illustrative purposes in evaluating our target guideline. As at December 31, 2023, the ratio was outside of the objective range. We estimate the ratio will be within the objective range on a prospective basis.

TI intends to retain all available funds and any future earnings to support operations and to finance the growth and development of its business.

7.6 Credit facilities

At December 31, 2023, we had $1.7 billion of liquidity available from the TELUS revolving credit facility and $604 million of liquidity available from the TI credit facility with a syndicate of financial institutions (excluding TELUS Corporation). We are well within our objective of generally maintaining at least $1 billion of available liquidity.

TELUS credit facilities

We have a $2.75 billion (or U.S. dollar equivalent) unsecured revolving credit facility with a syndicate of financial institutions, expiring July 14, 2028. The revolving credit facility is to be used for general corporate purposes, including the backstop of commercial paper, as required. As at December 31, 2023, we had an unsecured non-revolving $1.1 billion bank credit facility, maturing July 9, 2024, with a syndicate of financial institutions, which is to be used for general corporate purposes. As at December 31, 2023, we had drawn $1.1 billion on the non-revolving bank credit facility, with an effective average interest rate of 6.0% through January 2024.

TELUS revolving credit facility at December 31, 2023

($ millions)	Expiry	Size	Drawn	Outstanding undrawn letters of credit	Backstop for commercial paper program	Available liquidity
Revolving credit facility[1]	July 14, 2028	2,750	—	—	(1,021)	1,729

1 Canadian dollars or U.S. dollar equivalent.

Our credit facilities contain customary covenants, including a requirement that we not permit our consolidated leverage ratio to exceed 4.25 to 1.00 and that we not permit our consolidated coverage ratio to be less than 2.00 to 1.00 at the end of any financial quarter. As at December 31, 2023, our consolidated leverage ratio was 3.71 to 1.00 and our consolidated coverage ratio was 5.6 to 1.00. These ratios are expected to remain well within the covenants. There are certain minor differences in the calculation of the leverage ratio and coverage ratio under the revolving credit facility, as compared with the calculation of Net debt to EBITDA – excluding restructuring and other costs and EBITDA – excluding restructuring and other costs interest coverage. Historically, the calculations are substantially similar. The covenants are not impacted by revaluation, if any, of Property, plant and equipment, Intangible assets or Goodwill for accounting purposes. Continued access to our credit facilities is not contingent on maintaining a specific credit rating.

Commercial paper

TELUS Corporation has an unsecured commercial paper program, which is backstopped by our revolving credit facility, enabling us to issue commercial paper up to a maximum aggregate equivalent amount at any one time of $2.0 billion (US$1.5 billion maximum) as at December 31, 2023. Foreign currency forward contracts are used to manage currency risk arising from issuing commercial paper denominated in U.S. dollars. The commercial paper program is to be used for general corporate purposes, including, but not limited to, capital expenditures and investments. Our ability to reasonably access the commercial paper market in the U.S. is dependent on our credit ratings (see *Section 7.8 Credit ratings*).

TELUS International credit facility

As at December 31, 2023, TELUS International (Cda) Inc. had a credit facility, secured by its assets, expiring on January 3, 2028, with a syndicate of financial institutions, including TELUS Corporation. The TI credit facility is comprised of revolving components totalling US$800 million (TELUS Corporation as approximately 7.2% lender) and amortizing term loan components totalling US$1.2 billion (TELUS Corporation as approximately 7.2% lender). The TI credit facility is non-recourse to TELUS Corporation. The outstanding revolving components and term loan components had a weighted average interest rate of 7.5% as at December 31, 2023.

The term loan components are subject to amortization schedules which require that 5% of the principal advanced be repaid each year of the term of the agreement, with the balance due at maturity.

Other letter of credit facilities

At December 31, 2023, we had $60 million of letters of credit outstanding issued under various uncommitted facilities; such letter of credit facilities are in addition to the ability to provide letters of credit pursuant to our committed revolving bank credit facility. Available liquidity under various uncommitted letters of credit facilities was $124 million at December 31, 2023. We had arranged $338 million of incremental letters of credit to allow us to participate in Innovation, Science and Economic Development Canada's 3800 MHz wireless spectrum auction that was held in October to November 2023, as discussed further in *Note 18(a)* of the Consolidated financial statements.

Other long-term debt

Other liabilities bear interest at 3.3%, are secured by the AWS-4 spectrum licences associated with these other liabilities, and are subject to amortization schedules, so that the principal is repaid over the periods to maturity, the last period ending March 31, 2035.

7.7 Sale of trade receivables

TCI, a wholly owned subsidiary of TELUS, is a party to an agreement with an arm's-length securitization trust associated with a major Schedule I Canadian bank, under which it is currently able to sell an interest in certain trade receivables up to a maximum of $600 million. The agreement is in effect until December 31, 2024, and available liquidity was $500 million as at December 31, 2023. (See *Note 22* of the Consolidated financial statements.) Sales of trade receivables in securitization transactions are recognized as collateralized Short-term borrowings and thus do not result in our de-recognition of the trade receivables sold.

TCI is required to maintain a credit rating of at least BB from DBRS Ltd. or the securitization trust may require that the sale program be wound down prior to the end of the term. The minimum credit rating was exceeded as of February 9, 2024.

7.8 Credit ratings

We continued to have investment-grade ratings in 2023 and as at February 9, 2024. We believe adherence to most of our stated financial policies (see *Section 4.3*), coupled with our efforts to maintain a constructive relationship with banks, investors and credit rating agencies, continues to provide reasonable access to capital markets. (See discussion of risks in *Section 10.15 Financing, debt and dividends*.)

7.9 Financial instruments, commitments and contingent liabilities

Financial instruments

Our financial instruments, their accounting classification and the nature of certain risks that they may be exposed are described in *Note 4* of the Consolidated financial statements. Our policies in respect of the recognition and measurement of financial instruments are described in *Note 1(c)* of the Consolidated financial statements.

		Risks				
				Market risks		
Financial instrument	Accounting classification	Credit	Liquidity	Currency	Interest rate	Other price
Measured at amortized cost						
Accounts receivable	AC[1]	X		X		
Contract assets	AC[1]	X				
Construction credit facilities advances to real estate joint venture	AC[1]				X	
Short-term borrowings	AC[1]		X	X	X	
Accounts payable	AC[1]		X	X		
Provisions (including restructuring accounts payable)	AC[1]		X	X		X
Long-term debt	AC[1]		X	X	X	
Measured at fair value						
Cash and temporary investments	FVTPL[2]	X		X	X	
Long-term investments (not subject to significant influence)[3]	FVTPL/FVOCI[3]			X		X
Foreign exchange derivatives[4]	FVTPL[2]	X	X	X		
VPPAs[4]	FVTPL [2]					X

1 For accounting recognition and measurement purposes, classified as amortized cost (AC).

2 For accounting recognition and measurement purposes, classified as fair value through net income (FVTPL). *Unrealized* changes in the fair values of financial instruments are included in net income unless the instrument is part of a cash flow hedging relationship. The effective portions of *unrealized* changes in the fair values of financial instruments held for hedging are included in other comprehensive income.

3 Long-term investments over which we do not have significant influence are measured at fair value if those fair values can be reliably measured. For accounting recognition and measurement purposes, on an investment-by-investment basis, long-term investments are classified as either fair value through net income or fair value through other comprehensive income (FVOCI).

4 Use of derivative financial instruments is subject to a policy which requires that no derivative transaction is to be entered into for the purpose of establishing a speculative or leveraged position (the corollary being that all derivative transactions are to be entered into for risk management purposes only) and sets criteria for the creditworthiness of the transaction counterparties.

Derivatives that are part of an established and documented cash flow hedging relationship are accounted for as held for hedging. We believe that classification as held for hedging results in a better matching of the change in the fair value of the derivative financial instrument with the risk exposure being hedged.

In respect of hedges of anticipated transactions, hedge gains/losses are included with the related expenditure and are expensed when the transaction is recognized in our results of operations. We have selected this method as we believe that it results in a better matching of the hedge gains/losses with the risk exposure being hedged.

Derivatives that are not part of a documented cash flow hedging relationship are accounted for as held for trading and thus are measured at fair value through net income.

Liquidity risk

As a component of our capital structure financial policies, discussed in *Section 4.3 Liquidity and capital resources*, we manage liquidity risk by: maintaining a daily cash pooling process that enables us to manage our available liquidity and our liquidity requirements according to our actual needs; maintaining an agreement to sell trade receivables to an arm's-length securitization trust; maintaining bilateral bank facilities and syndicated credit facilities; maintaining a supply chain financing program; maintaining a commercial paper program; maintaining in-effect shelf prospectuses; continuously monitoring forecast and actual cash flows; and managing maturity profiles of financial assets and financial liabilities.

As at December 31, 2023, TELUS Corporation could offer an unlimited amount of debt or equity securities pursuant to a Canadian shelf prospectus that is in effect until September 2024. TELUS International has a Canadian shelf prospectus that is in effect until May 2024 under which an unlimited amount of debt or equity securities could be offered.

As at December 31, 2023, we had more than $1.7 billion of liquidity available from the TELUS revolving credit facility and $604 million of liquidity available from the TI credit facility with a syndicate of financial institutions (excluding TELUS Corporation) (see *Section 7.6 Credit facilities*), as well as $500 million available under our trade receivables securitization program (see *Section 7.7 Sale of trade receivables*). Excluding the TI credit facility and including cash and temporary investments of $864 million, we had available liquidity of approximately $3.1 billion at December 31, 2023 (see *Section 11.1 Non-GAAP and other specified financial measures*). This adheres to our objective of generally maintaining at least $1 billion of available liquidity. We believe that our investment-grade credit ratings contribute to reasonable access to capital markets.

Refer to *Note 4* of the Consolidated financial statements for further information regarding our financial instruments.

Commitments and contingent liabilities

Contractual obligations as at December 31, 2023

($ millions)	2024	2025	2026	2027	2028	2029-2033	Thereafter	Total
Short-term borrowings								
Interest obligations	7	—	—	—	—	—	—	7
Principal obligations[1]	104	—	—	—	—	—	—	104
	111	—	—	—	—	—	—	111
Long-term debt								
Interest obligations	1,047	930	880	829	661	2,623	4,804	11,774
Principal maturities	3,361	1,097	1,498	1,554	2,727	7,469	7,214	24,920
	4,408	2,027	2,378	2,383	3,388	10,092	12,018	36,694
Leases								
Interest obligations	127	103	80	59	43	109	67	588
Principal maturities	558	444	336	272	159	394	256	2,419
	685	547	416	331	202	503	323	3,007
Occupancy costs[2]	137	125	109	92	70	162	50	745
Purchase obligations[3]								
Operating expenditures	893	309	304	279	263	374	5	2,427
Property, plant and equipment, and Intangible assets	228	75	18	1	—	—	—	322
	1,121	384	322	280	263	374	5	2,749
Non-interest bearing financial liabilities	3,126	164	93	152	43	—	—	3,578
Net payments (receipts) on derivatives used to manage currency and interest rate risk	2	(11)	(8)	(3)	9	(40)	(44)	(95)
Other obligations	15	—	—	—	—	—	—	15
Total	9,605	3,236	3,310	3,235	3,975	11,091	12,352	46,804

1 See *Section 7.7 Sale of trade receivables*.

2 Occupancy costs include transactions with real estate joint ventures. See *Section 7.11 Transactions between related parties*.
3 Where applicable, purchase obligations reflect foreign exchange rates at December 31, 2023. Purchase obligations include future operating and capital expenditures that have been contracted for at the current year-end and include the most likely estimates of prices and volumes, where necessary. As purchase obligations reflect market conditions at the time the obligation was incurred for the items being purchased, they may not be representative of future years. Obligations from personnel supply contracts and other such labour agreements have been excluded.

Claims and lawsuits

A number of claims and lawsuits (including class actions and intellectual property infringement claims) seeking damages and other relief are pending against us and, in some cases, other mobile carriers and telecommunications service providers. As well, we have received notice of, or are aware of, certain possible claims (including intellectual property infringement claims) against us and, in some cases, other mobile carriers and telecommunications service providers. (See the related risk discussion in *Section 10.18 Litigation and legal matters*.)

It is not currently possible for us to predict the outcome of such claims, possible claims and lawsuits due to various factors, including: the preliminary nature of some claims; uncertain damage theories and demands; an incomplete factual record; uncertainty concerning legal theories and procedures and their resolution by the courts, at both the trial and the appeal levels; and the unpredictable nature of opposing parties and their demands.

However, subject to the foregoing limitations, management is of the opinion, based upon legal assessments and information presently available, that it is unlikely that any liability, to the extent not provided for through insurance or otherwise, would have a material effect on our financial position and the results of our operations, including cash flows, with the exception of the items disclosed in *Note 29(a)* of the Consolidated financial statements. This is a significant judgment for us (see *Section 8.1 Critical accounting estimates and judgments*).

Indemnification obligations

In the normal course of operations, we provide indemnification in conjunction with certain transactions. The terms of these indemnification obligations range in duration. These indemnifications would require us to compensate the indemnified parties for costs incurred as a result of failure to comply with contractual obligations, or litigation claims or statutory sanctions, or damages that may be suffered by an indemnified party. In some cases, there is no maximum limit on these indemnification obligations. The overall maximum amount of an indemnification obligation will depend on future events and conditions and therefore cannot be reasonably estimated. Where appropriate, an indemnification obligation is recorded as a liability. Other than obligations recorded as liabilities at the time of the related transactions, historically we have not made significant payments under these indemnifications.

As at December 31, 2023, we had no liability recorded in respect of our indemnification obligations.

7.10 Outstanding share information

Outstanding shares (millions)	December 31, 2023	January 31, 2024
Common Shares	1,468	1,476
Common Share options	2	2
Restricted share units and deferred share units – equity-settled	8	8

7.11 Transactions between related parties

Transactions with key management personnel

Our key management personnel have authority and responsibility for overseeing, planning, directing and controlling our activities and consist of our Board of Directors and our Executive Team. Total compensation expense for key management personnel was $71 million in 2023 compared to $92 million in 2022. The decrease in compensation expense for key management personnel was primarily due to lower share-based compensation. See *Note 30(a)* of the Consolidated financial statements for additional details.

Transactions with defined benefit pension plans

We provided our defined benefit pension plans with management and administrative services on a cost recovery basis and actuarial services on an arm's-length basis. Charges for these services were immaterial.

Transactions with real estate joint ventures and associate

During 2023, we had transactions with real estate joint ventures, which are related parties, as set out in *Note 21* of the Consolidated financial statements.

During the year ended December 31, 2023, the TELUS Sky real estate joint venture entered into an agreement to sell the income-producing properties and the related net assets to the venture partners; the two arm's-length parties will purchase the residential parcel and we will purchase the commercial parcel. Timing for the closing of these sales and purchases is dependent upon timing for the subdivision of the parcels, as well as other customary closing conditions. In addition, for the TELUS Sky real estate joint venture, commitments and contingent liabilities include construction financing ($282 million, with Canadian financial institutions and others as 66-2/3% lenders and TELUS as 33-1/3% lender) under a credit agreement maturing July 12, 2024. We have entered into lease agreements with the TELUS Sky real estate joint venture.

During 2023, we increased our investment in Miovision Technologies Incorporated, as set out in *Note 21(b)* of the Consolidated financial statements.

8. Accounting matters

8.1 Critical accounting estimates and judgments

Our significant accounting policies are described in *Note 1* of the Consolidated financial statements for the year ended December 31, 2023. The preparation of financial statements in conformity with generally accepted accounting principles (GAAP) requires management to make estimates, assumptions and judgments that affect: the reported amounts of assets and liabilities at the date of the financial statements; the disclosure of contingent assets and liabilities at the date of the financial statements; and the reported amounts and classification of income and expense during the reporting period. Actual results could differ from those estimates. Our critical accounting estimates and significant judgments are generally discussed with the Audit Committee each quarter.

Refer to *Note 1* of the Consolidated financial statements for further information on our critical accounting estimates, including examples of the significant estimates and judgments that we make, and their relative significance and degree of difficulty, as illustrated in the graphic included in *Note 1*.

General

- In determining our critical accounting estimates, we consider trends, commitments, events or uncertainties that we reasonably expect to materially affect our methodology or assumptions. Our statements in this MD&A regarding such consideration are made subject to the *Caution regarding forward-looking statements*.
- In the normal course, we make changes to the assumptions underlying all critical accounting estimates so that they reflect current economic conditions, updated historical information used to develop the assumptions, and changes in our credit ratings, where applicable. Unless indicated otherwise in the discussion below, we expect that no material changes in overall financial performance and financial statement line items would arise, either from reasonably likely changes in material assumptions underlying the estimate, or from selection of a different estimate from within a range of valid estimates.

- Our critical accounting estimates affect the Consolidated statements of income and other comprehensive income, and the Consolidated statements of financial position, as follows:

	Consolidated statements of income and other comprehensive income						
		Operating expenses					
Consolidated statements of financial position	Operating revenues and other income	Goods and services purchased	Employee benefits expense	Depreciation	Amortization of intangible assets	Financing costs	Employee defined benefit plans re-measurements[1]
Intangible assets, net, and Goodwill, net					X[2]		
Employee defined benefit pension plans			X	X[3]	X[3]	X	X
Property, plant and equipment, net				X			
Provisions for asset retirement obligations		X		X		X	
Provisions related to business combinations	X					X	
Investments	X						
Accounts receivable		X					
Contract assets	X	X					
Inventories		X					

1 Other comprehensive income – Item never subsequently reclassified to income.
2 Accounting estimate, as applicable to Intangible assets with indefinite lives, relates to spectrum holdings.
3 Accounting estimate impact due to internal labour capitalization rates.

- All critical accounting estimates are uncertain at the time the estimates are made and affect the following Consolidated statements of income and other comprehensive income line items: Income taxes (except for estimates about Goodwill) and Net income. Similarly, all critical accounting estimates affect the following Consolidated statements of financial position line items: Current assets (Income and other taxes receivable), Current liabilities (Income and other taxes payable), Deferred income taxes and Common equity (retained earnings) and Non-controlling interests. The discussion of each critical accounting estimate does not differ between our two segments, TELUS technology solutions (TTech) and digitally-led customer experiences - TELUS International (DLCX), unless explicitly noted.

Intangible assets, net; Goodwill, net; and Property, plant and equipment, net

General

- The Intangible assets, net, line item on our Consolidated statements of financial position represents approximately 35% of Total assets as at December 31, 2023 (36% as at December 31, 2022). Included in Intangible assets are spectrum licences, which represent approximately 22% of Total assets as at December 31, 2023 (23% as at December 31, 2022).

- The Goodwill, net, line item on our Consolidated statements of financial position represents approximately 18% of Total assets as at December 31, 2023 and approximately 17% of Total assets as at December 31, 2022.

- The Property, plant and equipment, net, line item on our Consolidated statements of financial position represents approximately 31% of Total assets as at December 31, 2023 and approximately 32% of Total assets as at December 31, 2022.

- If our estimates of the useful lives of assets were incorrect and/or our estimates of the acquisition-date fair value of property, plant, equipment and intangible assets acquired in business combinations were incorrect, we could experience increased or decreased charges for amortization or depreciation in the future. If the future were to differ adversely from our best estimates for the key economic assumptions and associated cash flows were to materially decrease, we could potentially experience future material impairment charges in respect of our Property, plant and equipment assets, Intangible assets or Goodwill. If Intangible assets with indefinite lives were determined to have finite lives at some point in the future, we could experience increased charges for amortization of Intangible assets. Such charges in and of themselves do not result in a cash outflow and would not immediately affect our liquidity.

The recoverability of Intangible assets with indefinite lives; the recoverability of Goodwill

- The carrying values of Intangible assets with indefinite lives and Goodwill are periodically tested for impairment, and this test represents a significant estimate for us.

- The recoverable amounts of the cash-generating units' assets have been determined based on a fair value less costs of disposal calculation. There is a material degree of uncertainty with respect to the estimates of the recoverable amounts of the cash-generating units' assets, given the necessity of making key economic assumptions about the future. The fair value less costs of disposal calculation uses future cash flows and growth projections; associated economic risk assumptions and estimates of the likelihood of achieving key operating metrics and drivers; estimates of future generational infrastructure capital expenditures; the future weighted average cost of capital; and climate considerations.

- See *Note 18(f)* of the Consolidated financial statements for further discussion of methodology and sensitivity testing.

The estimated useful lives of assets; the recoverability of tangible assets

- The estimated useful lives of most assets are determined by a continuing program of asset life studies. The recoverability of assets with finite lives is significantly impacted by the estimated useful lives of assets.

- Assumptions underlying the estimated useful lives of assets include the timing of technological obsolescence, competitive pressures, future infrastructure utilization plans and climate.

Employee defined benefit pension plans

Certain actuarial and economic assumptions used in determining defined benefit pension costs, accrued pension benefit obligations and pension plan assets

- We review industry practices, trends, economic conditions and data provided by actuaries when developing assumptions used in the determination of defined benefit pension costs and accrued pension benefit obligations. Pension plan assets are generally valued using market prices; however, some assets are valued using market estimates when market prices are not readily available. Actuarial support is obtained for interpolations of experience gains and losses that affect the employee defined benefit plan actuarial gains and losses and accrued pension benefit obligations. The discount rate used to determine the accrued benefit obligation is based upon the yield on long-term, high-quality, fixed-term investments. The discount rate is set annually at the end of each calendar year, at a minimum, based upon yields on long-term corporate bond indices in consultation with actuaries. Future increases in compensation are based upon the current benefits policies and economic forecasts. We have examined our respective pension obligation and current service cost durations and observed an approximate 10-year difference in duration. As individual discount rates more accurately reflect the obligation and current service cost, commencing in 2016, we applied a dual discount rate methodology.

- On an annual basis, at a minimum, the defined benefit pension plan assumptions are assessed and revised as appropriate. Assumptions used in determining defined benefit pension costs, accrued pension benefit obligations and pension plan assets include life expectancy, discount rates, market estimates and rates of future compensation increases. Material changes in overall financial performance and financial statement line items would arise from reasonably likely changes in the material assumptions underlying this estimate, since certain assumptions may have been revised to reflect updated historical information and updated economic conditions. See *Note 15* of the Consolidated financial statements for further analysis.

- This accounting estimate related to employee defined benefit pension plans is in respect of components of the Operating expenses line item, Financing costs line item and Other comprehensive income line item on our Consolidated statements of income and other comprehensive income. If the future were to adversely differ from our best estimate of assumptions used in determining defined benefit pension costs, defined benefit obligations accrued and pension plan assets, we could experience future increased (or decreased) defined benefit pension expense, financing costs and charges to Other comprehensive income.

Income tax assets and liabilities

The amount and composition of income tax assets and income tax liabilities, including the amount of unrecognized tax benefits

- Assumptions underlying the composition of income tax assets and liabilities are based upon an assessment of the technical merits of tax positions. Income tax benefits on uncertain tax positions are recognized only when it is more likely than not that the ultimate determination of the tax treatment of a position will result in the related benefit being realizable; however, this does not mean that tax authorities cannot challenge these positions. Income tax assets and liabilities are measured at the amount that is expected to be realized or incurred upon ultimate settlement with tax authorities. Such assessments are based upon the applicable income tax legislation, regulations, interpretations and jurisprudence, all of which in turn are subject to change and interpretation.

- Current income tax assets and liabilities are estimated based upon the amount of income tax that is calculated as being owed to tax authorities, net of periodic instalment payments. Deferred income tax liabilities are composed of the tax effect of temporary differences between the carrying amount and the tax basis of assets and liabilities, as well as the income tax effect of undeducted income tax losses. The timing of the reversal of temporary differences is estimated and the income tax rate substantively enacted for the periods of reversal is applied to the temporary differences. The carrying amounts of assets and liabilities are based upon the amounts recorded in the financial statements and are, therefore, subject to accounting estimates that are inherent in those balances. The tax basis of assets and liabilities, as well as the amount of undeducted income tax losses, is based upon the assessment and measurement of tax positions, as noted above. Assumptions as to the timing of reversal of temporary differences include expectations about the future results of operations and future cash flows. The composition of income tax liabilities is reasonably likely to change from period to period because of changes in the estimation of these significant uncertainties.

- This accounting estimate is in respect of material asset and liability line items on our Consolidated statements of financial position comprising less than 1% of Total assets as at December 31, 2023 and 2022, and approximately 8% of Total liabilities and owners' equity as at December 31, 2023 and 2022. If the future were to adversely differ from our best estimate of the likelihood of tax positions being sustained, the amount of tax expected to be incurred, the future results of operations, the timing of reversal of deductible temporary differences and taxable temporary differences, and the tax rates applicable to future years, we could experience material current income tax adjustments and deferred income tax adjustments. Such current and deferred income tax adjustments could result in an increase or acceleration of cash outflows at an earlier time than might otherwise be expected.

Provisions for asset retirement obligations

Certain economic assumptions used in provisioning for asset retirement obligations

- Asset retirement obligation provisions are recognized for statutory, contractual or legal obligations, normally when incurred, associated with the retirement of Property, plant and equipment (primarily certain items of outside plant and mobile site equipment) when those obligations result from the acquisition, construction, development and/or normal operation of the assets. The obligations are measured initially at fair value, determined using present value methodology, and the resulting costs are capitalized as a part of the carrying value of the related asset.

- On an annual basis, at a minimum, assumptions underlying the provisions for asset retirement obligations include expectations about inflation, discount rates and any changes in the amount or timing of the underlying future cash flows, which may span numerous decades. Material changes in financial position would arise from reasonably likely changes in the material assumptions underlying this estimate, since certain assumptions may have been revised to reflect updated historical information and updated economic conditions. The capitalized asset retirement cost is depreciated on the same basis as the related asset, and the discount accretion is included in the Consolidated statements of income and other comprehensive income as a component of Financing costs.

- This accounting estimate is in respect of the asset retirement obligations component of the Provisions line item on our Consolidated statements of financial position, and this component comprises approximately 1% of Total liabilities and owners' equity as at December 31, 2023 and 2022. If the provisions for asset retirement obligations were to be inadequate, we could experience a charge to Goods and services purchased in the future. A charge for an inadequate asset retirement obligation provision would result in a cash outflow proximate to the time that the asset retirement obligation is satisfied.

Provisions related to business combinations

Provisions for written put options

- In connection with certain business acquisitions, we have established provisions for written put options in respect of non-controlling interests. We provide written put options to the remaining selling shareholders under which they could put the remaining non-controlling interests at, or after, a specified date. The acquisition-date fair values of the puttable shares held by the non-controlling shareholders are recorded as provisions.

- On an annual basis, at a minimum, the provisions for written put options are assessed and revised as appropriate. The provisions for written put options have been determined based on the net present values of estimated future earnings results; there is a material degree of uncertainty with respect to the estimates of future earnings results, given the necessity of making significant economic assumptions about the future. The amounts of provisions for written put options are reasonably likely to change from period to period because of changes in the estimation of future earnings and foreign exchange rate movements.

- This accounting estimate is in respect of the provisions for written put options related to the non-controlling interests component of the Provisions line item on our Consolidated statements of financial position, and this component comprises less than 1% of Total liabilities and owners' equity as at December 31, 2023 and 2022. If the provisions for written put options were to be inadequate, we could experience a charge to Other income in the future. A charge for an inadequate written put option provision could result in a cash outflow, if cash - settled, proximate to the time that the written put option is exercised.

Portfolio investments

The recoverability of long-term portfolio investments

- We assess the recoverability of our long-term portfolio investments on a regular, recurring basis. The recoverability of portfolio investments is assessed on a specific-identification basis, taking into consideration expectations about future performance of the portfolio investments and comparison of historical results to past expectations.

- The most significant assumptions underlying the recoverability of long-term portfolio investments are related to the achievement of future cash flow and operating expectations. Our estimate of the recoverability of long-term portfolio investments could change from period to period due to both the recurring nature of the recoverability assessment and the nature of long-term portfolio investments (we do not control the investees).

- Portfolio Investments are included in the Other long-term assets line item on our Consolidated statements of financial position, which itself comprises approximately 4% of Total assets as at December 31, 2023 and 2022. If the allowance for recoverability of long-term portfolio investments were to be inadequate, we could experience an increased charge to Other income or Other comprehensive income depending on the financial asset classification. Such a provision for recoverability of long-term portfolio investments does not result in a cash outflow.

Accounts receivable

General

- When determining our allowance for doubtful accounts, we consider the line of business that gave rise to the Accounts receivable, conduct a statistical analysis of portfolio delinquency trends and perform specific account identification.

- These accounting estimates are in respect of the Accounts receivable line item and the Unbilled customer finance receivables line within the Other long-term assets line item on our Consolidated statements of financial position, which together comprise approximately 8% of Total assets as at December 31, 2023 (7% as at December 31, 2022). If the future were to differ adversely from our best estimates of the fair value of the residual cash flows and the allowance for doubtful accounts, we could experience an increase in doubtful accounts expense in the future. Such doubtful accounts expense in and of itself does not result in a cash outflow.

The allowance for doubtful accounts

- The estimate of our allowance for doubtful accounts could materially change from period to period because the allowance is a function of the balance and composition of Accounts receivable, which can vary on a month-to-month basis. The variability of the balance of Accounts receivable arises from the variability of the amount and composition of Operating revenues and other income and from the variability of Accounts receivable collection performance.

Contract assets

General

- We maintain allowances for lifetime expected credit losses related to contract assets. Current economic conditions, historical information (including credit agency reports, if available), and the line of business from which the contract asset arose are all considered when determining impairment allowances. The same factors are considered when determining whether to write off amounts charged to the impairment allowance for contract assets against contract assets.

The impairment allowance

- These accounting estimates are in respect of the Contract assets line items on our Consolidated statements of financial position, which comprise approximately 2% of Total assets as at December 31, 2023 and 2022. If the future were to differ adversely from our best estimates of the fair value of the residual cash flows and the impairment allowance for contract assets, we could experience an increase in the impairment allowance for contract assets against contract assets in the future. Such impairment allowance in and of itself does not result in a cash outflow.

Inventories

The allowance for inventory obsolescence

- We determine our allowance for inventory obsolescence based upon expected inventory turnover, inventory aging, and current and future expectations with respect to product offerings.

- Assumptions underlying the allowance for inventory obsolescence include future sales trends and offerings and the expected inventory requirements and inventory composition necessary to support these future offerings. Our estimate of the allowance for inventory obsolescence could change materially from period to period due to changes in product offerings and the level of consumer acceptance of those products.

- This accounting estimate is in respect of the Inventories line item on our Consolidated statements of financial position, which comprises approximately 1% of Total assets as at December 31, 2023 and 2022. If the allowance for inventory obsolescence were to be inadequate, we could experience a charge to Goods and services purchased in the future. Such an inventory obsolescence charge does not result in a cash outflow.

8.2 Accounting policy developments

Refer to *Note 2* of the Consolidated financial statements for a description of current and future changes in accounting policies, including:

- Initial application of standards, interpretations and amendments to standards and interpretations in the reporting period.
- Standards, interpretations and amendments to standards and interpretations in the reporting period not yet effective and not yet applied.

9. General trends, outlook and assumptions, and regulatory developments and proceedings

This section contains forward-looking statements, which should be read together with the *Caution regarding forward-looking statements* at the beginning of this MD&A.

9.1 Telecommunications industry in 2023

We estimate that Canadian telecommunications industry revenues (including TV revenue and excluding equipment and media revenue) increased by approximately 3% in 2023. Mobile and data services continue to drive ongoing industry growth. Additionally, trends in consumer communications and data consumption continue to demonstrate a strong preference for data-rich applications and data-intensive devices, including smartphones and tablets. Similar to many other industries, the telecommunications industry, including TELUS across our TELUS Technology Solutions (TTech) and digitally-led customer experiences – TELUS International (DLCX) segments, undertook significant cost efficiency efforts in 2023, in response to the evolving regulatory, competitive and macroeconomic landscape that we currently face.

Mobile products and services

We estimate that in 2023, the Canadian mobile industry experienced mobile network revenue growth of approximately 5.3%, which we believe was largely attributable to ongoing customer growth that in turn reflected robust immigration and population growth. We estimate that the Canadian mobile phone industry added approximately 1.7 million net new subscribers in 2023 (inclusive of TELUS' mobile phone additions), compared to our estimate of approximately 1.8 million in 2022 for the industry. These additions were supported by immigration and population growth, a continued increase in the rate of penetration in line with the trend toward multiple devices, and the ongoing adoption of mobile devices and services. With penetration rates in other developed nations well above 100% (United States, Europe and Asia), we estimate that the Canadian mobile phone penetration rate will continue to increase, above and beyond the approximate rate of 91% we estimate for 2023. TELUS mobile network revenue increased by 5.1% in 2023, and TELUS mobile products and services direct contribution increased by 7.4%.

In 2023, the Canadian mobile industry continued to experience heightened levels of competition nationally, particularly within the flanker environment. This competitive intensity has led to continued declines in chargeable data usage and rising levels of data allocation in monthly plans, including unlimited data plans, in addition to other ongoing factors, such as: the popularity of data sharing plans, including family plans; customer-friendly data usage notifications; and an evolving shift in the customer mix toward non-traditional mobile devices and tools such as video chats. The roll-out of 5G network infrastructure continued in 2023, with 5G coverage by the national carriers reaching approximately 86% of the Canadian population at the end of 2023, compared to approximately 80% at the end of 2022. For TELUS, our long-standing commitment to network excellence is reflected in the recognition we received from independent third-party sources in 2023, including being recognized as Canada's most awarded network by global analytics company, Opensignal, since 2017 for the 12th consecutive time.

We are well-prepared for the evolution in the competitive landscape, and we continue to work diligently to better monetize the robust growth in data services, while simultaneously delivering a strong value-for-money proposition and leading customer service. To this end, we are continuing our consistent and disciplined approach to realizing profitable customer growth through our strategic execution excellence of premium and economical smartphone loading. Moreover, we are focusing on the other levers available to us in an environment of moderating ARPU growth and expanding 5G network infrastructure, to ensure we continue to deliver on the EBITDA growth objectives for our TTech segment, including:

- Evolving our approach to mobile plans and device sales with the availability of Unlimited data plans on our 5G network, TELUS Easy Payment device financing, TELUS Family Discount offerings and our extensive selection of certified pre-owned devices, which have resulted in simplification for both customers and team members, while supporting growth in digital transactions and improved recovery of handset costs
- Monetizing our expanding 5G network by driving customer adoption of higher-value unlimited data plans and using speed tiers to encourage our customers' adoption of faster 5G speeds; Koodo Pick Your Perk plans, allowing customers to add a free feature of their choice while driving growth in ARPU; and marketing our innovative product and service offerings, including Stream+
- Continuing to drive customer growth through high-quality loading supported by strong industry growth as discussed above, including 5G device upgrades
- Working persistently to enhance the efficiency of the flow through from revenue to EBITDA, and the flow through from ARPU to average margin per subscriber unit per month (AMPU), in order to enhance our operating margins through ongoing efficiency and digitization initiatives; our digital-only, subscription-based Public Mobile brand supports our focus on AMPU through its focus on the bring-your-own-phone market and digital-only customer experience
- Seeking new sources of mobile revenue, such as Internet of Things (IoT) or Internet of Everything, machine-to-machine (M2M) and security applications in the business-to-business (B2B) market, including health, agriculture and consumer goods, as well as smart cities
- Exploring and implementing new channel strategies with attractive economic characteristics, including our certified pre-owned device program
- Pursuing smart bundling opportunities across mobile and fixed products and services to achieve better economies of scope and enhance lifetime revenue per customer with higher revenue per account and lower customer churn.

The Canadian mobile industry remains highly competitive and capital-intensive among facilities-based providers, as carriers continue to expand and enhance their broadband mobile networks, including the ongoing build-out of 5G, as well as making material investments in spectrum.

Fixed products and services

The cable-TV market changed in 2023 as Rogers completed its acquisition of Shaw. The three major cable-TV companies had an estimated 7.50 million internet subscribers at the end of 2023 (47% market share – down one percentage point), relatively unchanged compared to an estimated 7.50 million subscribers at the end of 2022. Meanwhile, telecommunications companies had approximately 8.46 million internet subscribers (53% market share – up one percentage point), compared to approximately 8.06 million at the end of 2022. We continue to make gains in market share as a result of the ongoing expansion of our TELUS PureFibre infrastructure and the pull-through of subscribers from our IP-based TELUS TV services, including our bundled mobility and home services, as well as significant growth in home security and automation. Our ongoing focus on fibre to the premises or home (FTTP/FTTH), and its superior characteristics as compared to cable, such as higher and symmetrical download and upload speeds, has allowed us to connect approximately 3.2 million households and businesses in B.C., Alberta and Eastern Quebec as of December 31, 2023 to our TELUS PureFibre technology. Notably, we received recognition from PCMag in 2023 as the fastest internet service provider (ISP) in Canada among major ISPs for the fourth consecutive year.

While Canadians still watch conventional TV, digital streaming platforms are playing an increasingly important role in the broadcasting industry and in the distribution of content. Popular online video services are providing Canadians with more choice about where, when and how to access video content. In 2023, Canadian IP TV providers expanded their subscriber base by an estimated 4% to 3.5 million, or 38% of market share, up compared to approximately 34% at the end of 2022, through wider network coverage, enhanced differentiated services and bundled offerings, and marketing and promotions focused on IP TV. Despite this growth in the overall IP TV subscriber base, the combined cable-TV and satellite-TV subscriber penetration rate was lower. We estimate that the three major cable-TV companies had approximately 4.7 million TV subscribers or a 50% market share at the end of 2023, up compared to 48% at the end of 2022.

In recent years, two of the largest Canadian cable-TV companies have launched new TV services based on the Comcast X1 TV platform – Rogers (and previously Shaw prior to its acquisition by Rogers) and Videotron (a Quebecor brand). Our IP-based Optik TV platform continues to offer numerous service advantages compared to this cable platform, including: flexible pricing plans and packages available to all customers; picture clarity and quality; content depth and breadth, including multicultural and hard-to-find shows from abroad, as well as specialty options such as wellness and entertainment; the number of ways customers can access content, including wireless set-top boxes, Restart TV, higher-capacity PVR and the Optik TV app, which offers more than twice as many live TV channels at home or on the go compared to our largest Western Canadian cable competitor. The TELUS PureFibre network was named the number one network for streaming Netflix for 17 consecutive months prior to the start of the COVID-19 pandemic (based on the Netflix ISP Speed Index rankings for Canadian providers released monthly, as of March 2020) and we are the only Canadian carrier to consistently achieve a number one ranking for each month from August 2020 to December 2023 for the newly revamped index. We continue to offer more on-demand content and more over-the-top (OTT) content with Netflix, YouTube, Prime Video (included in the Amazon Prime membership), hayu, TED Talks and the National Film Board of Canada, and we are the leader in multicultural content in Western Canada.

The national Canadian telecom providers continue to acquire and develop capabilities in home security and automation. Through a variety of recent acquisitions, we have advanced our commitment to leverage the power of technology in order to bring state-of-the-art convenience, control and safety into the lives, homes and businesses of more Canadians and become the leading provider of security and home automation services in Canada. Our security offerings also provide opportunities to offer attractive bundled solutions and advance our connected home strategy while accelerating our entry into the market for smart home and automation and physical and cybersecurity business solutions. Our SmartHome Security, TELUS Secure Business, and Custom Building Solutions service offerings complement our industry-leading customer service and build on our strategy and commitment to leverage our world-leading wireless and PureFibre network to enhance connected home, business, security, IoT, cybersecurity, smart buildings and smart cities, as well as health and wellness services for our customers across Canada.

Canada's three major cable-TV companies had an estimated combined base of approximately 2.7 million telephony subscribers at the end of 2023. This represents a national consumer market share of approximately 41%, relatively flat compared to approximately 41% at the end of 2022. Telecommunications companies had an estimated combined total of 3.3 million telephony subscribers at the end of 2023, representing a market share of approximately 50%, up compared to approximately 49% at the end of 2022. Technological substitution by mobile services continues to erode the number of residential voice subscribers and associated local and long distance revenues, as expected.

TELUS Health

In 2023, we continued to drive strong growth within our health business, complemented by the post-acquisition integration of LifeWorks, acquired in 2022, as well as the ongoing adoption of our unique and innovative portfolio of health and well-being product and service offerings across the health ecosystem. Health services revenue increased by 87% to $1.7 billion in 2023. Demand for health and well-being services has never been higher, and TELUS Health is improving health outcomes and delivering better preventive health and wellness experiences for people worldwide. Employers are leading an evolution in health and wellness – from prevention to care delivery – presenting a significant global growth opportunity for our health business. We are simplifying our offerings for this market by bringing together employee and family assistance programs (EFAP) and mental health and well-being solutions, and supporting these capabilities with continued digital enhancements. The digitization of everyday functions within the health ecosystem, combined with increased and pervasive broadband network connectivity, provides a unique opportunity to support the ongoing development and delivery of advanced health and wellness applications that will benefit Canadians and our global customers, to improve health and well-being outcomes. With these additional solutions, TELUS Health is providing meaningful interventions that improve employee mental and physical well-being, through both physical and telemedicine solutions.

TELUS Agriculture & Consumer Goods

The global agriculture industry and global food industry had market values of approximately $13 trillion and $12 trillion, respectively, in 2023. However, to meet the demands of a growing global population and changing preferences in developing nations, it is estimated that global food supplies will need to increase by as much as 70% over the next 30 years. Historically, we have seen the agriculture sector lag other sectors in adopting digital technology solutions. However, in response to the challenges posed by a growing population, food producers, consumer packaged goods companies, and retailers worldwide are now embracing innovative digital technologies to drive new efficiencies in production and consumption. By leveraging these new technologies, such as data analytics and automation, stakeholders in the food industry can achieve significant cost savings, optimize resource allocation, reduce production time and significantly reduce food waste. Moreover, these solutions have the potential to enhance the safety, quality, traceability and sustainability of the food we consume.

At TELUS Agriculture & Consumer Goods, we are committed to transforming the food supply value chain, from producer to consumer. Our focus is on providing our customers with access to data insights that can drive operational improvements and deliver tangible benefits. Our efforts are focused on three primary areas – software and business process solutions that target agriculture industry participants such as growers and agribusiness companies, software and consulting services that serve the animal agriculture industry with a primary focus on cattle, and software and data analytics services that serve consumer packaged goods companies. In 2023, we updated our support model for TELUS Agriculture & Consumer Goods and repositioned the business under common leadership with our TELUS Business Solutions operations. This has enabled us to leverage our expertise in the TELUS Business Solutions space to accelerate our TELUS Agriculture & Consumer Goods growth plans.

Digitally-led customer experiences – TELUS International (DLCX)

In 2023, TELUS International (TI) faced a challenging operating environment, due to meaningful headwinds from the global macroeconomic environment and aggressive cost-cutting initiatives undertaken by certain large clients. Despite these challenges, TI continued to win business with both new and existing clients, driving solid revenue growth. TI also undertook significant cost efficiency efforts, including workforce rightsizing, to better align its cost structure with current demand, which helped drive improved profitability in the second half of 2023, with DLCX Adjusted EBITDA margin of 26% in the fourth quarter of 2023 and 21% for the full year (see *Section 11.1 Non-GAAP and other specified financial measures*), more in-line with its historic margin profile. Across its more than 650 global clients, TI partners with major global and disruptive brands, with a focus on designing, building and delivering premium digital customer experience solutions. With exposure to an expanding variety of industry verticals, such as tech and games, communications and media, eCommerce and fintech, as well as more conventional sectors, such as healthcare, banking, financial services and insurance, TI is positioned for continued diversification of its revenue sources that will support sustainable, long-term business success. TI's end-to-end capabilities address multiple client needs, including digital customer experience management and the digital transformation of IT and customer experience systems, as well as new and emerging client needs, such as digital trust and safety, AI data services and generative AI solutions in customer experience. The demand for AI data services historically has been driven by large technology companies; however, demand from other enterprises is growing as AI adoption increases. In early 2023, TI completed its acquisition of WillowTree, a premier, full-service digital product provider focused on end-user experiences, such as native mobile applications and unified web interfaces. The acquisition of WillowTree brought key tech talent, including digital strategists, designers, engineers and project managers, diversifying TI's portfolio of next-generation solutions and augmenting its digital product offerings and innovative client-centric software development capabilities.

9.2 Telecommunications industry general outlook and trends

Mobile products and services

Mobile growth continues to be driven by the ongoing increase in data usage and adoption, including: higher-value smartphones, unlimited data offerings, shared family data plans, and IoT and M2M devices. In addition, consumers continue to replace fixed access services with mobile access and related data services. These trends are expected to drive the growing demand for mobile data services for the foreseeable future, particularly as the industry continues to shift to 5G. Industry ARPU is expected to continue moderating, compared to periods prior to the pandemic, particularly now that the industry has lapped the meaningful recovery in roaming revenues, which had fallen during the peak of the COVID-19 pandemic. Furthermore, as a result of increased competitive intensity, the industry continues to see greater adoption of bring-your-own-device (BYOD) additions, resulting in increased switching activity.

While LTE and LTE advanced (LTE-A) technologies increase download speeds, encourage data usage and enhance the customer experience, growth in data traffic poses challenges to mobile access technology. To better manage this data traffic, Canadian providers continue to evolve their networks and deploy spectrum to support the shift to 5G. Innovation, Science and Economic Development Canada (ISED) held its auction of spectrum in the 3800 MHz band in the fourth quarter of 2023 and we expect the auction of millimetre wave (mmWave) spectrum to commence in 2024; these bands are important for the expansion of 5G networks.

IoT technologies connect communications-enabled devices via wireless technologies, allowing them to exchange key information and share processes. Advanced platforms and networks are already in place in industries such as healthcare, utilities, agriculture and fleet management, with deployment ongoing in other sectors, including smart cities, vehicle insurance, retail, utilities, and connected vehicles. These industries are adopting IoT solutions, combined with other applications, to digitally transform their operations and generate value from their connections. IoT presents a meaningful opportunity for growth in wireless connectivity, which can deliver services to customers more efficiently, at a higher level of security and productivity. IoT connectivity generally has a lower ARPU when sold as a stand-alone service, but supports both revenue and margin growth, since it often leads to the sale of IoT applications or our other service offerings, enhancing customer penetration. In 2023, we added 564,000 connected devices, bringing our connected device subscriber base to more than 3.1 million, up 26% from 2022.

5G now plays a leading global role in technology evolution and innovation. In Canada, 5G is supporting our social purpose and our efforts to further bridge the digital divide and connect rural Canadians. Our ongoing investments in 5G will also generate capital expenditure savings by allowing us to deliver high-speed mobile internet services in more rural areas, as well as improved cost savings and innovative services in industrial automation, transportation and telehealth. With its significantly faster speeds, lower latencies, improved reliability and attractive economics, 5G will enable a host of new applications, including: for businesses, new opportunities for enhanced productivity, virtual work and profitability; for industries, remote operations, industrial control and automated manufacturing; for consumers, it will enable home automation, autonomous vehicles, and wireless-to-the-home connectivity with speeds comparable to fixed access technologies; for healthcare, it will support converged solutions for hospitals, clinics and remote patient monitoring, and potentially medical procedures; and for agriculture and consumer goods, it will drive autonomous farm equipment, precision agronomy, food traceability and real-time data insights. 5G is also essential to the future of a global digital economy, as well as the Canadian economy, and is expected to generate significant innovation, growth and productivity. As the 5G ecosystem evolves, it will move from a non-stand-alone core, based on the existing 4G LTE infrastructure, to a stand-alone core, which leverages cloud-based technology to enable new functionality with ultra-low latency and the capacity to support more connected devices. In 2023, we started to see 5G stand-alone adoption by early adopters around the world, including TELUS, and functionality and 5G stand-alone adoption are expected to progress further in 2024.

Delivering a robust and reliable 5G experience for Canadians will require complementary spectrum bands – a portfolio of low, mid and high-band spectrum to meet the needs of a diverse subscriber base. Low-band spectrum, such as 600 MHz, covers wide areas and penetrates buildings effectively, thus improving coverage in urban and suburban areas. This low-band spectrum will play a vital role in bringing 5G to Canadians and as such, it is an important resource for Canada, as wireless operators build out 5G coverage in rural areas. High-band spectrum, such as mmWave, can deliver speeds up to 100 times faster than 600 MHz spectrum; however, it does not have the same coverage characteristics for penetrating buildings effectively or covering wide areas. This high-bandwidth spectrum and the associated faster connection speeds will help unlock new technologies, such as virtual and augmented reality, and enable a user experience similar to fibre for fixed wireless access. Mid-band spectrum, such as the 3500 MHz and 3800 MHz bands, is important to the 5G ecosystem, as it balances both speed and coverage characteristics. This spectrum will be integral to low-latency communications services, including autonomous monitoring, fixed wireless access and vehicle-to-everything communication. The 3500 MHz and 3800 MHz spectrum bands are globally recognized as key for 5G networks. All of the national carriers in Canada introduced 5G services in 2020, which then accelerated in the following years. This is expected to continue in the years ahead, as spectrum is auctioned and deployed and new 5G technologies are rolled out. See *Section 1.3 Highlights of 2023* for further details on the recent spectrum auction and *Section 9.4 Communications industry regulatory developments and proceedings* for more information about upcoming spectrum auctions.

Fixed products and services

The fixed telecommunications market is expected to remain very competitive in 2024. Although the consumer high-speed internet market is maturing, with a penetration rate of approximately 91% in Western Canada and 92% across Canada at the end of 2023, subscriber growth is expected to continue over the coming years. Technology substitution, including the growth of mobile and voice-over-IP (VoIP) services, is expected to continue to replace higher-margin legacy voice revenues, while digital streaming services and other online content providers are expected to impact current linear TV services. In our incumbent operating areas of B.C. and Alberta, it is estimated that in 2023, 65% of households no longer had a fixed line and 40% of households no longer had linear TV service. We are an important provider of these substitution services and the decline in this legacy business is continuing as expected, although residential voice losses continued at a slower pace than previous years, reflecting our success in bundling our home solutions and services. Our long-standing growth strategy remains focused on mobile, data and IP-centric fixed capabilities.

The popularity of viewing TV and on-demand content anywhere, particularly on handheld devices, is expected to continue to grow as customers adopt services that enable them to view content on multiple screens. Streaming media providers continue to enhance OTT and direct-to-consumer (DTC) streaming services in order to compete for a share of viewership, as viewing habits and consumer demand evolve. Studies suggest that approximately 72% of Canadians subscribed to paid OTT video service subscriptions in Canada at the end of 2023.

Conventional TV content providers are monitoring OTT developments and adapting their content and market strategies to compete with these new offerings. We view OTT as an opportunity to add further capabilities to our linear and on-demand assets, providing customers with flexible options to choose the content they want and encouraging greater use of our high-speed internet and mobile services by those customers, while also limiting their frustration with the need to have multiple subscriptions. We continue to partner with, and offer services from, a wide range of OTT providers. With our launch of Stream+, our subscribers can enjoy their favourite shows and movies in the comfort of their home or on the go, powered by our award-winning mobile network.

Consistent with facilities-based competition, telecommunications companies continue to make significant capital investments in broadband networks, with a focus on FTTP, to maintain and enhance their ability to support advanced IP-based services and higher broadband speeds. Cable-TV companies continue to evolve their cable networks with DOCSIS-related bandwidth enhancements and node splitting. Although the platform increases speed in the near term and is cost-efficient, it does not offer the advanced capabilities of FTTP over the longer term, such as fast symmetrical upload and download speeds. At the end of 2023, our fibre-optic infrastructure was available to approximately 3.2 million homes and businesses. 5G and other wireless access technologies allow us to target otherwise underserved areas with a fixed mobile solution.

Our broadband investments, including the build-out of our FTTP broadband network and our IP-based Optik TV service, home security and automation and integrated bundled service offerings, which also encompass mobility, consumer healthcare and cybersecurity, continue to enhance our superior competitive position relative to our competitors. Our bundled offerings drive higher product intensity with our customers, as well as improved customer loyalty.

In the business market (public sector, commercial sector, and small and medium-sized businesses or SMB), the convergence of IT and telecommunications, facilitated by the ubiquity of IP, continues to shape the competitive environment, with non-traditional providers increasingly blurring the lines of competition and business models. Cable-TV companies continue to make investments to better compete in the highly contested SMB space. Telecommunications companies like TELUS are providing network-centric managed applications that leverage their significant FTTP investments, while IT service providers are bundling network connectivity with their proprietary software-as-a-service (SaaS) offerings.

The development of IP-based platforms providing combined IP voice, data and video solutions offers potential cost efficiencies that compensate, in part, for the loss of margins resulting from the migration from legacy to IP-based services. New opportunities exist for integrated solutions, as well as business process and IT outsourcing, that could have a greater business impact than legacy telecommunications services. Increasingly, businesses are looking to partner with their communications service provider to address their business objectives and challenges, and to tailor cloud-based solutions for their needs that leverage telecommunications in ways not imagined a decade ago. Cloud computing is changing service delivery to always-on and everything-as-a-service, and strong growth is expected in this area. We offer network-as-a-service capabilities for businesses with the option of an IT network as a service over the internet, mirrored across multiple locations, based on a self-serve platform that reduces deployment cycles and reliance on IT specialists. Heightened data security needs represent both a challenge and an opportunity. Our home and business security offerings are powered by our broadband network and integrate the latest smart devices to improve the lives of Canadians.

As the industry adopts 5G technologies in the coming years, we expect to be operating on, and providing services over, a more converged network. The lines between fixed access and mobile access will continue to blur, as the way we deliver our services to customers – and the way our customers use those services – continues to evolve. As our broadband network continues to expand and 5G is further commercialized, we expect to benefit from the flexibility of being able to select the most efficient way to deliver services across our footprint.

TELUS Health

Through TELUS Health, we are leveraging our position as the leading end-to-end provider of digital health and well-being solutions in Canada, utilizing our superior and expanding broadband technologies, to improve the accessibility, integration and effectiveness of our innovative health and wellness tools and applications across the primary and preventative care ecosystem. These solutions position TELUS Health for robust, sustainable domestic and international growth, offering virtual care applications, personal health records that allow self-management of healthcare data, electronic drug prescriptions with online insurance validation by the physician, and home health monitoring devices and data capture with caregiver oversight. Operating under TELUS Health Virtual Care, our national, employer-focused virtual care services provide patients with 24/7 bilingual and unlimited access to healthcare practitioners for the mental and physical care they need, anywhere in the country. In September 2022, we significantly expanded TELUS Health's capabilities in employer-focused healthcare with the acquisition of LifeWorks. This acquisition solidified TELUS Health as a global leader in EFAP and data-driven preventive health, wellness and mental health services. Focused on a digital-first but not digital-only model of care, combining with LifeWorks allows us to focus on scale, our global profile, and quality health and well-being outcomes. This acquisition not only reinforces LifeWorks' Canadian and global operations, it also leverages the advantages of our combined TELUS and TELUS International footprint to generate global cross-selling opportunities for an enhanced portfolio of TELUS Health product and service offerings.

Our virtual care solutions are transforming consumer access to healthcare, and their accelerated adoption has eased the pressures on the healthcare system. This robust growth in virtual care is expected to continue with an aging population in Canada, an increasing emphasis on chronic disease management, and the efficiency and effectiveness that technology can deliver. TELUS Health MyCare, with AI-powered functions like Symptom Checker, Monitor and Health Check, as well as enhanced videoconferencing capabilities and its Collaborative Health Record (CHR) to strengthen physician-patient relationships, is enabling Canadians to take more proactive care of their health, providing them with the care and information they need when it is convenient for them – a significant step forward from the current status quo in the evolution of Canada's health system. Market developments and trends throughout the year have validated TELUS Health's long-standing presence in the healthcare market and assumptions about its primary growth areas and path forward, reinforcing our focus on employee health and virtual care. In 2024 and beyond, aligned with our commitment to our social purpose, TELUS Health will leverage this suite of digital health tools, continuing to expand access to care and improve health outcomes for people around the world. The ongoing commercialization of 5G is expected to significantly extend our capabilities, as innovative new healthcare applications take advantage of higher speeds and lower latency.

TELUS Agriculture & Consumer Goods

Through our TELUS Agriculture & Consumer Goods business, we are positioning ourselves to become a major global player in the promising and rapidly growing agriculture technology market. We continue to advance our scaling strategy through both organic and inorganic means to achieve meaningful and sustainable growth. TELUS Agriculture & Consumer Goods is committed to delivering the best possible producer-to-consumer outcomes by generating and sharing digital insights that empower and connect our customers around the world. These insights allow our clients to improve the quality, safety, distribution and sustainability of food and consumer goods, while reducing food waste, today and in the future. We also offer digital tools that can deliver actionable, integrated solutions for a complex and fragmented supply chain. We have established meaningful digital technology and data insight positions in key businesses of the agriculture, food and consumer goods value chain: (i) agriculture, through agri-business, which enables the flow of data between manufacturers of farm machinery, seed and chemical suppliers, distributors, retailers and farms; and through animal agriculture, which supports the safe and efficient development of protein sources with technology and consultative expertise; and (ii) consumer goods, through trade promotion solutions for consumer packaged goods companies; and through solutions that enable food and consumer goods traceability from producer to consumer. We offer leading software solutions across the value chain, addressing complex data management challenges and data silos to digitally transform, protect and optimize the global food system by improving the production, transportation, quality and safety of our food and consumer goods.

Digitally-led customer experiences – TELUS International (DLCX)

Since its inception 19 years ago, TI has grown exponentially in size, scope and geographic diversity to deliver digital customer experience (CX) solutions for clients from delivery centres in North America, Central America, Europe, Africa and Asia-Pacific. For several years, TI has been adding significant scale and diversity across multiple capabilities with a number of strategic acquisitions, including: CCC, a leading provider of higher-value-added business services focused on customer relationship management and content moderation; Lionbridge AI, a market-leading global provider of crowd-based training data and annotation platform solutions used in the development of AI algorithms that can power machine learning; and WillowTree, a full-service digital product provider focused on end-user experiences such as mobile applications and unified web interfaces, expanding TI's design and build capabilities across its end-to-end digital offerings. Through its TIAI Data Solutions line of service, TI is helping clients test and improve machine learning through a global AI community of over one million data annotators and linguists across more than 500 languages and dialects, advancing TI's digital transformation strategy to further enhance customer experiences. At the same time, in October 2023, TI announced the launch of Fuel iX, a suite of enhanced generative AI (GenAI) solutions to deliver end-to-end CX innovation and AI-fuelled intelligent experiences (iX). With Fuel iX, TI is enabling its global clients to meet critical CX business needs faster and more strategically, with robust solutions spanning digital strategy, innovation, consulting and design, digital transformation and IT life cycle solutions, data annotation and intelligent automation capabilities, and omnichannel CX solutions, including content moderation, trust and safety solutions and other managed solutions. As at December 31, 2023, TI's approximately 75,000 highly engaged team members support its clients in over 50 languages from 68 delivery locations and global operations across 32 countries. Over the long term, TI is well-positioned to continue growing its global base of more than 650 clients, and as technology continues to rapidly transform the global economy, customer demand for differentiated CX management solutions will continue to evolve and grow.

9.3 TELUS assumptions for 2024

In 2024, we expect similar growth in EBITDA compared to the prior year, driven by continued demand for data in our mobile and fixed products and services; continued growth from our health, agriculture and consumer goods and B2B products and services; significant ongoing investments in our leading fibre broadband network and growing 5G deployment; our strategic efforts to enhance operational simplicity and efficiency; and our constant focus on an enhanced customer experience across all of our business operations, with the objective of simplifying our customers' interactions with us while reducing our overall cost structure.

Our assumptions are generally based on industry analysis, including our estimates regarding economic and telecom industry growth, as well as our 2023 results and trends discussed in *Section 5*.

Our 2024 key assumptions include the following:

- Estimated economic growth rates in Canada, B.C., Alberta, Ontario and Quebec of 0.6%, 0.4%, 1.1%, 0.4% and 0.4%, respectively.
- Estimated inflation rates in Canada, B.C., Alberta, Ontario and Quebec of 2.5%, 2.4%, 2.4%, 2.4% and 2.5%, respectively.
- Estimated annual unemployment rates in Canada, B.C., Alberta, Ontario and Quebec of 6.4%, 6.1%, 6.3%, 6.7% and 5.5%, respectively.
- Estimated annual rates of housing starts on an unadjusted basis in Canada, B.C., Alberta, Ontario and Quebec of 234,000 units, 42,000 units, 36,000 units, 79,000 units and 46,000 units, respectively.
- Estimated annual planned permanent resident additions of 485,000.
- No material adverse regulatory rulings or government actions against TELUS.
- Continued intense mobile products and services competition and fixed products and services competition in both consumer and business markets.
- Continued increase in mobile phone industry penetration in the Canadian market.

- Ongoing subscriber adoption of, and upgrades to, data-intensive smartphones, as customers seek more mobile connectivity to the internet at faster speeds.
- Mobile products and services revenue growth resulting from improvements in subscriber loading, with continued competitive pressure on blended ARPU.
- Continued pressure on mobile products and services acquisition and retention expenses resulting in the Effects of contract asset, acquisition and fulfilment and TELUS Easy Payment device financing being a net cash outflow of approximately $150 million to $250 million (2023 actual – $143 million net cash outflow), arising from gross loading and customer renewal volumes, competitive intensity and changing customer preferences. Continued connected devices growth, as our IoT offerings diversify and expand.
- Continued growth in fixed products and services data revenue, reflecting an increase in internet, TV and security subscribers, speed upgrades, rate plans with larger data buckets or unlimited data usage, and expansion of our broadband infrastructure, healthcare solutions, agriculture and consumer goods solutions and home and business security offerings.
- Continued erosion of residential voice revenue resulting from technological substitution and greater use of inclusive long distance.
- For our DLCX segment, long-term growth and profitability will be supported by our differentiated digital customer experience solutions and continued optimization of the cost structure, enabled by automation and generative AI solutions, to mitigate near-term challenges from persistent global macroeconomic pressures.
- Continued focus on our customers first initiatives and maintaining our customers' likelihood-to-recommend.
- Employee defined benefit pension plans: current service costs of approximately $66 million recorded in Employee benefits expense, $2 million recorded in Employee benefits expense for past service costs and interest expense of approximately $9 million recorded in Financing costs; a rate of 4.65% for discounting the obligation and a rate of 4.65% for current service costs for employee defined benefit pension plan accounting purposes; and defined benefit pension plan funding of approximately $28 million.
- Restructuring and other costs of approximately $300 million (2023 actual – $717 million) for continuing operational effectiveness initiatives, with margin enhancement initiatives to mitigate pressures related to intense competition, technological substitution, repricing of our services, rising costs of subscriber growth and retention, and integration costs associated with business acquisitions. Approximately $200 million of cash restructuring and other disbursements from our 2023 efficiency program will flow into our 2024 free cash flow guidance, and we expect total cash restructure and other disbursements of approximately $400 million in 2024.
- Net cash Interest paid of approximately $1.25 billion to $1.4 billion (2023 actual – $1.2 billion).
- Depreciation and Amortization of intangible assets of approximately $4.0 billion to $4.2 billion (2023 actual – $4.1 billion).
- Income taxes: Income taxes computed at an applicable statutory rate of 24.5 to 25.1% and cash income tax payments of approximately $370 million to $450 million (2023 actual – $389 million).
- Participation in ISED's auction in the mmWave band, with auction bidding currently expected in 2024.
- Continued growth of health services revenue and contribution to EBITDA and expanding the breadth of our health offerings. We anticipate being able to generate cross-selling opportunities between our business units. We expect this growth to be partially offset by higher operating costs associated with growth related to scaling our digital health offerings, with a focus on deploying value-added services effectively and optimizing efficiency.

- Impacts on our international operations from the global macroeconomic environment and its effect on other national and local economies, as well as continued currency fluctuations, which may have an impact on our outlook. Canadian dollar to U.S. dollar average exchange rate of C$1.32: US$1.00 (2023 actual – C$1.35: US$1:00); U.S. dollar to European euro average exchange rate of US$1.08: €1.00 (2023 actual –US$1.08: €1.00).

- Continued expansion of our agriculture and consumer goods services business through business acquisitions and organic growth.

- Continuation of our digitization efforts to simplify the many ways our customers do business with us, introduce new products and services, respond to customer and market needs, and provide highly reliable service.

Our 2024 outlook is forward-looking information that is based on these assumptions and is subject to inherent risks and uncertainties. These assumptions may ultimately prove to have been inaccurate. Events or our actual results may differ materially from expectations expressed in or implied by this outlook due to these assumptions having been incorrect or as a result of risks such as those described in detail in *Section 10 Risks and risk management*.

9.4 Communications industry regulatory developments and proceedings

Our telecommunications, broadcasting and radiocommunication services are regulated under federal laws by various authorities, including the Canadian Radio-television and Telecommunications Commission (CRTC), ISED, Canadian Heritage and the Competition Bureau.

The operations of our health business are also subject to various federal and provincial health laws and regulations, as well as policies, guidelines and directives issued by regulatory and administrative bodies. See *Section 10.3 Regulatory matters*.

The following is a summary of certain significant communications industry regulatory developments and proceedings that are relevant to our telecommunications and broadcasting business and our industry. This summary is not intended to be a comprehensive legal analysis or description of all of the specific issues described. Although we have indicated those issues for which we do not currently expect the outcome of a development or proceeding to be material for us, there can be no assurance that the expected outcome will occur or that our current assessment of its likely impact on us will be accurate. See *Section 10.3 Regulatory matters*.

Radiocommunication licences and spectrum-related matters

ISED regulates, among other matters, the allocation and use of radio spectrum in Canada and licenses radio apparatus, frequency bands and/or radio channels within various frequency bands to service providers and private users. The department also establishes the terms and conditions that may attach to such radio authorizations, including restrictions on licence transfers, coverage obligations, research and development obligations, annual reporting, and obligations concerning mandated roaming and antenna site sharing with competitors.

Spectrum transfer moratorium and review of the spectrum transfer framework

On March 31, 2023, the Minister of Innovation, Science and Industry announced a moratorium on high-impact transfers of spectrum licences in commercial mobile bands. "High-impact" transfers are those that would have a significant effect on the ability of telecommunications service providers to offer wireless services in Canada. The Minister also directed ISED to launch a comprehensive review of Canada's spectrum transfer framework, with the moratorium expiring once a new framework comes into effect. No details were released about when the framework review would take place or when a new framework will be implemented. There is a risk that this moratorium could have a material impact on us depending on how long it remains in place.

Millimetre Wave (mmWave) spectrum auction to support 5G

On June 5, 2019, ISED released its *Decision on Releasing Millimetre Wave Spectrum to Support 5G*, repurposing several tranches of mmWave spectrum for mobile use. On June 6, 2022, ISED issued its *Consultation on a Policy and Licensing Framework for Spectrum in the 26, 28 and 38 GHz bands*, which is the first step in setting the auction framework rules, including competitive measures for these mmWave bands. There is a risk that the auction rules will favour certain carriers over us and impact our ability to acquire an adequate quantity of mmWave spectrum. ISED maintains its projection that the mmWave auction will commence in 2024.

Consultation on conditions of licence relating to the provision of service within the Toronto Transit Commission (TTC) subway system

On September 11, 2023, ISED released new conditions of licence relating to the provision of service within the TTC subway system. These conditions of licence apply to all wireless service providers that hold mobile wireless spectrum that cover the Toronto tier 5-282 service area. These conditions of licence require all applicable licensees to provide wireless services in the TTC subway by October 3, 2023. They also set requirements upon licensees to finalize network agreements with Rogers Communications Inc., the licensee that operates the wireless antenna system in the TTC subway, and to meet stated deployment requirements over the next three years. We satisfied the October 3, 2023 date to deploy wireless services in the TTC subway. On December 11, 2023, we finalized a network agreement with Rogers which ensures access for TELUS to the TTC network and will further ensure we meet stated deployment and other conditions of licence.

Regulatory and federal government reviews

The CRTC and the federal government have initiated public proceedings to review various matters. A number of key proceedings are discussed below.

Review of the wholesale high-speed access service framework

On March 8, 2023, the CRTC issued *Review of the wholesale high-speed access service framework*, Telecom Notice of Consultation CRTC 2023-56. The Notice of Consultation first creates a rate reduction by requiring incumbent carriers to revise their rates to reflect a 10% decrease in the costs of traffic-sensitive components. The Notice of Consultation then seeks comment on a number of issues, including whether wholesale access to fibre-to-the-premises (FTTP) service should be offered on an aggregated basis and whether any further regulation, including retail regulation, is warranted. The Notice of Consultation further expresses the CRTC's preliminary view that incumbents should be required to provide an interim aggregated wholesale FTTP service pending the disposition of the consultation. In November 2023, the CRTC issued its decision imposing an interim wholesale mandate pending the final disposition of the proceeding. The interim order requires Bell to provide aggregated wholesale FTTP access in its incumbent Ontario and Quebec serving territories and requires us to provide the same service in our incumbent serving territory in Quebec. The CRTC did not make any similar order with respect to our incumbent serving territories in British Columbia or Alberta. Bell has sought leave to appeal the interim order to the Federal Court of Appeal and has sought a stay of the interim order pending the disposition of its leave application and appeal, if granted. Bell has also brought a petition to Cabinet to rescind the interim order and has sought alternative relief that would apply the decision nationwide and could exclude larger carriers from accessing the mandated service. The leave and stay applications as well as the petition remain under reserve. The remainder of the CRTC proceeding, including the issue of whether to impose a permanent mandate, is scheduled to conclude shortly after an oral hearing scheduled for February 2024. Until the CRTC releases its decisions in this matter, it is too early to determine the impact of this proceeding on us.

Review of mobile wireless services

On April 15, 2021, the CRTC released its decision in the *Wireless Regulatory Framework Review*. The CRTC determined that TELUS, Bell, Rogers and SaskTel must provide wholesale mobile virtual network operator (MVNO) access to facilities-based regional wireless providers in areas where those providers hold a mobile wireless spectrum licence. MVNO access is based on commercially negotiated rates and will be phased out after seven years. On October 25, 2022, the CRTC released Telecom Decision CRTC 2022-288, where it made determinations on the draft terms and conditions of the MVNO tariffs of TELUS, Bell, Rogers and SaskTel. The carriers updated their tariffs based on this decision and the Commission granted final approval on May 9, 2023 in Telecom Order 2023-133. TELUS, Bell, Rogers and SaskTel now have the MVNO service operational and available for use. Eligible wireless providers desiring MVNO access are entitled to commence negotiations. The Commission also issued Telecom Order 2023-171, where it approved updates to the domestic roaming tariffs of TELUS, Bell and Rogers to take into account the availability of seamless roaming and 5G services as part of mandated domestic roaming.

We appealed two determinations from this decision to the Federal Court of Appeal: (i) the requirement for the national mobile carriers, including us, to offer seamless roaming as an additional condition under which the existing mandated wholesale roaming service must be offered; and (ii) the ruling that sections 43 and 44 of the *Telecommunications Act* do not provide the CRTC with jurisdiction to adjudicate disputes involving mobile wireless transmission facilities. The appeal was heard in December 2022 and was dismissed on April 13, 2023. In December 2023, the Supreme Court of Canada granted us leave to appeal the issue of CRTC jurisdiction over mobile wireless transmission facilities. We anticipate the Supreme Court will hear the matter in late 2024 or in 2025.

On July 24, 2023, the CRTC issued its first arbitration decision related to the MVNO framework, in the context of a final offer arbitration between Rogers and Quebecor. The CRTC selected Quebecor's offer for the MVNO data access rate, but the rate remains confidential. Rogers has now filed an application with the Federal Court of Appeal seeking leave to appeal the CRTC's decision. In addition, on October 10, 2023, the CRTC issued an arbitration decision about access to MVNO services by Quebecor from Bell. The CRTC selected the data rate as proposed by Bell. The impact of these decisions on us will be dependent on the commercial rates that we negotiate for MVNO access or are otherwise imposed by the CRTC through the final offer arbitration process, as well as the outcome of the Federal Court of Appeal process.

Consultation on amending the CRTC MVNO mandate to include additional retail market segments

On March 1, 2023, the CRTC issued *Facilities-based wholesale mobile virtual network operator (MVNO) access tariffs – Considering the inclusion of additional retail market segments*, Telecom Notice of Consultation CRTC 2023-48. In this consultation, the CRTC is soliciting comments on whether the wholesale MVNO framework should be broadened to include enterprise, IoT and M2M service. The record of this proceeding is now closed. Until the CRTC issues a decision in this consultation, it is too early to determine its impact on us.

Application to seek a review of domestic wholesale roaming rates

On May 19, 2022, Bragg Communications Inc., Cogeco Communications Inc., Videotron Ltd., Xplornet Communications Inc. and Xplore Mobile Inc. filed a joint application to the CRTC seeking a review of the tariffed rates currently charged by TELUS, Bell and Rogers for domestic wholesale roaming, claiming that the current rates are no longer just and reasonable. We have filed an answer to this application demonstrating why such a review is not warranted at this time and the CRTC has since issued requests for information to wireless services providers. The impact of this application is dependent upon whether the CRTC decides to undertake a review of mandated roaming rates and to what extent there are any changes for current tariffed rates.

New draft cybersecurity legislation

On June 14, 2022, the federal government introduced Bill C-26, *An Act respecting cyber security, amending the Telecommunications Act and making consequential amendments to other Acts*. The legislation would amend the *Telecommunications Act*, among other things, to allow the Governor in Council to prohibit telecommunications service providers from using equipment from designated companies in their networks. In practice, this will allow the federal government to ban the use of Huawei and ZTE equipment in our network and impose penalties for non-compliance. The Minister of Innovation, Science and Industry stated that the government intends to use its powers under Bill C-26, if passed, to, among other things, require the removal of existing Huawei and ZTE 5G equipment by June 28, 2024. The legislation would also create a new statute, the *Critical Cyber Systems Protection Act* (CCSPA). The CCSPA would require designated federally regulated corporations to maintain cybersecurity plans, impose reporting requirements and impose penalties for non-compliance. Bill C-26 received second reading on March 27, 2023 and is now undergoing committee review. If we are ultimately subject to an order requiring us to remove a significant amount of equipment from our network, the effect could be material.

Government of Canada and CRTC activities to improve Canadian network resiliency

On February 22, 2023, the CRTC issued *Call for comments – Development of a regulatory framework to improve network reliability and resiliency – Mandatory notification and reporting about major telecommunications service outages*, Telecom Notice of Consultation CRTC 2023-39, in which it sought comments on a notification and reporting regime for major service outages. In addition, the Commission mandated the implementation of an interim notification and reporting regime for major service outages while the consultation is ongoing. We implemented the interim regime on March 8, 2023 and are participating in the consultation. ISED is also conducting further steps via the Canadian Security Telecommunications Advisory Committee (CSTAC) to examine network resiliency. We continue to participate in all follow-up initiatives as required. It is too early to determine if these initiatives will have a material impact until they are concluded.

Nova Scotia 911 legislation

In November 2022, Nova Scotia passed amendments to the *Emergency 911 Act* and the *Emergency Management Act* that, among other things, require telecommunications service providers to take certain actions to prevent certain outages, to inform stakeholders, and to refund customers in the case of certain outages. These amendments have received royal assent but have not been proclaimed into force. Most of the obligations of telecommunications service providers are to be set out in regulations, which have yet to be made by the Governor in Council. Until the regulations are made, it is too early to determine the impact of this legislation on us.

CRTC proceeding regarding potential barriers to the deployment of broadband-capable networks in underserved areas in Canada

On December 10, 2019, the CRTC issued *Call for comments regarding potential barriers to the deployment of broadband-capable networks in underserved areas in Canada*, Telecom Notice of Consultation CRTC 2019-406. In this proceeding, the CRTC sought comment on barriers that service providers and communities face in building new facilities, or interconnecting to or accessing existing facilities, and in extending networks into underserved areas in order to offer universal service objective-level services. The CRTC has specifically identified access to affordable transport services and efficient use of support structures as potential barriers. The record of the proceeding is now closed and we anticipate a decision this year. It is too early to determine the impact of the proceeding on us.

Implementation of next-generation 9-1-1 service

On June 14, 2021, the CRTC issued Telecom Decision CRTC 2021-199, *Establishment of new deadlines for Canada's transition to next-generation 9-1-1* (NG9-1-1), where the CRTC stipulated revised implementation for NG9-1-1 service in Canada. Consistent with the CRTC's requirements, we are now transiting live NG9-1-1 traffic over our NG9-1-1 network, but full implementation of NG9-1-1 in our NG9-1-1 territory is contingent on interconnections with 9-1-1 call centres and such implementation is dependent upon local government authorities. We continue our work to fully implement NG9-1-1.

On October 4, 2023, a group of public safety answering points (PSAPs), which are the entities that receive 9-1-1 calls and dispatch emergency services, filed an application to the CRTC asking that NG9-1-1 network providers, including us, make available a NG9-1-1 network testing environment for PSAPs. We are reviewing this application and plan to intervene as part of this process. The outcome of this application is not expected to be material and will not affect our ability to meet our regulatory mandate to implement NG9-1-1.

Development of a network-level blocking framework to limit botnet traffic

On June 23, 2022, the CRTC released *Development of a network-level blocking framework to limit botnet traffic and strengthen Canadians' online safety*, Compliance and Enforcement and Telecom Decision CRTC 2022-170. The technical working group, the CRTC Interconnection Steering Committee, has examined the issue and filed a report about how ISPs can implement network blocking of malicious botnet traffic. A Commission decision on that report is pending. The outcome is not expected to be material.

Federal private sector privacy bill proposes to repeal and replace the Personal Information Protection and Electronic Documents Act

The *Digital Charter Implementation Act, 2022* (C-27) proposes to enact the *Consumer Privacy Protection Act* (replacing the existing private sector privacy legislation and implementing new consumer privacy rights, enhanced enforcement powers and a private right of action), the *Personal Information and Data Protection Tribunal Act* (a new adjudicative body to provide independent oversight on enforcement activities by the regulator) and the *Artificial Intelligence and Data Act* (a new regulatory regime for the use of AI in the private sector, supported by extensive enforcement powers). C-27 is currently before the INDU Committee of the House of Commons. The Minister of Innovation, Science and Industry has proposed extensive amendments to all elements of C-27. The bill proposes significant changes to federal privacy legislation in Canada; however, until the bill is passed in its final form, we are unable to determine the materiality of the proposed changes.

Amendments to Quebec's public and private sector privacy law

On September 22, 2021, the Quebec National Assembly passed *An Act to modernize legislative provisions as regards the protection of personal information*, which received assent the same day. Extensive new requirements governing the collection, use and disclosure of the personal information of individuals in Quebec will be phased in over three years. The Act also creates a new enforcement regime with significant criminal fines and administrative monetary penalties for certain infractions and a private right of action with minimum statutory punitive damages. We are continuing to implement compliance for products, services and processes that are within the Act's jurisdiction, as additional guidance is issued by the Quebec government and the provincial regulator.

CRTC review of telecommunications services to the Far North

On November 2, 2020, the CRTC initiated the first phase of a review of its regulatory framework for Northwestel Inc. and the state of telecommunications services in Canada's North in Telecom Notice of Consultation CRTC 2020-367. On January 20, 2021, a number of interveners proposed large subsidy increases to Northwestel and other companies providing service in Canada's North. On June 8, 2022, the CRTC released Telecom Notice of Consultation CRTC 2022-147, initiating the second phase of this review, leaving open the potential for subsidy increases. A hearing was held in Whitehorse, Yukon, from April 17 to 21, 2023. The CRTC has since issued some requests for information that suggested a subsidy of up to $55 million per year, of which we would pay approximately 25%, and we have transferred incumbency in Atlin, British Columbia to Northwestel (along with associated obligations). The proceeding is now closed. A decision is expected in 2024.

Amendments to the Competition Act

In February 2022, ISED announced its intention to undertake a review of the *Competition Act*, beginning with immediate, targeted amendments to the Act. The targeted amendments received royal assent on June 23, 2022 and included: (i) addition of a new provision to protect workers from agreements between employers that fix wages and restrict job mobility; (ii) addition of a new provision regarding "drip pricing" to both the civil and criminal prohibition on false or misleading representations; (iii) addition of an expanded list of factors to be considered when assessing the competitive impact of mergers, business practices and competitor collaborations; (iv) amendments to clarify an "anti-competitive act" for abuse of dominance; (v) amendments to provide access by private parties to the Competition Tribunal if they are directly and substantially affected by the conduct of another party; and (vi) introduction of an anti-avoidance provision to the notifiable transactions provisions of the *Competition Act*.

In November 2022, ISED commenced a consultation seeking input on further amendments to the *Competition Act*. The further consultations were commenced by the issuance of a discussion paper entitled *The Future of Competition Policy in Canada,* released in November 2022. ISED has outlined five areas of focus for the consultation: (i) merger review; (ii) unilateral conduct; (iii) competitor collaborations; (iv) deceptive marketing; and (v) administration and enforcement of the law. We filed comments setting out our views on these topics in response.

In December 2023, Bill C-56 received royal assent. The bill amends the *Competition Act* to, among other things, repeal the efficiencies defence in respect of mergers; enhance the powers of the Commissioner of Competition with respect to market studies; extend the civil competitor collaboration provisions to include certain agreements between non-competitors; and expand the abuse of dominance provisions.

Also in December 2023, the government introduced Bill C-59, which includes further amendments to the *Competition Act*. If passed, the Bill will, among other things, increase the rights of private parties and enhance merger enforcement powers regarding competitor collaborations and mergers.

Rogers application to attach small cell antennas to TELUS and Bell support structures

On July 4, 2023, Rogers brought an application to the CRTC alleging that TELUS and Bell have an obligation to process Rogers' applications to attach small cell antennas to support structures and that TELUS and Bell have failed to meet this obligation. We filed answers to the application on August 11, 2023. In our submission, we denied Rogers' allegations vigorously. On February 5, 2024, the CRTC denied Rogers' application. Simultaneously, the CRTC initiated a proceeding, Telecom Notice of Consultation CRTC 2024-25, Call for comments – Attachment of wireless facilities on support structures owned or controlled by incumbent local exchange carriers (ILEC), in order to examine the broader public policy issues before ruling on the placement of wireless facilities on ILEC-owned or -

controlled support structures. Comments are to be submitted by April 5, 2024. Until the CRTC issues a determination in this proceeding, it is too early to determine its impact on us.

Proceeding regarding support structure relocation compensation

On January 16, 2023, we filed a proposed revision to our support structure tariff that allows support structure licensees to negotiate relocation terms and compensation directly with the party forcing the relocation, pursuant to the CRTC's direction in Telecom Decision CRTC 2022-311, *Rogers Communications Canada Inc. and Shaw Cablesystems G.P. – Application regarding compensation for transmission line relocation in British Columbia*. Concurrent with the tariff application proceeding, which included requests for information and replies to interventions, on February 28, 2023, British Columbia's Ministry of Transportation and Infrastructure (MOTI) filed an application with the CRTC to stay the Commission's directives in the decision, as well as to review and rescind or vary the decision. We responded on March 30, 2023, asking the Commission to dismiss MOTI's review and vary application (R&V) and on May 16, 2023, the Commission denied MOTI's request for a stay of the directives but has yet to conclude on the R&V. The R&V ruling is outstanding and is not expected to be material.

Legislation to ban the use of replacement workers during strikes and lockouts

In November 2023, the federal government introduced Bill C-58, which would, in certain circumstances, and with exceptions and limitations, prohibit employers in federally regulated industries from hiring replacement workers during work stoppages related to collective bargaining. If this Bill becomes law, it could affect how we continue to provide our services during strikes or lockouts, subject to the applicability of exceptions and limitations currently included in the bill.

Broadcasting and content-related issues

Regulatory plan to modernize Canada's broadcasting system

Bill C-11, *An Act to amend the Broadcasting Act and to make related and consequential amendments to other Acts* , which brings streaming services that operate over the internet expressly within the scope of the *Broadcasting Act*, was passed by Parliament and received royal assent on April 27, 2023. On May 12, 2023, the CRTC issued three notices of consultation for Phase 1 of the regulatory plan, including notices of consultation concerning the contribution framework that will apply to traditional and online broadcasting undertakings, the registration of online undertakings, and a review of exemption orders and basic conditions of service that will apply to online undertakings. We have participated in all three consultations. On September 29, 2023, the CRTC released policies relating to which online undertakings are required to register with the CRTC and the conditions of service that will apply to those undertakings. We participated in the CRTC's hearing, which began on November 20, 2023, to consider the initial contribution regime that will apply to online undertakings. It is too early to determine the impact on us.

TELUS receives renewals for its broadcasting undertaking licences

On August 8, 2023, the CRTC issued administrative licence renewals for various broadcasting undertakings, including our terrestrial broadcasting distribution undertakings (BDUs) serving areas of Alberta, British Columbia and Quebec, and our terrestrial pay-per-view (PPV) service. As a result of these administrative licence renewals, our BDUs and PPV service will continue to operate under their existing conditions of licence until August 31, 2026. On November 9, 2023, the CRTC issued TELUS a licence renewal for our national video-on-demand (VOD) undertaking, for the period of January 1, 2024 to August 31, 2028.

Review of the Copyright Act and consultations on copyright reform to address specific issues

The *Copyright Act*'s last statutorily mandated review was launched in 2017 and resulted in reports from the Standing Committee on Industry, Science and Technology and the Standing Committee on Canadian Heritage being presented to the House of Commons in the summer of 2019. The parliamentary review led to further government consultations (described below) launched in 2021 to explore specific issues raised during the review, such as how to modernize the copyright framework for online intermediary liability, AI and IoT. The timeline for potential changes to the *Copyright Act* is uncertain, although the next statutorily mandated review was supposed to be launched in 2022, and it is unclear whether or how this might impact the timeline for comprehensive copyright reform legislation. In the meantime, the federal government has made smaller changes to the *Copyright Act*, such as the inclusion in the 2022 budget of proposed amendments to extend the term of copyright by 20 years, which was required to satisfy Canada's obligations under

the *Canada-United States-Mexico Agreement*. The policy approach for copyright has traditionally been based on a balance between the rights of copyright owners and user rights, and as a result, the impact of this proceeding is not expected to be material.

On April 14, 2021, ISED announced the launch of a consultation to modernize the copyright framework for online intermediaries. The consultation builds on the work done in 2018 and 2019 as part of the parliamentary review of the *Copyright Act*. ISED sought comments on a broad range of issues, including the role of intermediaries in policing online copyright infringement, how to remunerate rights holders for the use of their content on online platforms, and what types of enforcement tools (such as website-blocking orders) should be available against intermediaries. We participated in this consultation and filed joint comments with other ISPs on May 31, 2021. Among other things, the comments advocated for a continuation of existing government policy that provides ISPs with unconditional safe harbour protection for the potentially infringing activities of their customers. It is too early to tell whether this consultation will have a material impact on us.

On July 19, 2021, the government announced a consultation to modernize the copyright framework applicable to AI and IoT. The government's objectives were to support innovation and investment in AI and other digital and emerging technologies, support Canada's cultural industries and preserve the incentive to create and invest provided by the economic rights set out in the Act, and support competition and marketplace needs regarding IoT devices and other software-enabled products. We participated in this consultation and filed joint comments with other ISPs on September 17, 2021. Among other things, the joint comments advocated that no changes should be made to the *Copyright Act* that would unduly burden or create potential liability risks for ISPs. Similar to the broader *Copyright Act* review, the impact of this proceeding is not expected to be material.

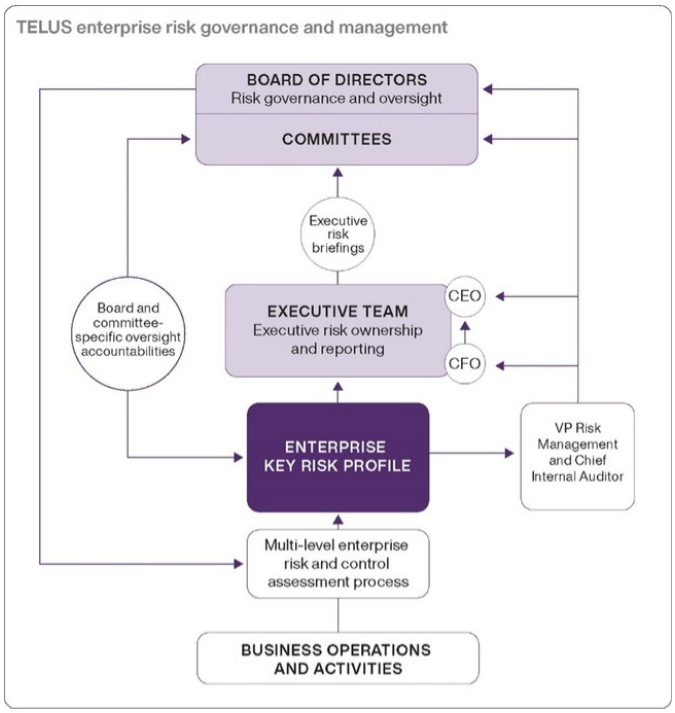
Consultation on the government's proposed approach to address harmful content online

On July 29, 2021, the government launched a consultation on its proposed approach to address harmful content online. The government's proposals largely target social media and content platforms, but a few proposals would also have impacted ISPs. Accordingly, we participated in this consultation and filed joint comments with other ISPs on September 25, 2021. Among other things, the joint comments advocated that the legal framework for addressing harmful online content should not create undue obligations or liability for telecommunications carriers, and that requirements to block access to content online or to provide subscriber information should continue to require judicial orders. In March 2022, the government established an expert advisory group on online safety, with a mandate to provide the Minister of Canadian Heritage with advice on how to design the legislative and regulatory framework to address harmful content online and how to best incorporate the feedback received during the national consultation held from July to September 2021. Following the publication of the group's report, the government conducted further consultations with stakeholder groups regarding the advice it received from the expert advisory group. The government has indicated it hopes to bring forward a bill to address online harms in 2024. The impact of this consultation is not expected to be material.

10. Risks and risk management

10.1 Overview

Risk arises from uncertainty around events, actions and our business activities that may have a negative impact on the achievement of our objectives and goals, but may also give rise to opportunities for growth. Risk oversight and management processes are integral to our risk governance and strategic planning practices.



Risk governance, oversight and culture

We have in place robust risk governance and oversight practices, with risk oversight responsibilities outlined in the policy manual for our Board of Directors (Board). Our Board is responsible for ensuring that material risks to our business are identified, and for overseeing the implementation of systems and processes that effectively identify, monitor and manage material risks.

Our risk governance culture starts with clear risk management leadership and transparent communications, supported by our Board and Executive Team. In our approach to risk governance, accountability for managing and reporting on risk exposures is clearly defined. Training and awareness programs, appropriate resources and risk champions help to ensure that we have the risk management competencies necessary to support effective decision-making across the organization. Ethics are integral to our risk governance culture, and our code of ethics and conduct directs team members to meet the highest standards of integrity in all business decisions and actions.

Responsibilities for risk management

We take a multi-level approach to managing risks, sharing responsibility across the organization and recognizing that agile and effective risk management is integral to the achievement of our strategic and operational objectives. The first line of assurance is executive and operating management, and these team members are expected to integrate risk management into core decision-making processes (including strategic planning processes) and day-to-day operations. We have risk management and compliance functions across the organization, in areas that include Finance, Legal, Data and Trust (which includes Privacy), Security and other operational business areas, and these form the second line of assurance. These teams establish policies, provide guidance and expertise, and work collaboratively with management to monitor the design and operation of controls. Internal Audit is the third line of assurance, providing independent assessments of the effectiveness and efficiency of risk management and controls across all areas of our business.

Risk and control assessment process

Events within and outside of TELUS present both risks and opportunities. We strive to avoid taking on undue risk and we work to ensure alignment of risks with business strategies, objectives, values and risk tolerances; we also seek to take advantage of opportunities that may emerge and, in so doing, we consider the impacts of our decisions on our many stakeholders. We strive to proactively mitigate our risk exposures through performance planning, operational management and risk response strategies, which can include mitigating, transferring, retaining and/or avoiding risks.

We have in place multi-level enterprise risk and control assessment processes that solicit and incorporate insights from leaders across all areas of TELUS, enabling us to track multi-year trends in key and emerging risks and our control environment. A comprehensive annual risk and control assessment is conducted with senior leaders and an annual assessment is also completed by the members of our Board, which provides a high-level perspective on key enterprise risks. Results of the assessments are shared with senior management, our Board and Audit Committee, and inform the development of our risk-focused internal audit program. These risk assessments are also incorporated into our strategic planning, operational risk management and performance management processes. In addition, key enterprise risks are reviewed with the Audit Committee on a quarterly basis in order to capture and communicate any changes, and detailed risk assessments are conducted for various risk management, strategic and operational initiatives throughout the year.

10.2 Principal risks and opportunities

This section describes our principal risks and the related opportunities. The significance of these risks is such that they, alone or in combination, may have material impacts on our operations, results, reputation and brand, as well as the approaches taken by investment analysts when evaluating TELUS as an investment. These risks and the associated risk mitigation measures are addressed in the following sections.

Although we believe the measures we take to identify and mitigate risks are reasonable, there can be no expectation or assurance that they will effectively mitigate or fully address the risks described, or that new developments and risk exposures will not materially affect our operations or financial results. Despite our efforts to implement controls in our domestic and international operations, there can be no assurance that these controls will prove to be effective in all instances. Forward-looking statements in this section and elsewhere in this MD&A are based on the assumption that our risk mitigation and control measures will be effective. See *Caution regarding forward-looking statements*. We consider our exposure to risk in four categories: strategic, operational, financial and compliance.

Strategic risks and opportunities

These strategic risks arise from uncertainties that may affect the nature and focus of our enterprise strategic objectives and our ability to sustain profitable revenue growth.

Risk	Potential impact	Mitigations
Regulatory matters (see 10.3) ⬆	We operate in a number of highly regulated industries and are therefore subject to a wide variety of laws and regulations domestically and internationally. Policies and practices of elected officials and regulatory decisions, reviews and government activity may have strategic, operational and/or financial implications (including revenue and free cash flow).	• Advocacy across all levels of government • Prudent investment and cost efficiency • Spectrum acquisition strategies • Planning decisions that consider our regulatory environment
Competitive environment (see 10.4) ⬆	Competitor expansion, activity and intensity (pricing, including discounting, bundling), as well as non-traditional competition, disruptive technology and disintermediation, may alter the nature of the market and impact our market share and financial results (including revenue and free cash flow).	• Adoption of our customers first strategy • Diversified investments • Monitoring of regulatory changes and competitors • Product life cycle management • Product portfolio innovation and acquisition • Cost structure and process improvements that leverage artificial intelligence (AI) and digitization • Bundling of services
Technology (see 10.5)	Consumer adoption of alternative technologies and changing customer expectations have the potential to impact our revenue streams and customer churn rates.	• Investments in mobile network infrastructure • Ongoing fibre deployment • Spectrum acquisition strategies • Expansion of 5G network and Internet of Things (IoT) portfolio • Investments in fibre-to-the-premises (FTTP) and decommissioning of legacy copper network • Periodic review of technology road map
Security and data protection (see 10.6) ⬆	Our ability to detect and identify potential threats and vulnerabilities depends on the effectiveness of our security controls in protecting our infrastructure and operating environment, and our timeliness in responding to attacks and recovering business operations. A successful attack may impede the operations of our network or lead to the unauthorized interception, destruction, use or dissemination of customer, team member or business information.	• Security policies, standards and methodologies • Privacy and security impact assessments • Vulnerability assessments • Continuous monitoring and response programs
Generative AI (see 10.7) (As this is a new risk, a risk trend is not applicable)	Generative AI (GenAI) presents the potential for developing innovative solutions and enhancing the experience of our team members and customers, while also exposing us to numerous risks, including risks related to the responsible use of AI, data privacy and cybersecurity.	• Adoption of Trust Model • Management oversight via an AI Board • Deployment of an internal GenAI tool
Climate and the environment (see 10.8)	Natural disasters, pandemics, disruptive events and climate change may impact our operations, customer satisfaction and team member experience.	• Business continuity and disaster recovery program and playbooks • Emergency Management Operating Committee (EMOC) • Proactive interlock with Innovation, Science and Economic Development Canada (ISED), provincial emergency operations centres, emergency response groups, critical infrastructure partners and Indigenous governments to enable fast response during an event • Proactive climatic change event readiness program • Commitments to sustainable and responsible business practices, with targets that balance economic growth with positive social and environmental outcomes See *Section 5.2* of our 2023 Annual Information Form (AIF) for a description of our alignment with the recommendations of the former Task Force on Climate-related Financial Disclosures (TCFD). Additionally, a detailed report of our environmental risk mitigation activities can be found in our sustainability and ESG report[1] at **telus.com/sustainability**.
Operational performance and business combination (see 10.9) ➡	Investment and acquisition present opportunities to expand our operational scope, but may expose us to new risks. We may be unsuccessful in gaining market traction/share and realizing benefits, and integration efforts may divert resources from other priorities.	• Investment and acquisition strategy and governance • Innovation partnerships • Pre- and post-acquisition due diligence and integration planning

1 Not incorporated by reference.

Legend	Description
	Risk level is higher compared to last year
	Risk level remains unchanged compared to last year
	Risk level is lower compared to last year

Operational risks and opportunities

Operational risks arise from uncertainties we face in our day-to-day operations. Our approach is guided by our code of ethics and conduct, while our business operations are supported by policies, procedures and internal controls.

Risk	Potential impact	Mitigations
Customer service (see 10.10)	Our service delivery directly impacts customer experience, customer churn rates, and likelihood to recommend outcomes. We may not be able to deliver the excellence our customers expect or maintain our competitive advantage in this area.	• Process simplification and digitization • Customer experience management • Customer feedback and surveys • Virtual installation and repair program
Our systems and processes (see 10.11)	Systems and technology innovation, maintenance and management may impact our IT systems and network reliability, as well as our operating costs.	• Reliability by design • Network redundancy • Life cycle management and adoption of emerging solutions • Change management • Project management • Continuous monitoring and response programs • Disaster recovery program and plans

Our team
(see 10.12)
	The rapidly evolving and highly competitive nature of our markets and operating environment, along with the globalization and evolving demographic profile of our workforce, and the effectiveness of our internal training, development, succession and health and well-being programs, may impact our ability to attract, develop and retain team members with the skills required to meet the changing needs of our customers and our business.
	
	There may be greater physical and mental health challenges faced by team members (and their families) as a result of the pandemic, and the effect of other significant change initiatives at the organization may result in the loss of key team members through short-term and long-term disability.
		• Performance development program
		• Health and well-being strategy:
		  ◦ Ongoing mental health training for leaders and all team members
		  ◦ Ongoing awareness-building and support across five dimensions of well-being (physical, psychological, social, financial and environmental)
		  ◦ Early intervention strategies to prevent short-term and long-term disability
		• Compensation and benefits program
		• Retention and succession planning
		• Detailed post-acquisition integration planning for team members from acquired businesses and clarity on execution of the plans, ensuring the orderly roll-out of our core cultural programs across operating and geographic areas
		• Work Styles® program
		
		Additional information on our team member programs can be found in our sustainability and ESG report at **telus.com/sustainability**.

Risk	Potential impact	Mitigations
Suppliers (see 10.13)	We may be impacted by supply chain disruptions and lack of resiliency in relation to global or local events. Dependence on a single supplier for products, components, service delivery or support may impact our ability to efficiently meet constantly changing and rising customer expectations while maintaining quality of service.	• Strategic vendor partnerships, contracts and agreements • Supplier risk profiling and multi-vendor strategy • Supplier code of conduct • Business continuity management plans Information on supply chain sustainability can be found in our sustainability and ESG report at **telus.com/sustainability**.
Real estate matters (see 10.14)	Real estate investments are exposed to possible financing risks and uncertainty related to future demand, occupancy and rental rates, especially following the pandemic. Future real estate developments may not be completed on budget or on time and may not obtain lease commitments as planned.	• Rationalization of locations, including robust due diligence and continuous monitoring of key performance indicators • Market trends tracked continuously in order to adjust scope of development projects to market variability • Fixed-price supply contracts, limiting risk of escalation and inflation, and expert project management oversight • Costs for real estate projects monitored through capital gating and approval processes • Pre-lease agreements with prospective tenants prior to construction completion to fill vacant space • Return-to-office model with reconfigured work spaces

Financial risks and opportunities

Financial risks arise from uncertainties involved in maintaining appropriate levels of liquidity, financing and debt in order to sustain operations and support future growth.

Risk	Potential impact	Mitigations
Financing, debt and dividends (see 10.15)	Our ability to access funding at optimal pricing may be impacted by general market conditions and changing assessments in the fixed-income and capital markets regarding our ability to generate sufficient future cash flow to service our debt. Our current intention to return capital to shareholders could constrain our ability to invest in our operations to support future growth.	• Shelf prospectus in effect until September 2024 • Investment-grade credit ratings • Laddered debt maturity schedule • Liquidity provided by credit facilities, securitization program and commercial paper program • Expected robust free cash flow generation, supported by continued EBITDA growth and stable capital expenditures
Tax matters (see 10.16)	Complexity of domestic and foreign tax laws, regulations and reporting requirements applying to TELUS and our international operating subsidiaries may impact financial results, effective governance of tax considerations and compliance. International acquisitions and expansion of operations heighten our exposure to multiple forms of taxation.	• Deployment of a robust tax strategy • Hiring and retaining a team of experienced and knowledgeable taxation professionals • Engaging external advisors
The economy (see 10.17) 	Changing global economic conditions, including a potential recession and alternating expectations about inflation, as well as our effectiveness in monitoring and revising growth assumptions and contingency plans, may impact the achievement of our corporate objectives, our financial results (including free cash flow), and our defined benefit pension plans.	• Pension investment governance and monitoring • Foreign currency forward contracts • Diverse product sets and asset mix • Efficient business operations

Compliance risks and opportunities

Compliance risks arise from uncertainties related to compliance with laws and regulations across the many jurisdictions in which we operate globally.

Risk	Potential impact	Mitigations
Litigation and legal matters (see 10.18)	Complexity of, and compliance with, laws, regulations, commitments and expectations may have a financial and reputational impact.	• Establishment of policies, controls, processes and contractual agreements • Hiring and retaining a team of experienced and knowledgeable legal professionals • Engaging external advisors • Compliance programs • Insurance policies

10.3 Regulatory matters

Risk category: Strategic

The regulatory regime under which we operate as a telecommunications carrier in Canada, including the laws, regulations, and decisions in regulatory proceedings and court cases, reviews, appeals, policy announcements and other developments, such as those described in *Section 9.4 Communications industry regulatory developments and proceedings* , imposes conditions on the products and services that we provide and the ways in which we provide them. The regulatory regime sets out, among other matters, rates, terms and conditions for the provision of telecommunications services, licensing of broadcast services, licensing of spectrum and radio apparatus, and restrictions on ownership and control by non-Canadians.

The allocation and use of spectrum in Canada are governed by ISED, which establishes spectrum allocation policies, determines spectrum auction frameworks, issues licences for use and sets radio authorization conditions.

Canadian ownership and control requirements, including restrictions on the ownership of the common shares of TELUS Corporation (Common Shares) by non-Canadians, are imposed by the *Canadian Telecommunications Common Carrier Ownership and Control Regulations* under the *Telecommunications Act* (collectively, the Telecommunications Regulations) and the *Direction to the CRTC (Ineligibility of Non-Canadians)*, as ordered by the Governor in Council pursuant to the *Broadcasting Act* (the Broadcasting Direction).

We have multiple businesses that, in addition to operating in Canada, also operate in other countries and jurisdictions, such as our digitally-led customer experiences – TELUS International (DLCX) segment, and our TELUS Health and TELUS Agriculture & Consumer Goods businesses, and must comply with the laws, regulations and decisions in all of the jurisdictions in which they operate. These jurisdictions, as well as the contracts that we enter into (particularly those of our DLCX segment and our TELUS Health and TELUS Agriculture & Consumer Goods businesses), require us to comply with, or facilitate our customers' and clients' compliance with, numerous complex, rapidly changing - and sometimes conflicting - legal regimes, both domestic and international. These laws and regulations address many aspects of our business operations, including, but not limited to, anti-corruption measures, internal financial control and disclosure obligations, data privacy and protection, standards for wages and hours of work, employment and labour relations, trade protections and restrictions, import and export controls, tariffs, taxation, sanctions, data and transaction processing security, payment card industry data security standards, records management, user-generated content hosted on websites we operate, data residency, corporate governance, anti-trust and competition measures, team member and third-party complaints, telemarketing regulations, consumer telephone service regulations, nuisance and fraud call regulations, government affairs and other regulatory requirements affecting trade and investment. Our customers and clients are also located around the world, and the laws and regulations that apply to their business operations include, among others, U.S. federal laws and regulations; state laws that apply to data privacy and protection, third-party administration services, utilization review services and telemarketing services; and state laws that apply to debt collection in the United States, collectively enforced by numerous federal and state government agencies and attorneys general; as well as similar consumer protection laws in other countries in which our subsidiaries' clients are based. Failure to provide services in a manner that complies with any such requirements could result in breaches of contracts with our subsidiaries' clients. The application of these laws and regulations to our subsidiaries' clients is often unclear, and the laws and regulations of different jurisdictions may at times conflict. The global nature of our operations adds to the difficulty of compliance. For example, business practices that are prohibited by regulations, including the *Corruption of Foreign Public Officials Act* in Canada and the *Foreign Corrupt Practices Act* in the United States, are not uncommon in many countries, particularly in those with developing economies, where we or our subsidiaries' clients operate. We cannot provide assurance that the actions of our subsidiaries' clients or their customers will not violate our internal policies or Canadian or U.S. laws.

Changes in privacy laws and regulations, both domestic and international, involve stringent requirements that can have a significant impact on our operations. Regulatory authorities may have greater enforcement powers, including the ability to impose fines, sanctions and restrictions on our operations. Canadian privacy regulators, such as the Office of the Privacy Commissioner of Canada, are placing a greater emphasis on privacy concerns in the provisions of digital health services, secondary marketing and digital tracking. Non-compliance with these laws could result in financial penalties, reputational damage and erosion of customer trust.

We have acquired a number of businesses and entered into areas in the Canadian and global health services sector that are highly regulated and also expose us to risks related to the quality of care and provision of insured/uninsured services. The operations of our health business in Canada are subject to various federal and provincial laws and regulations, as well as policies, guidelines and directives issued by regulatory and administrative bodies, such as medical associations, provincial colleges of physicians and other associations governing the practice of health professionals (the holders of licences and permits to provide healthcare services) that we engage for the delivery of our services. In the case of virtual care, the related laws, regulations, policies, guidelines and directives are evolving and thus are subject to differences in interpretation and application, and we may not be able to enter into agreements with governments in certain provinces that will allow us to provide services on an economical basis or at all.

Changes over the past 12 months

Significant regulatory developments and proceedings involving the Government of Canada and its various agencies, as well as governments and regulatory authorities in other jurisdictions, continued through 2023. Certain significant regulatory developments

and proceedings relevant to our business and industry are highlighted in *Section 9.4.* In addition, other significant developments include, but are not limited to, the following:

- With the adoption of Bill 3 in April 2023, Quebec is joining other provinces and territories in establishing privacy legislation that regulates the processing of personal health information as the new law comes into force. TELUS Health may incur costs in order to ensure it meets numerous new legal obligations, notably privacy impact assessments for new projects, products and services and for transfers of health information outside of Québec and restrictions on the use of identification, localization and profiling technologies, mobile and web applications and automated decision-making systems. TELUS Health will also have to navigate a new, prescribed consent regime heavily dependent on expressed consent in order to optimize data use.

- TELUS Health reached a settlement with the British Columbia Medical Services Commission regarding our LifePlus program. This agreement establishes a clear distinction between insured and uninsured care delivery, while maintaining continuity of care for clients.

Potential impact

Changes to the regulatory regime under which we operate as a telecommunications carrier in Canada, including changes to laws and regulations and ownership rules or the enactment of laws or regulations by provinces or municipalities that threaten unitary federal regulatory authority over telecommunications in Canada, could materially and adversely affect our business. These changes may increase our costs, restrict or impede the way we provide our services, limit the range of services we provide, and otherwise cause us to reduce our capital and operational expenditures, including our investments in network technologies, and alter customer perceptions of our operations. The further regulation of our broadband, mobile and other operations and any related regulatory decisions could also restrict our ability to compete in the marketplace and limit the return we can expect to realize on past and future investments in our network. Such changes may not be anticipated or, when they are anticipated, our assessment of their impact on us and our business operations may not prove to be accurate.

Our ability to provide competitive services, including our ability to enhance our current services and offer new services on a timely basis, is also dependent on our ability to obtain access to new spectrum licences at a reasonable cost as they are made available. The revocation of, or a material limitation on obtaining, spectrum licences could have a material adverse effect on our business operations, including the quality and reliability of our network and service offerings, as well as our financial condition.

Government or regulatory actions with respect to certain countries or suppliers may also impact us, and other Canadian telecommunications carriers generally, and may have material non-recurring incremental cost consequences for us.

Overall, compliance with laws and regulations in multiple jurisdictions globally may involve significant costs, consume significant time and resources or require changes in our business practices that reduce our revenue and profitability. We may also face burdensome and expensive governmental investigations or enforcement actions regarding our compliance. Non-compliance could result in fines, damages, criminal sanctions against us, our officers or our team members, prohibitions on the conduct of our business, damage to our reputation, restrictions on our ability to process information, allegations by our customers that we have not fulfilled our contractual obligations, or other unforeseen consequences. In addition, we are required under various laws to obtain and maintain accreditations, permits and/or licences for the conduct of our business in all regions in which we have operations and, in some cases, in which our customers receive our services, including Canada, the United States, Europe and Asia. If we do not maintain our accreditations, licences or other qualifications to provide our services, or if we do not adapt to changes in legislation or regulation, we may be compelled to cease operations in the relevant regions and may not be able to provide services to existing customers or attract new customers. Our failure to comply with applicable legal and regulatory requirements could have a material adverse effect on our business operations, financial performance, financial condition and cash flows.

If Bill C-27 becomes law in its current form and is enacted by the Canadian federal government, it could materially expand prescriptive privacy requirements, significantly raise our risk profile in light of greater enforcement powers, and broaden most of the current transparency requirements and rights of access to information. The availability of implied consent and the ability to use anonymized data may also be curtailed. If Bill C-27 does not become law, Canada may not be able to maintain adequacy with European Union (EU) privacy legislation, adding to the challenges involved with cross-border transfers of personal information related to our customers, employees and suppliers between Canada and EU member states. The EU assessment of the adequacy of Canada's privacy regime is in its preliminary stages. The specific impact of the *Artificial Intelligence and Data Act* (AIDA)

component of Bill C-27 remains uncertain, given the vagueness of the provisions of the Act and the uncertainty that it will be passed in its current form. In Quebec, Law 25 continues to have an effect on many business processes and documents, imposing new obligations in relation to plain language disclosures and transparency (especially with respect to profiling technologies, automated decision systems and minors' data). The Quebec privacy regulator has released guidance on notice and consent under Law 25 and will release guidance on other interpretations in the future that may impact our operations and expose us to new risks in Quebec. Our compliance program is on track to address these impacts, and we continuously monitor the evolution of the law and regulatory guidance.

The amendments to the *Competition Act* made through Bill C-56, and set out in greater detail in *Section 9.4* could make our business environment more challenging because they expand the civil competitor collaboration and abuse of dominance provisions, and repeal the efficiency defence in respect of mergers challenged by the Commissioner of Competition. The amendments to the *Competition Act* proposed in Bill C-59 could, among other things, increase the risk of litigation because they enhance the ability of private parties to seek recourse under the statute.

Changes to the regulatory regimes under which we operate our health business, including enactment of laws, regulations and policies, guidelines or directives issued by regulatory and administrative bodies, such as medical associations, colleges of physicians and other associations governing health professionals, could adversely affect the reputation, brand, financial results and operations of this business. As it relates to our virtual care business, uncertainty regarding regulatory regimes and the anticipated regulatory changes that may be enacted by governments could have adverse effects on our business if they result in the revocation of, or significant limitations on, our ability to provide virtual care services to our customers and charge for the provision of those services.

Mitigation

We advocate at all levels of government, including: our participation in CRTC and federal government proceedings, studies, reviews and other consultations; representations before provincial and municipal governments pertaining to telecommunications issues; legal proceedings impacting our operations at all levels of the courts; and other relevant inquiries (such as those relating to the exclusive federal jurisdiction over telecommunications), as described in *Section 9.4 Communications industry regulatory developments and proceedings*. We also work with industry associations to promote a pragmatic and balanced approach to privacy legislation and interpretations by regulators at all levels of government that protects privacy, builds trust and supports innovation.

We will continue to monitor regulatory developments and may reconsider our investment decisions with a view to realizing an appropriate return on capital. Our risk mitigation strategies for investment decisions may include, but are not limited to, reducing capital and operational expenditures and introducing new efficiency initiatives, which could include reducing the size of our workforce.

We continue to strive to comply with all radio authorization and spectrum licence and renewal conditions, and we plan to participate in future spectrum auctions. We continue to advocate with the federal government for fair spectrum auction rules, so that companies like TELUS can bid on an equal footing with other competitors for spectrum blocks available at auction and can purchase spectrum licences offered for sale by competitors. We also continue to strongly advise that preferential treatment is not required and is not in the best interests of Canadians, especially rural Canadians. It is also not in the best interests of regional carriers, including for 5G services, most notably carriers that are currently part of established, sophisticated and well-financed cable companies.

The Canadian Telecommunications Common Carrier Ownership and Control Regulations require us to monitor and control the level of non-Canadian ownership of our Common Shares. These powers have been incorporated into our Articles and extended to ensure compliance under the *Broadcasting Act*.

We continue to advocate for amendments to Bill C-27 that will reduce unnecessary burdens on our operations, continue to protect the privacy of Canadians and support a positive finding on the adequacy of Canada's privacy regime by the EU in the future. We have implemented best practices and processes, such as our data enablement plan, that will facilitate compliance with privacy law reform, including record-keeping to enable us to demonstrate compliance and due diligence if necessary. With respect to AI, the uncertainty around AIDA has been partially mitigated by the introduction of the ISED voluntary *Code of Conduct*. Because of our proactive early preparations for the responsible management and governance of AI, TELUS was the first company in the telecommunications sector in Canada to sign the voluntary Code of Conduct. We also continue to host consultations with diverse Canadian communities to

inform our practices and advocacy in the development of formal AI regulations. With respect to Quebec's Law 25, we are working to implement compliance with its provisions and we continue to monitor the evolution of the law and regulatory guidance.

As it relates to our health business, we monitor new and amended regulations, policies, guidelines and directives in order to stay ahead of, and plan for, new and evolving requirements. In addition, we have put in place internal governance to ensure oversight of clinical practice across all healthcare operations, to manage compliance with licensing requirements and contractual agreements, and to ensure quality of care. A credential verification audit of our clinical team members is conducted periodically to ensure compliance with standards, provincial professional regulatory bodies and all other relevant applicable regulations. We also advocate with the federal and provincial governments for reasonable regulations, in part by participating in market studies and other consultations. Furthermore, we continue to evaluate the current business model and strategic growth areas for our health business.

10.4 Competitive environment

Risk category: Strategic

As the telecommunications industry continues to evolve, we have expanded our offerings beyond the delivery of voice and data services for consumer and business customers. We offer services in the areas of security and home automation, next-generation digitally-led customer experiences, healthcare, and agriculture and supply chain optimization, both inside and outside Canada (see *Principal markets addressed and competition* in *Section 4.1*). We face intense competition in our provision of voice and data services, as well as in all sectors of our business operations and in all geographic markets.

In the mobile market, our competitors have been employing aggressive promotional offers and device financing strategies to attract and retain customers. In the consumer market, cable companies and other competitors are offering bundled services at discounted monthly rates that include residential local and long distance voice, security solutions, internet access and mobile voice and data services. These developments are contributing to a more challenging environment for us to maintain our market share and customer base.

Furthermore, some competitors have acquired broadcast content assets that are providing content for their services. As a result, we rely on these competitors as a source of content for our services.

In addition to traditional TV services, over-the-top (OTT) services such as Amazon Prime Video, Apple TV, Discovery+, Disney+, Netflix, Crave and YouTube, are also competing for viewership. This additional competition may lead to a higher rate of disconnection for current paid TV services and could adversely impact the growth of our subscriber base and revenue from our TV and entertainment services.

In the business market, incumbent facilities-based competitors continue to compete based on network footprint and reliability, while hyperscalers such as Microsoft (Teams, Skype) and other IP voice/collaborative service providers such as Zoom emphasize price, flexibility and convenience. These service providers do not invest in, or own, networks or other infrastructure but compete directly with video, voice and messaging services across both the consumer and business markets segment.

TI competes with professional services companies that offer consulting services, information technology companies with digital capabilities, AI and data labelling service providers, and contact centre and business process outsourcing companies that are expanding their capabilities to offer higher-margin and higher-growth digital services. In addition, the continued growth and evolution of the digital services offered by TI and the markets in which it operates will also expose our subsidiary to new and different competitors, many of which may have significantly greater market recognition than TI in the markets it enters, as well as additional competition from existing competitors that are also expanding their services to include digital and AI capabilities. From time to time, clients of TI that are currently using its services may determine that they can provision these services in-house. Our client contracts typically range from three to five years and can be terminated by clients with limited notice and without penalty or termination fees, which permits clients to make service adjustments that could adversely impact our revenue. As a result, TI faces sustained competitive pressure to offer services in a manner that will be viewed by its clients as better and more cost-effective than the in-house provision of those services.

TELUS Health competes with providers of employee family assistance and mental health programs, virtual and clinical care, electronic medical records (EMR) and pharmacy management products, claims adjudicators, systems integrators and other providers of health services, including those that own a vertically integrated mix of health services delivery, IT solutions and related lines of

business, as well as global health services providers. With consumer-facing health products, we compete in the provision of virtual care services (with access to general practitioners, nurse practitioners, mental health therapists and dieticians through virtual consultations), preventative health services and personal emergency response services.

TELUS Agriculture & Consumer Goods is a global digital technology and data science business leveraging technology innovation, ingenuity and AI to optimize agricultural production and global and local food and consumer goods supply chains. While we maintain a broad solution set compared to other agriculture and consumer goods technology providers, we compete with focused software and IoT competitors, while also facing competitive pressure from recent investments by select customers in their supply chains and vertical integration.

Changes over the past 12 months

On April 3, 2023, Rogers completed its acquisition of Shaw. Under the agreement, the majority of Shaw's wireless business, Freedom Mobile, was sold to Videotron. These events have significantly changed the competitive environment within the Canadian telecommunications industry. Since the close of the transaction, aggressive price competition has continued to intensify for both mobile and fixed products and services, as Rogers and Videotron attempt to gain market share. However, we continue to welcome innovation-based competition that benefits customers and we have confidence in our competitive advantages, including our diverse offerings of products and services, world-leading networks, differentiated delivery channels, customer service excellence, and the social purpose and culture of our world-class team.

Due to recent regulatory intervention, the Canadian telecommunications industry is facing significant new challenges. The mobile virtual network operator (MVNO) and FTTP wholesale access regulations, as outlined in CRTC 2021-130 and CRTC 2023-56 and discussed in *Section 9.4 Communications industry regulatory developments and proceedings* , have the greatest and most imminent significance for our business operations. These regulations could have a substantial impact on the future of our network operations.

Virtual broadcast distribution undertakings pose a threat to our TV service offerings intensifying competitive pressure, disrupting the market structure and changing consumer behaviors. Consumers now have more options to choose from, driving current TV service providers to differentiate their offerings to attract and retain customers. In addition, these platforms operate on a direct-to-consumer model, eliminating the need for an intermediate delivery channel, adversely impacting the position of current TV service providers and reducing their control over content distribution. As a result, it may become more difficult for us to protect and grow our TV subscriber base.

Since the CRTC's 2020 approval of SpaceX Starlink's application to provide low-earth orbit satellite internet service to rural Canadians, competitors, such as Amazon (Kuiper Project), Lynk and Telesat, have accelerated their efforts in this space. However, many of these satellite service providers are still awaiting approval to offer their services in Canada. Our Canadian competitors have also started exploring this market, seeking to provide satellite-to-phone services in remote areas by announcing partnerships with some satellite providers.

Erosion of our customer base for residential voice service and the decline of higher-margin legacy voice revenues are expected to continue, due to ongoing technological substitution by mobile and voice-over-IP (VoIP) services and other competitive pressures. This decline has been partially offset by incremental growth in overall demand and migration of customers to IP-based platforms and cloud-based solutions.

As a result of the pandemic, there has been a shift from legacy operational solutions to next-generation technologies, as businesses adopted solutions that enable remote working arrangements.

Non-traditional competitors such as Amazon, Google and Microsoft are entering the business market, leveraging their global scale to offer low-cost data storage and cloud computing services. In addition, rapidly evolving technologies, such as software-defined networking (SDN) and network function virtualization (NFV), enable the layering of new services in cloud-centric solutions.

In the markets in which TI competes, competitors are actively building scale through consolidation and enhancing digital capabilities through niche acquisitions. There has also been a sustained upward trend in the rate of employee attrition and labour costs in 2023, in particular at global IT companies, with demand for skilled talent generally driving higher wages worldwide.

In the markets in which TELUS Health competes, overall market trends show competitors expanding their product and service offerings with new digital solutions, as well as physical clinic openings, partnerships and acquisitions, in order to offer clients comprehensive and integrated wellness solutions. However, we believe that our clinical and digital wellness service offerings give us a competitive advantage in these markets.

Potential impact

Our customers' loyalty and their likelihood to recommend TELUS both depend on our ability to provide a customer experience that meets or exceeds their expectations, a range of relevant products and services, and reliable state-of-the-art networks.

Intense competition from mobile competitors, telephony, data, IP and IT service providers and VoIP-focused competitors in both the consumer and business markets, along with various promotional offers, inclusive bundles and rate plans, has been placing more pressure on average revenue per subscriber per month (ARPU), churn rates and costs of acquisition and retention. In addition, technological substitution and technological advances across all key business and market segments have blurred the boundaries between broadcasting, internet services and telecommunications (see *Section 10.5 Technology*).

If one or more regional operators, meeting the related requirements, choose to leverage the MVNO and FTTP wholesale access regulations (discussed in *Section 9.4*) in order to launch wireless or wireline services, new participants will enter the market. This will significantly transform the competitive environment and the market dynamics within the Canadian telecom industry. In addition, it is important to consider the potential impact of the wholesale rates set by the CRTC for FTTP access and the commercially negotiated rates for MVNO access. If these rates are too low, facilities-based carriers, such as TELUS, may face challenges in the timely recovery of the costs associated with investing in wireless and FTTP infrastructure. This could put pressure on in-market rates, impacting the overall profitability of our wireline and wireless lines of business.

In the short term, low-earth orbit satellite internet services may not have a significant impact on mobile network operators, as these services are primarily being offered in underserved regions. In addition, satellite internet service providers are also facing challenges in managing network resources and ensuring reliable service delivery as a result of higher infrastructure costs, regulatory barriers and spectrum constraints. However, in the long term, if these services were to become available in urban areas, our business operations could be adversely affected. Hyperscalers such as Amazon may offer bundled services, including free or below-market cost products, which could potentially erode our market share.

If TI is unable to compete successfully against companies that offer similar services, or to offer its clients a compelling alternative to the in-house provision of services, the results could include lower business volumes, higher client churn rates, service price

reductions, revenue loss, pressures on recruitment and retention of team members, an increase in marketing and promotional expenses, and lower operating margins, which could have a material adverse effect on our business operations, financial performance, financial condition and cash flows.

We also face intense competition in the provision of health, agriculture and digital technologies and services from companies that offer similar technologies and services. If we are unable to effectively differentiate our offerings in these sectors, our business operations, financial performance, financial condition and cash flows could experience materially adverse impacts, and we may not realize the benefits of the significant investments we have made in acquiring, integrating and growing businesses in these sectors.

Mitigation

Our top corporate priority is putting our customers first and earning industry leadership in their likelihood to recommend. To enhance the customer experience, we continue to invest in our products and services, system and network reliability, team members, and system and process improvements, including digitization. Additionally, in our product life cycle management processes, we endeavour to add new and innovative products and services through research and development, partnerships and acquisitions, while also enhancing our current services with integrated bundled offerings and investing in customer-focused initiatives that provide more transparency and simplicity for our customers, all to differentiate ourselves from our competition. In 2023, we implemented a significant cost efficiency program across our global footprint, including TI, which involved workforce reductions, in response to the evolving regulatory, competitive and macroeconomic environment we currently face. The efficiency program is expected to meaningfully streamline our operating costs and offset competitive pressures impacting revenue.

Our 4G network technology covers approximately 99% of Canada's population, which has enabled us to establish and maintain a strong position in smartphone and data device selection and expand roaming access to more than 225 global destinations. To compete effectively across all segments of the consumer markets, we offer a wide range of services through our TELUS, Koodo and Public Mobile brands. Each brand has a unique value proposition and web-based channel (see *Our capabilities* in *Section 4.1* and *Our major brands and distribution channels* in *Section 4.2*). We continue to build out our 5G network across Canada, including major cities, and it now covers approximately 86% of Canada's population as at December 31, 2023. As we expand our 5G coverage, including operationalizing spectrum, we will continue to offer a network that is fast, reliable and built in full compliance with Health Canada safety guidelines, in order to provide our customers with faster speeds, higher capacity and near-instantaneous responsiveness, while also powering smarter cities, supporting the work of first responders, and transforming key verticals such as healthcare and agriculture (see *Our technology, systems and properties* in *Section 4.2*).

We are continuing to make significant investments in our broadband infrastructure, including connecting more homes and businesses directly to our fibre-optic network and migrating customers from copper-based to fibre-optic services. As at December 31, 2023, approximately 3.2 million households and businesses in B.C., Alberta and Eastern Quebec were connected with fibre-optic cable, providing these premises with immediate access to our fibre-optic infrastructure. This is up from approximately 3.0 million households and businesses at December 31, 2022. Our broadband investments extend the reach and functionality of our IP TV services and business and healthcare solutions (see *Our technology, systems and properties* in *Section 4.2*).

Our IP TV and OTT multimedia initiatives (including Optik TV and Stream+) support the next generation of IP TV and, importantly, tie our OTT environment to a single platform, which allows us to be agile in the delivery of OTT services, such as Amazon Prime Video, Apple TV, Discovery+, Disney+, Netflix, Crave and YouTube, while also reinforcing our leadership position in Western Canada in the provision of high-definition linear channels, video-on-demand services and ultra-high definition 4K HDR content. Our strategy is to aggregate and integrate content and applications and make them accessible for our customers' enjoyment, on a timely basis across multiple devices. We have demonstrated that it is not necessary to own content in order to make it accessible to customers on an economically attractive basis, provided there is timely and strict enforcement of the CRTC's regulatory safeguards. In addition, as more OTT service providers launch new services and offer higher-resolution video over the internet, we continue to make investments in our network.

We also continue to monitor and assess developments related to the MVNO and FTTP wholesale access regulations, and we remain vigilant and proactive in assessing the potential impacts on our operations, market position and overall business strategy. It is essential for us to adapt and respond effectively to any changes in the competitive landscape that may arise from the implementation of these regulations. As such, we remain committed to safeguarding our business interests and capitalizing on emerging opportunities.

We continue to add to our capabilities in the business market through product development, acquisitions and partnerships and investments in SD-WAN, unified communications, IoT and digital services. We created GoCo, an organization that quickly became one of Canada's leading providers of some of the fastest-growing solutions in this market, such as SD-WAN and unified communications.

To meet client expectations, TI provides an experience that is not only personalized and empathetic, but also consistent and integrated across omni-channel touchpoints. To quickly capture, evaluate and adapt to customer feedback on a global scale, it has built a team with expertise in advanced analytics, AI, machine learning and data management, together with leading digital technologies. Where TI experiences pressure on its profitability as a result of a challenging competitive environment and, consequently, sees a volume decline, it actions cost efficiency efforts aimed at optimizing the alignment of its support costs with current demand to drive improvements to its bottom line. On an ongoing basis, it strives to continuously iterate and improve upon its operations to optimize the overall efficiency of its organization, enhance operating leverage and margins and better serve its clients. It has also built an agile delivery model on a global scale, with substantially all of its delivery locations connected through a carrier-grade infrastructure backed by cloud-based technologies, enabling globally distributed and virtualized teams. In 2023, TI implemented a focused review of its sales organization and strategy, with support from TELUS, to align with its established best-practices. The review focused on a number of key strategic and operational improvements, including aligning TI's organizational structure and skill sets with its go-to-market strategy, looking for opportunities to improve client diversification, enhancing its revenue forecasting and reporting capabilities, implementing sales process improvements and augmenting them through the use of technology and AI and implementing practices to better leverage its customer relationships and cross-selling opportunities. In October 2023, TI announced the launch of Fuel iX, its solution incorporating GenAI to deliver end-to-end CX innovation and AI-fuelled intelligent experiences (iX). With Fuel iX, TI is providing a comprehensive suite of services, combining digital consulting, data services and analytics, web and mobile application development, and an AI-fuelled platform. The solution enables companies to overcome disjointed data and organization silos, and embeds AI in day-to-day CX operations and workflows. However, TI's primary competitive differentiator is its unique workplace culture, which makes people and a shared set of values a priority in everything it does. It continues to build on this culture of care, ensuring the full engagement of the individuals it chooses to join its team – and the clients and suppliers it chooses to work with – as it builds and runs its business. TI's focus includes organic growth, accelerating digital adoption for all solutions and service offerings, with an emphasis on collaborative innovation. It also continues to consider mergers and acquisitions, such as its acquisition of WillowTree, as described in *Section 10.10*, in executing its growth strategy, adding scale and digital capabilities. In the current evolving labour market, the ability to attract and retain talent is key to operational success. It continues to adapt models and practices by assessing the regional conditions of the markets it operates in and by offering proactive compensation and talent programs.

TELUS Health has continued to leverage our systems, proprietary solutions and third-party solutions to extend our growing footprint in healthcare and capture the benefits of investments in health and wellness by governments and employers. Through the launch of new services and the ongoing enhancement of our portfolio of clinical and digital health offerings, we are entering new markets and further differentiating ourselves from our competitors.

TELUS Agriculture & Consumer Goods has continued to help companies improve the reliability of their supply chains, protect their brands and drive efficiency and profitability. As one of the few service providers with a perspective that spans the complete value chain, we expect to be able to differentiate our offerings from those of more narrowly focused competitors.

We continue to execute our disciplined long-term strategy of investing in our growth areas and delivering on our customers first priority. We intend to continue to market and distribute innovative and differentiated services; offer bundled services across our consumer and business portfolios; invest in our extensive network and systems to support customer service; evolve technologies; invest in our distribution channels, including our digital capabilities; and acquire the use of spectrum to support the development of our service offerings and the expansion of our subscriber base, as well as to address the accelerating growth in demand for data.

10.5 Technology

Risk category: Strategic

We are a technology-enabled company and we maintain short-term and long-term strategies to optimize our selection, costs and deployment of technology, minimize risks and uncertainties and diversify our product and service offerings. Our 5G technology, 4G LTE technology, LTE advanced (LTE-A) and TELUS PureFibre infrastructure are foundational to our future growth (see *Our technology, systems and properties* in *Section 4.2*).

Any acceleration in the paradigm shift involving customer adoption of alternative technologies, such as video and voice OTT offerings, IP voice and collaboration services, network-as-a-service (NaaS), supported by a widely distributed and accessible Wi-Fi network, could negatively affect our revenue streams. OTT technology may also impact the business environment by enabling capabilities that in the past were associated with telecommunications service providers (e.g. cloud-based services and roaming). The proliferation of low-power wide-area (LPWA) IoT networks and services also presents challenges arising from low bandwidth usage, which may put additional pressure on our revenue streams. The implementation of low-earth orbit satellite and wireless connectivity over non-terrestrial networks will present new challenges for our product and service offerings. However, this non-terrestrial connectivity can also be leveraged in remote networks, which will generate new revenue opportunities and enhance network resiliency. In addition, we are constantly focused on advances in cybersecurity, in order to identify any opportunities they may offer.

Our open radio access network (ORAN) deployments, combined with core network and cloud-based initiatives, demonstrate our strategic intent to remain at the forefront of 5G network innovation, as well as driving long-term total cost-of-ownership benefits. The risks involved in new ORAN technology deployment are being mitigated by leveraging key strategic partnerships and by recruiting leading subject-matter experts to our development and support roles. ORAN technology is also offsetting our exposure to a significant supply chain risk associated with the traditional radio access network supplier ecosystem by expanding the pool of suppliers, offering a much wider range of choices. In addition, ORAN technology eliminates the risk associated with having to replace all radio access network components when upgrading a single component sourced from a different supplier.

As a global organization, our success relies on the effective utilization and management of advanced technologies. The rapid evolution of the technology landscape, including incremental technology sprawl and the introduction of new, non-standard technologies, presents both opportunities and risks that can significantly impact our operations, financial performance and competitive position.

TI constantly strives to develop and adopt new technologies to expand its existing offerings, proactively identify new revenue streams and improve cost efficiencies in its operations, all while meeting rapidly evolving client expectations. Recent and rapid developments with respect to the popularization and commercialization of AI have created additional opportunities for and pressures on TI. These opportunities and pressures include the need to develop AI-related offerings to meet customer expectations and remain competitive, as well as the integration of AI into its business processes and tools to create cost efficiencies.

Technology risks to TELUS Health are specific to addressing data residency requirements to align with customer contractual and governmental expectations, alleviating technology debt acquired through numerous acquisitions, and bolstering our security posture through a targeted program to identify and remediate deficiencies. Technology debt includes end-of-life hardware and software, inadequate customer and team member identity capabilities, and a lack of a holistic view of our technology footprint to address business continuity, reliability and integration-specific requirements.

Our innovative TELUS Agriculture & Consumer Goods technology offers value chain participants with powerful solutions that leverage advanced data systems and AI to drive valuable insights at various stages of production. While we are dedicated to maintaining and expanding our product and service offerings, some solutions are still in the early stages of development and implementation, which may not effectively respond to or meet our clients' expectations. Future advancements in technologies or alternative solutions could surpass or outperform our current offerings, which may reduce our clients' interest and our ability to attract new clients.

Changes over the past 12 months

Over the course of 2023, we continued to make significant investments in advancing and deploying our next-generation technologies, which will support and enhance our delivery of a superior customer experience (see *Our technology, systems and properties* in *Section 4.2*).

Potential impact

Our mobile business depends on deploying technology and maintaining sufficient access to spectrum to support the delivery of our services. Rising levels of data traffic and the rapid pace of data device innovation present challenges to providing adequate capacity and maintaining high service levels with competitive cost structures.

Our growth and profitability and the diversity of our revenue sources will depend on our ability to develop and deploy new technologies that help us expand our existing offerings, as well as proactively identifying new revenue streams and driving cost efficiencies across our operations, while also meeting rapidly evolving customer expectations. We may not continue to be successful in anticipating or responding to our customers' expectations and interests when we adopt evolving technology solutions and integrate these solutions into our offerings, and we may not achieve the intended enhancements or cost reductions in our operations. New services and technologies offered by our competitors may make our service offerings uncompetitive. Failure to innovate, maintain technological advantages or respond effectively and in a timely manner to changes in technology could have a material adverse effect on our business, financial performance, financial condition and cash flows.

Any failure to refresh critical infrastructure or remain up to date with advanced new technology may cause our products, services and IT infrastructure to become obsolete, given the rapid pace of technological evolution. Emerging technologies such as AI involve uncertainties, and failure to successfully integrate these technologies may impact our competitive position, cost structure and market share.

The successful integration of new technologies and systems, whether through acquisitions or internal development, is essential to deliver reliable products and services seamlessly. Integration challenges, such as interoperability issues and inconsistent technology standards, may lead to higher IT costs, operational disruptions, customer dissatisfaction and exposure to new cybersecurity risks.

Mitigation

Our ongoing investments in 4G LTE technology, including LTE-A technology and new 5G capabilities, allow us to manage new demands for data capacity by more effectively utilizing our spectrum holdings. The evolution to 5G technologies is supported by our investments in our core network, IP network and IP/fibre back-haul to cell sites, including our small-cell infrastructure, as well as our software-upgradeable radio infrastructure. The 5G expansion is expected to further increase network capacity and speed, reduce delivery costs per megabyte, deliver a superior subscriber experience, and enable innovative new applications for consumers and businesses.

Mobile network investments are increasingly being directed to virtualized infrastructure and cloud-native systems, which offer greater capacity for computing and storage, higher levels of resiliency and more flexible software design. Our large-scale move to national, geographically distributed private cloud-based facilities that use commercial off-the-shelf computing and storage solutions enables the deployment of broad-scale SDN and NFV technologies. This will allow us to virtualize much of our network infrastructure. The distributed smaller-scale computing power and storage deliver services faster while accommodating the need to continually scale the IP/fibre core network infrastructure.

Rapid growth of data volumes requires efficient utilization of our spectrum licences. We have begun deploying 5G spectrum, including spectrum in the 600 MHz and 3500 MHz bands, while recently acquired spectrum in the 3800 MHz band will be vacated by its current users between 2025 and 2027. Our deployment of small-cell technology is helping us achieve a more efficient utilization of our spectrum holdings and offset any potential speed and capacity disadvantages created by 3500 MHz availability.

By leveraging our seamless global IoT connectivity across more than 200 countries and networks, we continue to add to our IoT portfolio, expanding our offerings with a wide variety of solutions that support the management of assets on the move, such as fleet telematics, and solutions that are enabling the evolution of smarter, more sustainable buildings, including security and energy management applications. We are also capitalizing on advanced self-learning technologies and automation (e.g. AI and robotic process automation), which will change the way we manage our operations and support customer experience innovation, as well as presenting new revenue opportunities. Refer to Section 10.7 *Generative AI* for more information. In addition, we are continuing to focus on cybersecurity solutions, recognizing that cybersecurity, as an ecosystem of technologies and processes working together, may raise the visibility of enterprise risk and inform better security decisions for organizations across Canada.

Ongoing investments in FTTP, along with the decommissioning of our legacy copper network within our fibre footprint, should enable cost efficiencies as we move services to a single fibre network, as well as opportunities for real estate monetization of select central offices. The transition will also support the further evolution of IP-based telephony, and as those services evolve, we continue to assess opportunities to consolidate separate technologies within a single voice service environment. The overall convergence of mobile and fixed services provides opportunities for cost savings and for the rapid development and deployment of advanced new services. To support this convergence within a common IP-based application environment, we are leveraging modular architectures, lab investments and employee trials. We are partnering with system integrators where appropriate, purchasing hardware that is common to most other North American IP-based technology deployments, and introducing virtualization and cloud-native technologies where feasible. We are also active in a number of standard-setting bodies, such as the Metro Ethernet Forum, in order to advocate for new IP infrastructure governance that leverages standards-based functionality, which could allow us to further simplify our network.

To ensure our solutions remain innovative, competitive, reliable and secure, and align with industry standards, we maintain a comprehensive technology road map, with ongoing investments in refreshed technology, research and development, and product innovation through partnerships with select global hyperscalers. In addition, we have implemented a robust post-acquisition technology program, aligned with our technology road map, to mitigate the risks associated with technology sprawl and non-standard technologies.

We continue to focus on growing our product and service portfolios in health and agriculture and supply chain technology in sectors where TELUS Health and TELUS Agriculture & Consumer Goods have leading market positions, a robust brand profile and superior product technologies.

10.6 Security and data protection

Risk category: Strategic

As a national provider of data, information and communications services, we have a perspective extending beyond that of individual organizations. We leverage this insight and understanding to monitor and identify security-related trends as they evolve across the wider threat landscape. The risks outlined below reflect both our experience and the trends we have observed in that wider landscape.

A number of our assets may be exposed to risks involving intentional threats. These include physical assets that may be vulnerable to terrorist attacks, vandalism and/or theft, including, but not limited to, cellular towers, distributive fibre and copper cable, corporate stores, network and telephone switch centres, and elements of corporate infrastructure.

Cyberattacks that penetrate the network security of our data centres, products and systems, or any unauthorized disclosure of, or access to, the personal information or confidential data of our customers and clients or their end customers, could have a negative impact on our brand and reputation and customer confidence, all of which could have a material adverse effect on our business operations and legal liability, as well as our financial performance. TELUS Health operates data centres and cloud infrastructure that collect and manage data on behalf of customers, including sensitive personal health information, which may move across our interconnected operational and business support systems and networks. Personal health information is known to be a prime target for these forms of attack. Breaches involving personal health information may have significant financial implications, while also damaging our reputation and the trust of our customers, and may adversely impact future health outcomes. In addition to data security risk, the use of sensitive personal information by our businesses in all jurisdictions in which we operate may expose us to the risk of non-compliance with the law where such use is unauthorized, or may compromise perceptions of our brand or ethical standards where such use is seen as inconsistent with customer expectations or social norms.

A number of TI's service contracts provide for high or unlimited liability for the benefit of its clients in relation to any damages resulting from breaches of privacy or data security associated with TI's provision of services.

Although our network security measures and our procedures for the authentication of customer credentials are designed to protect against unauthorized disclosure, alteration and destruction of, and access to, data on our networks, it is not possible for such security measures to be perfectly effective. There can be no assurance that such measures will function as expected or will be sufficient to protect our network infrastructure against specific attacks, and there can also be no assurance that such measures will successfully prevent or mitigate service interruptions or other security-related incidents. All network infrastructure is vulnerable to rapidly evolving cyberattacks, and our user data and corporate systems and security measures may be breached due to the actions of outside parties (including malicious cyberattacks), team member error, malfeasance, internal bad actors, a combination of these, or other circumstances. A breach may allow an unauthorized party to obtain access to or exfiltrate our data or the data of our customers or clients. In addition, outside parties may attempt to fraudulently induce our team members, users, customers or clients to install malicious software, disclose sensitive information, access credentials or take other actions that may provide access to our data or the data of our users, customers or clients. Because networking and computing environments are increasing in complexity and the techniques used to obtain unauthorized access, disable or degrade service or sabotage systems may change frequently, become more sophisticated over time or remain dormant until a predetermined event and thus avoid detection until deployed against a target, we may be unable to anticipate these techniques or put in place adequate preventative measures. If an actual or perceived breach of our security measures occurs (or a breach of the security measures of a third-party vendor, customer or client that can be attributed to our failure or is perceived to be our fault), the market perception of the effectiveness of our security measures could be negatively affected and we could lose users, customers and clients. Security breaches also expose us to risk involving loss of information, as well as class action or other litigation brought by both customers and clients and by individuals whose information may have been compromised, or to risk involving remediation costs, increased costs of security measures, loss of revenue, damage to our reputation and potential liability.

Changes over the past 12 months

The cybersecurity threat landscape in 2023 has been marked by a significant increase in social engineering attacks directly targeting our team members and employees of our third-party vendors. These attacks, often perpetrated by organized cybercriminal groups, involve persuading the targeted individuals to share their access credentials, which are then used to exfiltrate data or carry out unauthorized changes in our customers' accounts. While the method is neither new nor sophisticated, the number of these attacks has been rising rapidly since mid-2022, when the trend was first identified.

Another emerging threat in 2023 involves the popularization of generative AI. As the technology becomes more sophisticated and accessible, threat actors are beginning to leverage it as a powerful new social engineering tactic to create attack campaigns that are more efficient and much harder to identify than in the past. In particular, advances in "deep fake" videos and voice recordings generated by AI may make it more difficult for us to equip our team members to recognize them.

Potential impact

Physical security threats can expose both our team members and our infrastructure, systems and networks to the risk of significant harm, which could include personal injury, destruction of property and loss of service and/or data.

Along with the rapidly evolving nature and sophistication of these threats, we and our partners may also experience malfunctions or deficiencies in software or equipment or other systems or network assets that could result in unauthorized access to, or change, loss or destruction of, our data. These malfunctions could compromise the privacy of individuals, including our customers, team members and suppliers, and could expose other sensitive information.

A successful disruption of our systems, networks and infrastructure, or those of third parties, including our suppliers, vendors and partners, may prevent us from providing reliable service, impact the operations of our networks, or lead to the unauthorized interception, destruction, use or dissemination of our information or our customers' information. Such disruption, whether physical or digital, or unauthorized access to our data could cause us to lose customers or revenue, incur expenses or experience damage to our goodwill and reputation. In addition, such damages could result in costs arising from investigative efforts, replacement or restoration of assets and potential civil lawsuits or fines imposed by regulatory bodies.

While we believe our team members receive appropriate training, if any person, including any of our team members, negligently disregards or intentionally breaches any controls or procedures with which we are required to comply in relation to a customer's data, or otherwise mismanages or misappropriates that data, or if unauthorized access to or disclosure of data in our possession or control occurs, we could be exposed to significant liability. This would include liability to our customers and the clients of TI, or the customers of those clients, as a result of breaching contractual confidentiality and security provisions or permitting access to personal information protected by privacy laws, as well as liabilities and penalties in connection with any violation of applicable privacy laws or criminal prosecution. Unauthorized disclosure of sensitive or confidential customer, client or team member data, whether through breach of computer systems, systems failure, team member negligence, fraud or misappropriation or otherwise, could damage our reputation and cause us to lose customers and clients and result in liability to individuals whose personal information has been compromised.

Similarly, unauthorized access to our information systems and networks, or those we develop or manage for our customers and clients, whether by our team members or third parties, could result in negative publicity, damage to our reputation, loss of customers, clients or business, class action or other litigation, costly regulatory investigations and other potential liability.

Our operations, including the business operations of TI, TELUS Health and TELUS Agriculture & Consumer Goods, are increasingly conducted across a wide range of locations in a number of jurisdictions. Global business activities are associated with a more complex regulatory privacy environment and an elevated exposure to compliance risk. The European Union has comprehensive data governance laws with significant enforcement powers, such as penalties based on a percentage of gross global revenues. For example, non-compliance with the European Union General Data Protection Regulation could result in a fine of up to 4% of our annual global revenues and orders requiring us to stop processing certain personal data. Other jurisdictions in which we operate may also expose us to different regulatory and liability risks related to data security issues, such as data breaches. Shifting social perceptions also increase brand risk, as customer expectations in relation to transparency and ethical practices in the management of data and personal information are heightened.

Mitigation

Our security program addresses risk through a number of measures, including:

- Security reviews of third-party connections, identifying risks and developing plans for remediation
- Added security due diligence for new business acquisitions to ensure their security measures meet the standards and level of risk mitigation we have in place for our existing infrastructure and applications
- Security awareness programs
- Critical controls based on policies, standards and methodologies that are aligned with recognized industry frameworks and practices
- Monitoring of external activities by potential attackers
- Rapid security incident response
- Recurring security evaluations of our higher-risk assets
- Identification and regular re-evaluation of our exposure to known security risks
- Regular reviews of our standards and policies to ensure they address current needs and threats
- Regular reviews of our business continuity and recovery planning processes that would be invoked in the event of a disruption
- A privacy and security impact assessment process

- A secure-by-design process that incorporates security provisions into new major initiatives across TELUS.

Incident response is a critical component of internal control across our organization. Our technical capabilities help us identify security-related events, respond to potential threats and adjust our security posture appropriately. In addition, our approach to cyber-hygiene includes regular vulnerability assessments and the prioritization and remediation of any identified exposure through patching or other mechanisms. Our security office also works with law enforcement and other agencies to address ongoing threats and disruptions, and provides awareness training to our team members to help them better recognize and report threats.

Our Data and Trust program addresses data privacy and data governance risks through a number of mechanisms, including:

- The TELUS privacy commitment and code (additional information can be found at: **telus.com/en/about/privacy/commitment-code**)

- The TELUS Health privacy commitments (additional information can be found at: **telus.com/en/health/about-telus-health/privacy**)

- The TELUS privacy management program, which includes a framework for the identification, mitigation, monitoring and reporting of privacy risk. This framework has been made available to all of our team members, as well as our customers (additional information can be found at: **telus.com/en/about/privacy/management-framework**)

- Our robust data governance model, which addresses the operational risks associated with the use and management of personal data, with guidance on the risks associated with data, the importance of respecting the confidential nature of customer data and the essential objective of maintaining customer trust

- Our data enablement plan process and data risk management process, which supplement the existing mechanisms for the early identification, assessment, treatment and monitoring of data privacy risks. These processes are supported by a growing network of trained business data stewards deployed across our operating units. The business data stewards provide more informed practical insight and monitoring for data governance.

10.7 Generative AI

Risk category: Strategic

The advent of widely available GenAI presents promising opportunities for more advanced automation and improved communication, but may also involve risks to our strategy, security and brand. GenAI refers to a subset of AI that is focused on the generation of new and original content, such as images, text or music, based on patterns and examples from existing data. Its deep learning algorithms generate content that has not been explicitly programmed. Other applications of machine learning that analyze big data are outside the scope of this definition; however, GenAI poses an unusual risk due to its accessibility and its rapid adoption outside of TELUS. Recent and rapid developments with respect to the popularization and commercialization of AI have created additional opportunities for and pressures on TELUS.

Part of TI's business strategy for future growth is based on the assumption that a significant portion of its services will continue to be delivered through automation, including through the use of AI. It may face negative public reaction to increased automation, for example, because its use may result in the reduction of employment positions. Further, the use of AI or the other technologies by TI or by its clients could reduce the demand for many of its service offerings. This may be particularly true with respect to revenue derived from its customer experience (CX) business, which may be negatively impacted by the introduction of AI capabilities into its marketplace. TI also uses tools for content moderation that are based on machine learning and predictive analytics, which can create accuracy issues, unintended biases and discrimination outcomes that could lead to errors in content moderation decisions, which could potentially, in turn, harm TIAI and its clients' brands and otherwise adversely affect its business.

Changes over the past 12 months

While GenAI existed prior to 2023, its diversity and accessibility have grown exponentially in the past 12 months. Over that time, we have launched and frequently iterated, a secure internal GenAI tool that incorporates many compelling features and is intended to offer our team members a safe alternative to external and publicly available applications like Midjourney and ChatGPT.

In October 2023, TI launched Fuel intelligent experiences (iX), an enhanced client solution that leverages the power of GenAI to deliver innovative end-to-end customer experiences and AI-driven intelligent interactions.

Refer to *Regulatory matters* in *Section 10.3* for more information on the proposed changes to federal and provincial privacy legislation with respect to the use of AI.

Potential impact

Today, organizations are being exposed to new and heightened risks arising from rapid technological advances, particularly in the realm of GenAI. GenAI can produce false or irrelevant information due to its ability to generate novel and unpredictable outputs. The utilization of GenAI also raises significant concerns related to the privacy of sensitive data, including the potential dissemination of confidential information or the misuse of personal data, as well as the generation of content that may infringe upon copyright or intellectual property rights. Any breaches of our internal data management and security measures could result in the dissemination of sensitive information, leading to reputational damage and possible legal consequences (see *Section 10.18 Litigation and legal matters*).

GenAI may incorporate or amplify biases that are inherent in its underlying training data. Any biases in those datasets subsequently prompt the application to produce content that is also biased. Biases inherent in training data may result in inaccurate, missing, misleading or potentially offensive content, which in turn, may give rise to risks related to our decision-making, privacy and brand.

The use of AI or other automation technologies for our TIAI business may have negative perceptions by public and private companies and related legislative efforts in economies around the world could have adverse impacts on the demand of our services.

Mitigation

AI has the potential to transform business and society, but only if stakeholders continue to have confidence in the technology and trust in its use and users. Our approach to using AI is grounded in our customers first commitment. TELUS has established a Trust Model, which advocates for the responsible use of data in a way that builds trust by creating value, promoting respect and ensuring data security. Our responsible AI program sets out principles and guidelines for the ethical and responsible development, implementation and management of AI technologies within our organization. We believe that the responsible use of AI will help us serve our customers better, and will also support a friendly future.

As a world-leading communications technology company, we have established a GenAI Board. This board provides governance and oversight for the commercialization of GenAI opportunities and fosters sustainable proficiency in GenAI across all TELUS teams. Our responsible AI program provides a framework that supports the human-centric adoption of GenAI, including adversarial testing practices and guidance on prompt engineering.

We have taken a national leadership position in responsible AI, proactively consulting with our ecosystem of stakeholders regarding the development of AI regulations. TELUS is the first company in the Canadian telecommunications industry to sign the ISED voluntary *Code of Conduct*, enabling us to demonstrate leading practices in our industry while formal regulations are still in development. See *Section 10.3 Regulatory matters* for more details.

At TI, to support changes and developments in the regulatory landscape with respect to AI, we have increased and enhanced our specialized resources to track these developments and help guide our employee training, customer communications and strategic planning. These resources focus on aligning with industry best practices and helping us keep pace with, and in some cases ahead of, regulatory requirements. Further, by keeping apprised of developments in the AI space, these resources help us to continue to innovate, support technological advantages and enable us to respond effectively and timely to changes in technology, all while keeping pace with regulatory changes. Where customers are looking to other vendors to deploy AI-based technologies, we distinguish ourselves by providing what we believe to be higher quality, more comprehensive and expertise-backed services. There is concern amongst our team members, potential candidates for employment with us, our suppliers and customers and the public in general regarding the use of AI and the potential impact its use might have on employment opportunities with TI. To counteract this, we are taking the opportunity to upskill our employees. Through this initiative, we provide our employees with more value-added and challenging work, while also offering them development opportunities, higher job satisfaction, and maintaining our caring culture.

10.8 Climate and the environment

Risk category: Strategic

Our operations, infrastructure, team members, suppliers, customers and communities are exposed to climate-related physical risks, which include extreme weather events and other natural hazards. We may also be exposed to transition risks related to climate change, such as the impact of changes in legislation or regulatory policies, or the deployment of lower-emission technology.

Our data and voice communications infrastructure, including TI delivery locations in Africa, Asia Pacific, Europe and the Americas, may be damaged or disrupted by natural disasters or extreme weather events, including those resulting from, or exacerbated by, climate change, such as earthquakes, floods, volcano eruptions, heavy rains, winter storms, extreme heat waves, tsunamis and cyclones; epidemics or pandemics; technical disruptions and infrastructure breakdowns, including damage to, or interruption of, electrical grids, transportation systems, communication systems or telecommunication cables; issues affecting information technology systems and networks; accidents and other events, such as fires and floods, as well as the failure of fire suppression and detection, heating, ventilation or air conditioning systems; or other events, such as protests, riots, labour unrest, security threats and terrorist attacks. Any of these events may lead to the disruption of information systems and telecommunications services for sustained periods, cause delays and inefficiencies in providing services to clients and potentially result in the closure of our operating sites. They also may make it difficult or impossible for team members to travel to, or work in, our business locations. Some locations may not be well-suited for our team members to work from home due to insufficient connectivity, gaps in external infrastructure or the nature of the work itself.

Certain areas of our operations are subject to environmental considerations, such as the construction of telecommunications infrastructure, handling and disposing of waste, electronic waste or other residual materials, managing our water use, and responding to spills and releases. The pace at which we can reduce emissions of greenhouse gas (GHG) depends on a variety of factors that can change over time. Our most significant sources of scope 1 and 2 GHG emissions include, but are not limited to, the direct and indirect supply of energy use at our owned and leased real estate properties in Canada, cell tower sites and vehicle fleets, as well as the supply of fuel to remote generator sites, which is within our operational control but involves other risks. Some areas of our operations are also subject to evolving and increasingly stringent federal, provincial and local environmental and health and safety laws and regulations. These laws and regulations impose requirements with respect to matters such as the release of certain substances into the environment, corrective and remedial action concerning such releases, protection of sensitive ecosystems and associated wildlife habitat, and the proper handling and management of certain substances, including wastes.

Changes over the past 12 months

Along with the continued and widely shared concerns regarding the effects of climate change and other environmental impacts on our business operations, there are growing expectations and evolving global regulatory regimes for the disclosure of environmental and sustainability governance, strategies, metrics and targets and risk management practices, including climate-related scenario analysis. In its 2023 Status Report, the Task Force on Climate-related Financial Disclosures (TCFD) stated that the number of organizations expressing support for TCFD had grown to more than 4,800 globally, and many companies had begun to implement the TCFD recommendations. With the release of this report on October 12, 2023, TCFD has fulfilled its remit and disbanded. The Financial Stability Board (FSB) has asked the International Financial Reporting Standards (IFRS) Foundation to take over the monitoring of the progress of companies' climate-related disclosures. Our disclosure aligning with these recommendations can be found in our 2023 AIF.

Potential impacts associated with low levels of non-ionizing radio frequency (RF) emissions from mobile phones and cell towers have been a matter of public concern, and we anticipate that they will continue to be a public concern as we deploy 5G network technology, with the number of small cells in our infrastructure expected to increase as we continue to upgrade our network. There have also been concerns raised regarding the lead-sheathed cables in the networks of telecommunications companies.

Potential impact

Evolving public expectations and increasingly stringent laws and regulations could increase the costs of compliance, while failure to recognize and adequately respond to them could lead to penalties, regulatory scrutiny or damage to our reputation and brand. We may not be able to achieve our targets and objectives with respect to reducing GHG emissions, which may result in adverse publicity and damage to our reputation. Regarding the sustainability-linked bonds we have issued to date (between 2021 and through 2023), failure to achieve our sustainability performance target – a reduction of 46% in our absolute scope 1 and 2 GHG emissions by 2030 from a base year of 2019 – would trigger higher interest payments associated with these bonds through an interest rate step-up.

Damage or destruction that interrupts our provision of services could adversely affect our brand, our reputation and our relationships with our customers, clients, suppliers and stakeholders, and could also cause us to incur additional costs to repair or replace damaged network infrastructure, equipment or sites. Our resiliency provisions and disaster recovery plans may not be sufficient to support continuity and reliability of service during disruptions, or to limit the duration and impact of service outages. While we currently have commercial liability insurance, our insurance coverage may be insufficient or may not provide coverage at all for certain events. Furthermore, we may be unable to secure such insurance coverage at premiums acceptable to us in the future, or such insurance may become unavailable or unaffordable, as the insurance industry grapples with the impacts of climate change on its business models. Prolonged disruption of our services could also entitle our customers and clients to terminate their contracts with us or require us to pay penalties or damages. Any of the above factors may materially adversely affect our business operations, financial performance, financial condition and cash flows.

Mitigation

We have established a comprehensive emergency management and business continuity program that encompasses provisions for monitoring and preparedness, as well as mitigation, response and recovery. These programs enhance the safety of our team members, minimize the potential impact of threats to our facilities, infrastructure, business operations and our brand, support the maintenance of service to our customers, and help keep our communities and first responders connected.

The Corporate Business Continuity Office convened the Emergency Management Operating Committee (EMOC) to manage the impacts of a number of events in 2023, including the Quebec and Ontario ice storms and Hurricane Lee (Eastern seaboard, including Canada), and it remained activated from May through August to respond to the unprecedented wildfire season in British Columbia, Alberta, Ontario, Quebec, Nova Scotia and the Northwest Territories. Several other weather-related incidents, including flooding, wind storms and more regional wildfires, required enhanced preparation, monitoring and coordination, but were successfully managed by specialized operational teams without the need for an EMOC activation.

New TELUS community-based emergency management liaisons (emergency management primes) were trained and activated this year, facilitating exceptional community support and connecting with local Indigenous communities and governments, ISED, provincial emergency operations centres and evacuation centres, and communities affected by natural disasters. Teams provided technology and hardware to support emergency response with the rapid deployment of advanced temporary networks (portable cell towers) in isolated corridors, enhancing connectivity for emergency operations centres and evacuation centres. We donated essential supplies, food, disaster kits, consumables and assets where requested by our emergency management organization partners, as well as health services provided through TELUS Health.

We have continued our proactive mitigation efforts across the enterprise to address climate change-related events governed by our Climate Change Council. This forward-looking program helps prepare our teams through readiness checks and risk reviews to proactively fortify our network infrastructure and ensure operational resilience.

Specific initiatives include the launch of emergency response assets, structural mitigation, vegetation management, climate risk forecasting and mapping, and evolving standards for network build-out to address the rapidly changing environment. These efforts are ongoing, with clearly identified objectives and outcomes that extend several years into the future.

We continue to move forward on a number of projects and programs to reduce energy use – the primary source of our GHG emissions – such as lighting retrofits and network equipment upgrades, along with longer-term initiatives such as our vehicle fleet electrification program, which includes a fit-for-purpose component, as well as the installation of electric vehicle (EV) charging stations and real estate optimization.

We are committed to following sustainable and responsible business practices and making decisions that balance economic growth with social and environmental benefits. We have implemented award-winning sustainability and environmental governance practices and related disclosure. The review and monitoring of our approach to environmental, governance and sustainability matters is the responsibility of the Audit Committee and Corporate Governance Committee, acting on behalf of our Board of Directors. This includes our strategic plans and objectives, as well as our reporting on exposures to climate-related risks. Our Chief Executive Officer and Executive Team exercise oversight of climate-related risks and opportunities and provide approval of the overall strategic direction of our sustainability programs. Our Sustainability and Environmental Compliance team prepares quarterly reports for the Corporate Governance Committee, as well as other updates for the Board as required, on risks, targets and other key performance metrics related to climate change and the environment.

Disclosure in our sustainability and ESG report and other filings contains information pertaining to the governance and management of climate-related risks and opportunities.

An ISO 14001:2015 certified environmental management system is in place to identify and limit environmental impacts associated with our operations and to support compliance with regulatory requirements. The system is audited annually by a third party. We are continuing to identify new ways to reduce our environmental impact.

The federal government is responsible for establishing safe limits for human exposure to RF electromagnetic fields in Canada. We are confident that the mobile handsets and devices we sell, and our cell towers and other associated devices, comply, in all material respects, with all applicable Canadian and U.S. government safety standards. We continue to monitor new published studies, government regulations and public concerns about the health impacts of RF exposure. Stakeholder engagement is also ongoing as part of the regulatory process involved in the installation of new cell towers.

We have a very small number of lead-sheathed cables, representing less than 0.3% of our remaining legacy copper network. A large percentage of lead-sheathed cables have been removed, and more will be removed as we continue to implement our copper retirement strategy. The majority of the remaining lead-sheathed cables are underground, within a contained conduit structure (vault) that is inaccessible to the public.

10.9 Operational performance and business combination

Risk category: Strategic

We will partner, acquire and divest as necessary to accelerate the implementation of our growth strategy. In our pursuit of certain partnerships and acquisitions, we may seek opportunities to expand the scope of our existing services, add new customers or enter new markets around the world. There can be no assurance that we will successfully identify suitable candidates in the future for partnerships, for strategic transactions at acceptable prices or at all, or be able to complete any such transactions.

As we implement this strategy, we continue to experience rapid growth. We have significantly expanded our operations across new business sectors and geographic markets, and our workforce has grown significantly over the past several years. We expect to develop and improve our internal systems in the locations in which we operate in order to address the anticipated ongoing growth of our business. We are also continuing to look for delivery locations, service offerings and organizations outside of our current geographic operating regions in order to minimize the risks of operating in a limited number of countries and/or to expand our capabilities and customer value propositions. To deliver on this strategy, we must effectively manage our infrastructure and the expansion of our workforce, establish additional delivery locations or hire skilled team members as and when they are required to meet the ongoing needs of our customers and clients and to maintain our current growth trajectory, and we may need to extend or improve our internal systems. We must also manage cultural differences among our team members, including workers' council and trade unions, which may heighten our exposure to the risk of employment law claims and add to the complexity of our operations. Our inability to execute our growth strategy, to ensure the continued adequacy of our current systems or to manage our expansion, capital and other resources effectively could have a material adverse effect on our business operations, financial performance, financial condition and cash flows.

We have assets and operations located outside of Canada and the United States. In addition, the business strategies of TI, TELUS Health and TELUS Agriculture & Consumer Goods may involve further expansion or development of their business operations in Europe or in emerging market regions, including Africa, Asia Pacific and Latin America. The international nature of our business operations exposes us to various economic, political and other risks associated with doing business globally.

Changes over the past 12 months

Over the course of 2023, we made a number of acquisitions to support our growth strategy. Please refer to *Note 18* of the Consolidated financial statements for more information.

Potential impact

Business combination transactions may add to the complexity of our corporate structure, product and service offerings, and operational systems and processes. Robust due diligence and timely post-acquisition integration are necessary to ensure we realize potential synergies and achieve strategic growth.

We may be unable to successfully identify key risks during due diligence, complete the related transaction or successfully integrate our current or future acquisitions into our operations and culture within the expected timelines, or at all. We therefore may not realize the benefits of our current or future acquisitions and may be unable to manage the associated risks. Consequently, any acquisition we complete may not deliver the long-term benefits or synergies we had anticipated, and we may not be able to develop the acquired business in the manner we had planned.

The risks associated with doing business globally - and in particularly challenging emerging markets - may impede the execution of our strategy by limiting the countries and regions in which we are able to expand. The impacts of these risks may also emerge only after we have made investments and begun preparations to provide services in a new country or region. Our exposure to such risks may cause us to incur additional costs to mitigate the potential impact of these risks on our business. As we continue to operate our business globally, our success will depend, in part, on the nature and extent of any such impacts and our ability to anticipate, respond to, and manage these impacts effectively. Finally, international trade and political disputes can adversely affect the operations of multinational corporations like TELUS by limiting or disrupting trade and business activity between countries or regions. For example, we may be required to limit or halt operations, terminate customer or client relationships or forgo profitable opportunities in countries which may, in the future, be subject to sanctions or other restrictions on the business activity of corporations such as TELUS, by Canadian or U.S. legislation, executive order or otherwise. Some TI clients have been targeted by, and may in the future be subject to, such sanctions. Trade disputes between countries may also lead to unexpected operating difficulties in certain countries, including heightened regulatory scrutiny, new complications involving the repatriation of funds or negative impacts on currency exchanges. All of the foregoing could have a material adverse effect on our business operations, financial performance, financial condition and prospects.

Given the rapid rate of technological change, we may also look to partner and invest in emerging opportunities that may not yet be completely viable and established. These investments may require large levels of initial funding and experience low levels of initial adoption, growth and returns, all of which could impact our financial position in the short term.

Mitigation

To support ongoing investment in leading-edge and innovative technology, we have diversified our approach to allow for differing levels of investment, which we determine based on the relative maturity of a technology in its life cycle, its alignment with our strategy and its linkage with our value proposition. Through TELUS Ventures, we invest in line with our commitment to help develop exciting new technologies with the potential to deliver benefits for our customers, stakeholders and shareholders while minimizing risks. In addition, we continue to engage in partnerships that conduct research and development of leading-edge innovative technology and services in sectors such as healthcare, agriculture, security, home automation and entertainment.

Over time, we have built a disciplined corporate development and ventures expertise, with due diligence and post-acquisition integration planning, reinforced by a well-defined process and governance approach to evaluating investments, acquisitions and the alignment of workplace cultures. When a larger-scale business combination is contemplated, our teams follow a well-established and collaborative due diligence review process, with oversight provided by our senior leadership and Board. In addition, post-acquisition plans are developed to support onboarding, engagement and cultural alignment, as well as operational integration with our risk monitoring and management practices.

10.10 Customer service

Risk category: Operational

Our customers' loyalty, their likelihood to add to the services they engage us for, and their likelihood to recommend us all depend on our ability to provide a service experience that meets or exceeds their expectations and is differentiated from our competitors. Our service delivery teams focus on operational excellence and efficiency, implementing radical simplification, investing in digitization to enhance the customer experience and becoming best-in-class solution advisors, with the objective of safely minimizing the effort involved for our customers when they interact with us. Having our DLCX segment team members assist with the provision of customer service further strengthens our ability to continue delivering exceptional customer service.

Changes over the past 12 months

Customer expectations and preferences have changed as a result of the pandemic, affecting many areas of our service delivery. These include a major acceleration of our transformation into a digital-first organization and the proliferation of self-serve capabilities to help our customers. The related impacts have affected our teams around the world, requiring us to be agile in enabling team members to work with customers virtually through our virtual technician model (VTM) and do-it-yourself (DIY) capabilities.

Potential impact

Delivering sub-optimal experiences when our customers engage with us for the provision of services or support may negatively impact customer satisfaction, our portfolio of brands and our ability to grow our customer base, including customers of our telecom businesses, our DLCX segment, TELUS Health and TELUS Agriculture & Consumer Goods. Inadequate or inefficient customer interactions (e.g. order taking, support contact, service delivery, billing accuracy, and network and services reliability) may result in incremental customer dissatisfaction and rising churn rates. Failure to continue to execute effectively on organizational initiatives, such as our solutions advisor support, digitization and simplification, or our customers first priority, may lead to a deterioration in the customer experience we provide. Any significant or prolonged systems and service disruptions or outages may negatively impact customer satisfaction and our brands.

Our corporate sustainability and social purpose initiatives are an important part of our organizational culture and are key factors in attracting and retaining customers and employees and differentiating us from our competitors. If we are unable to meet or exceed the evolving expectations of our customers in these areas or implement our ambitious corporate sustainability and social purpose initiatives on a timely basis, and communicate them to our customers effectively, our reputation may suffer, which may negatively impact our ability to attract new customers and retain existing customers.

Our DLCX segment has realized a significant portion of its revenue from a limited number of large clients, and we believe this will continue in the near term. Google was our DLCX segment's largest external client for the year ended December 31, 2023, which accounted for 13% of its revenue, while a leading social media company was our DLCX segment's largest external client for the year ended December 31, 2023, which accounted for approximately 11% of its revenue. Additionally, the volume of work performed for specific DLCX segment clients or the revenue that generates can vary from year to year. For example, in the second quarter of 2023, our DLCX segment experienced a reduction in service volume demand from some larger clients that was more significant than expected. In addition, several key clients also began to aggressively reduce their costs, which has resulted in delays and near-term reductions in spending commitments. Any significant reduction in, or elimination of, the volume of services our DLCX segment provides as a result of client consolidation or our removal from a key client's provider network would reduce our DLCX segment's revenue and could negatively affect our business. In addition, such consolidation may encourage clients of our DLCX segment to apply more pressure to lower the prices it charges for its solutions.

Mitigation

Continued simplification and digitization, including our ongoing development of conversational interactive voice response and enhanced call-back capabilities, have improved first-time interaction experiences for our customers by reducing the number of call transfers and shortening wait times. We continue to enhance the reliability and functionality of our websites and applications, while promoting digital engagement to further simplify interactions for our customers and reduce the volume of calls related to basic transactions and other concerns.

We continue to build on our innovative capabilities to enhance our customers' experience. Harnessing the capabilities of AI, we have developed virtual conversational agents, or chatbots, that can provide automated responses to user queries, and implemented network business analytics to identify network issues, optimize performance and improve customer satisfaction. In addition, our field teams are focused on reducing the time they spend in each customer's home by retrofitting customer premises with DIY equipment and by updating our customers' understanding of billable professional services. This is in conjunction with the development of more advanced DIY installation and repair programs, as well as our VTM, which will drive further cost savings and offer more options for our customers. Our customers first commitment ensures that we consistently deliver an industry-leading customer experience, as our frontline team members provide better service and offer multiple transaction options. We prioritize first-call resolutions to resolve customers' concerns more efficiently, without the need for additional calls or service visits, enhancing both the customer experience and cost efficiency. We have worked diligently to minimize Commission for Complaints for Telecom-television Services (CCTS) by identifying patterns and providing more informed and personalized coaching to our customer experience agents, enabling them to effectively address our customers' underlying concerns.

TI was founded with an intensive focus on customer service excellence, continuous improvement and a values-driven culture with the strategic objective of better serving a growing portfolio of global clients. Through TI, customer care and business services are delivered from within a unified TELUS-wide culture by a flexible team with more than 75,000 team members in 32 countries, minimizing business disruptions. We acquired WillowTree in early 2023, which augmented the premium front-end design and build capabilities that TI offers to its clients.

Through TELUS Health, we deliver healthcare technology solutions, health and well-being services, and financial and administrative products and services to our customers. TELUS Health's employee and family assistance programs (EFAPs), which include mental health and well-being solutions, present a significant global growth opportunity that we are introducing to our customers. We have also developed a hybrid approach to the implementation of our software solutions to better facilitate the delivery of healthcare services to our customers. During 2023, 610.3 million digital health transactions (service utilization) were recorded.

We are committed to making a difference by building stronger, healthier communities, as described further in *Section 3 Corporate priorities*.

10.11 Our systems and processes

Risk category: Operational

We are a key provider of essential telecommunications and security services in Canada. Through TI, we provide digital customer experience services to global brands, and through TELUS Health, we ensure optimal care is made possible by combining the power of technology and data with the provision of market-leading experiences. Within TELUS Agriculture & Consumer Goods, we leverage technology and data to improve the flow of information across the agricultural, food and consumer goods production industries in Canada and internationally. Our success depends on our ability to deliver reliable and continuous services to all of our customers.

We have a large number of interconnected operational and business support systems. Acquisitions and the development and launch of new services typically require significant systems development and integration efforts. If these activities are not effectively managed, they could expose us to potential cybersecurity, privacy and brand risks. As leading-edge services are introduced, they must work with next-generation systems, frameworks and IT infrastructures, while also being compatible with legacy services and support systems. In addition, our large enterprise deals may involve complex and multi-faceted customer-specific enterprise requirements. These requirements may include customized systems and reporting needs to support service delivery, which may delay or lengthen the implementation cycle and further delay revenue recognition. For TI, the contracts it enters into with its clients may have prolonged

contract negotiation periods, some clients may require a pilot program or there may be prolonged ramp-up periods, which may also delay its ability to recognize revenue.

Changes over the past 12 months

Like other organizations, we rely on third-party cloud-based computing services to deliver our IT services through either software-as-a-service (SaaS) or infrastructure-as-a-service (IaaS) solutions. While this can result in benefits in terms of our speed to market, reliability, performance and agility, it requires adjustments to our operations and may increase the potential for service disruptions. Operational support processes and vendor negotiations must take into account that the delivery of hardware and software services may occur beyond our infrastructure, and therefore controls need to be incorporated into our operational support processes and tools.

In addition, we routinely have numerous integration activities, development projects and complex system and process change initiatives underway.

Potential impact

Our network, technology, infrastructure, supply chains, team members and operations may be materially impacted by disruptions in the functioning of critical infrastructure due to intentional threats (see *Section 10.6 Security and data protection*), labour disruptions (see *Section 10.12 Our team*), climate-related risks and natural hazards or unintentional threats (see *Section 10.8 Climate and the environment*), health threats (such as epidemics or pandemics), competitive threats and geopolitical pressures. Any of these risks or hazards may adversely affect our ability to deliver services to our customers and may also make it difficult or impossible for team members to travel to, or work in, our business locations. We may also be liable to our customers for any service disruption resulting from such damage or destruction. Core expertise and competencies in all areas of our organization are in high demand worldwide and our operations and continued growth depend on our ability to hire, retain and develop skilled leaders and key team members. Any of the above factors may adversely affect our business operations.

As the complexity of our systems increases, our system stability and availability may be affected. There can be no assurance that any of our proposed IT systems or process change initiatives will be implemented successfully, that they will be implemented in accordance with anticipated timelines, or that sufficient numbers of skilled team members will be available to complete such initiatives and maintain our competitive position in the marketplace. If we fail to deploy and maintain functional and reliable IT systems on a timely basis, fail to create and maintain an effective governance and operating framework to support the management of our teams, or fail to understand and streamline our numerous legacy systems and proactively meet constantly evolving business requirements, we could experience an adverse impact on our business and financial performance.

Mitigation

We have established a next-generation business support systems (BSS)/operational support systems (OSS) framework, based on the telecommunications industry's TeleManagement Forum standards, which separates BSS and OSS from underlying network technologies. This decouples the introduction and ongoing evolution of new network technologies from the provision of customer services, so both can evolve independently, enabling us to optimize network investments while limiting any impact on customer services. For example, we can deploy vendor technologies and SaaS and IaaS capabilities to avoid custom development where possible. We deployed this BSS/OSS framework concurrently with our fibre roll-out and legacy copper migration, and we are also using the framework for our 5G roll-out. As we make significant investments in system resiliency and network reliability in support of our ongoing customers first initiatives, the framework will allow us to refresh and extend these systems and networks independently and more rapidly than we were able to in the past.

As we added to our VPN capacity in order to ensure stability, productivity and security for team members working from home and from alternative locations, we also accelerated our timing for the purchase and deployment of a new VPN system, improving connection capacity and reliability while enhancing security measures. To the extent possible, we equipped some of our DLCX segment customer service team members to provide remote support to its clients. In addition, the TI AI Data Solutions (TIAI) business utilizes the services of a crowdsourced provider base that is geographically dispersed in countries around the world.

Consistent with best practice, we continue to invest in mitigating the risks inherent in older technology, modernizing key platforms and capabilities for greater flexibility and reliability, and securing the benefits and capabilities that cloud-based operations can provide. We continue to make progress in modernizing and improving our systems and critical applications by leveraging proven, state-of-the-art, cloud-based technologies and capabilities. We also continue to equip our teams with advanced digitization and cloud expertise and skills, so that they are able to play a leading role, today and into the future. We are leveraging our partnership with Google from 2021 through to 2031, to supplement our in-house expertise and experience as we extend the digitization of our business operations by harnessing the capabilities of Google Cloud Platform, as well as other partners and cloud-based service providers.

We have release and change management policies, processes and controls in place that are based on industry best practices. In general, we strive to ensure that system development and process changes are prioritized, and we apply a project management approach to such initiatives that includes appropriate risk identification and contingency planning, scope and change control, and resource and quality management. We conduct reasonable functional, performance and revenue assurance testing, as well as capturing and applying any lessons learned. Where a change involves major system and process conversions, we often shift our business continuity planning and emergency management operations centre to a heightened state of readiness in advance of the change.

For each new large enterprise deal, we look to leverage systems and processes developed for previous contracts while incorporating other elements as required, using a controlled methodology to draft a new custom solution and following standard industry practices for project management and systems support.

We conduct ongoing monitoring of our systems and critical applications. Risk-based disaster recovery capabilities are leveraged to help prevent outages and limit impacts on our customers and operations. In addition, enterprise-wide business continuity programs are in place to support monitoring, preparedness, mitigation, response and recovery.

10.12 Our team

Risk category: Operational

Our success depends on the well-being and engagement of our team members and their diverse abilities and experiences, as well as our ability to attract, retain and advance the skilled and talented employees upon which our service offerings depend.

We believe that our unique customers first focus and our inclusive culture have contributed to our ability to attract and retain a highly skilled, diverse, engaged and motivated workforce, which in turn has driven strong customer and client retention. It may become more difficult for us to maintain a culture that supports our success as we continue to evolve our products and services, enter new geographic and regional markets, open new delivery locations, add to our workforce and acquire new businesses. If our unique culture is not maintained, our ability to attract and retain highly skilled team members across our core verticals, as well as our customers and clients, may be negatively impacted, and our operational and financial results may be adversely affected.

Our business could also be adversely affected if individuals providing their data annotation services through TIAI's crowdsourcing solutions were to be classified as employees. The classification of certain individuals who provide their services through third-party digital platforms as independent contractors is currently being challenged by legislators and government agencies in the United States and Europe, as well as many other countries in which our TIAI business relies on the services of independent contractors. Similarly, some of the healthcare practitioners who are supporting our virtual care business in TELUS Health, as well as some of the engineers who are supporting our development of technology solutions in TELUS Agriculture & Consumer Goods, may be classified as employees instead of independent contractors by decision-makers in certain jurisdictions. We generally believe that most of those individuals who provide their data annotation services through TIAI's crowdsourcing solutions, those healthcare practitioners who support our virtual care business and those engineers who support our development of technology solutions are independent contractors. Independent contractors can choose whether, when and where to provide services, while data annotation professionals can choose to provide services on competitors' platforms, and they use their own equipment. In the case of healthcare practitioners, they can choose to provide services in other non-virtual healthcare settings. We may not be successful in defending the independent contractor classification in the jurisdictions in which we operate or when such classification is challenged. The costs associated with defending, settling or resolving any future lawsuits (including demands for arbitration) that address the independent contractor classification could be material to our business.

Changes over the past 12 months

Persistent global, macroeconomic, social and environmental uncertainties, as well as with internal restructuring initiatives, including efficiency programs, may raise the level of stress for our team members.

Potential impact

Lost work time resulting from team member illness or injury can negatively affect organizational productivity and employee benefits expense. The potential loss of key team members due to disability, attrition or retirement or difficulty in retaining skilled team members, could negatively affect our growth, business operations and profitability, as well as the experience we provide for our customers.

Technological advances are changing the skill sets needed for team member roles across our workforce, leading to increased global competition for resources.

Our failure to meet our team members' evolving expectations in the areas of corporate sustainability and social purpose could impair our ability to attract and retain team members.

Mitigation

Our People and Culture team drives a multi-pronged strategy to amplify the best culture for our team members that is safe, empowering and engaging. Our culture is anchored in our TELUS values. Those values have been the cornerstone of our high-performance culture, defining TELUS as both an organization and a team, and guiding our interactions with each other, our customers and communities. They encompass our unwavering customers first mindset, our commitment to diversity and inclusion, and our support for communities:

- We passionately put our customers and communities first
- We embrace change and innovate courageously
- We grow together through spirited teamwork.

Our objective is to attract, develop and retain talented employees. We achieve this objective by investing in our people throughout their careers, and by offering diverse and inclusive employment prospects and development opportunities, as well as a unique and progressive culture.

To support team members' overall well-being and achieve a positive change in absenteeism in the workplace, we take a holistic and proactive approach that involves risk prevention, early intervention, team member and family assistance, mental health training, engaging social and educational well-being initiatives, assessment and support services, disability management, and accommodation and return-to-work services. Our well-being strategy aligns with best-in-class frameworks, including the National Standard for Psychological Health and Safety, and encourages our team members to develop optimal personal health across five dimensions of well-being: physical, psychological, financial, social and environmental. To promote safe work practices, we offer training and orientation programs for team members and contractors who have access to our facilities.

Through our annual Pulsecheck engagement surveys, we continue to assess our team's health and well-being and gather their insights about our work environment. We continue to see a strong positive response to TELUS as a socially and environmentally responsible organization, and our inclusion index remains unchanged at 85%, from the previous year, further reinforcing the inclusive and welcoming culture we have created at TELUS. According to Kincentric, our survey provider, TELUS is the most engaged organization globally among organizations of our size and composition.

Our collective effort to embrace ethical, transparent, inclusive and respectful behaviour helps us continue to deliver on our customers first promise, while further elevating our world-leading culture and our global leadership in social capitalism. In 2023, we continued to advance our equitable workplace culture through our multi-year diversity and inclusion (D&I) evolution strategy, which is focused on both behavioural and structural changes.

We appreciate and celebrate every team member's unique talents, voice and abilities, and we encourage them to always bring their best selves to work. As noted above, in 2023, we achieved a score of 85% on our inclusion index, an indicator of the strength of our inclusive culture – where team members experience a strong sense of connection and belonging, find opportunities to learn and grow through meaningful work and develop a strong sense of being valued for their contributions and the ability to challenge the status quo and be part of building a better future.

We continue to advance the implementation of our Indigenous Reconciliation Action Plan (IRAP) from 2021 through to 2026, remaining steadfast in our accountability and commitments to reconciliation. We believe that innovation and creativity are essential in responding to the needs of Indigenous communities. Additional information can be found at **telus.com/reconciliation**.

We strive to attract and retain key team members through both monetary and non-monetary approaches. Our compensation and benefits program supports our high-performance culture and is both market-driven and performance-based. Where required, we implement targeted retention solutions for employees with critical skills or talents that are scarce in the marketplace, and we have a succession planning process in place to identify top talent for senior-level positions.

We focus on and manage organizational change through a formal business transformation function that leverages the expertise, key learnings and successful practices developed in previous years during the implementation of mergers, business integrations and efficiency-related reorganizations.

We have a post-acquisition integration process that works with our business units and the operations they acquire, applying an integration model based on learnings from previous integrations, while also focusing on the unique attributes and workplace cultures of the acquired companies, which advances the standardization of our business processes and is intended to preserve the unique qualities of each acquired operation. In 2023, we developed a global cultural blueprint that we are planning to apply in our future acquisitions. The blueprint identifies the core characteristics of our winning culture and can be shared across our lines of business and our diverse geographic and operational locations.

With respect to collective bargaining, business unit leaders and our Labour Relations team share joint leadership accountability to ensure the financial and operational impacts of any collective agreement settlements are assessed and the outcomes are cost-effective, affordable and aligned with our strategic direction.

We continuously strive to raise the level of our team members' engagement. We believe that our strong team member engagement is driven by our focus on the customer and team member experience, our success in the marketplace and our social purpose. We continue to focus on other non-monetary factors that support team member engagement, including performance development, career opportunities, learning and development, recognition, D&I, well-being resources and programs, our leading-edge Work Styles program (enabling team members to work where, when and how they will be most effective, providing them with the flexibility to manage their professional and personal activities every day and equipping them with robust digital collaboration tools to stay connected), and our community volunteerism, including TELUS Days of Giving. Additional information on our programs can be found in our sustainability and ESG report at **telus.com/sustainability**.

10.13 Suppliers

Risk category: Operational

We rely on our relationships with multiple vendors, including large suppliers such as Amazon, Apple, Cisco, Ericsson, Google, Microsoft, Nokia and Samsung, which are important in supporting our network and service evolution plans and our delivery of services to our customers. Our suppliers and vendors may experience business difficulties or privacy and/or security incidents, and may face external challenges, such as epidemics or pandemics, global supply chain shortages or shipping and port disruptions, as well as government or regulatory pressures. They may restructure their operations, be consolidated with other suppliers, discontinue or cease to provide support or updates for certain products, or sell their operations or products to other vendors. In addition, various suppliers may sell products or services directly to our customers, rather than selling those products and services through us.

In certain cases, the number of suppliers of a product, service or technology that we use is limited. In addition, government or regulatory actions with respect to certain countries or suppliers may affect our relationship with certain vendors and our future use of their products and services.

Changes over the past 12 months

The constraints on international shipping caused by the pandemic have been alleviated, with capacity and availability returning to pre-pandemic levels. Most freight surcharges have been eliminated, although base pricing remains elevated. The widely reported global supply chain shortages have had a notable impact on technology products, which began with a shortage of silicon wafers and extended to the chipsets and circuit boards that are embedded in almost all of the products that we purchase. While these shortages have become less pronounced during 2023 and some products are now available with pre-pandemic lead times, the availability of some others is still limited, with lead times that are twice as long as previously. While most of the combined logistical and supply chain challenges have been remedied, the extent to which they will continue to adversely impact our operations and financial performance is uncertain.

As part of our ongoing 5G network build, we have also chosen to replace many Huawei products in other layers of our network with enhanced equipment from the suppliers of our 5G network (either Ericsson, Nokia or Samsung). During the transition phase, from 2022 through to June 2024, components removed from the network will be used as replacements, as required, thus ensuring a continuous supply of necessary materials.

Potential impact

Our agility in the delivery of products and services is directly linked to our ability to engage or replace a supplier or vendor on a timely basis and without incurring additional cost. Reliance on certain manufacturers may reinforce their market power and adversely affect our ability to purchase certain products at an affordable price. Consequently, the success of upgrades and the evolution of technology that we offer our customers may be impacted, as well as the cost of acquisition or the time required to deploy certain technologies and systems (see *Section 10.5 Technology* for further details*)*.

There is no guarantee that our vendor strategies and agreements will not be impacted by operational difficulties or government/regulatory pressures experienced by vendors, or that we will not incur additional costs or delays in the provision of our services or in the deployment of our technologies and systems.

Mitigation

We value our relationships with our suppliers because they help us achieve our business objectives and contribute to our success. We work closely with key strategic suppliers to ensure appropriate timing in the manufacturing, delivery and warehousing of their products, so that our needs can be met regardless of changing conditions. We strive to direct our business to suppliers that have demonstrated a strong commitment to sustainable development by adopting ethical, labour, health and safety, and environmental principles and compliance practices that align with our expectations and support the well-being of their employees, contractors and communities.

Our supply operations, in collaboration with our product development and marketing teams, develop long-term forecasts and adjust purchase order quantities to support our fulfillment capabilities in the context of longer lead times. In addition, we continue to seek alternative devices or sources of supply, and where possible, we refurbish certain devices and certify them for resale as pre-owned devices, including smartphones from our Bring-it-Back program and our professional device repair businesses, such as Mobile Klinik and uBreakiFix, to support sustainability.

As a leading network aggregator, we partner with several network equipment suppliers and work with numerous international and domestic vendors to deliver the best possible experience for our customers across our lines of business. We consider possible vendor strategies and/or restructuring outcomes when planning for our future growth, as well as the support and maintenance of our existing equipment and services. We have reasonable contingency plans that address various scenarios, including working with multiple vendors, maintaining reliable ongoing vendor relationships with periodic reviews of vendor performance, and working closely with other product and service users to influence vendors' product or service development plans. With the current international focus on telecom suppliers, our business continuity plans have been formalized to ensure availability of supply in compliance with U.S. Bureau of Industry and Security (BIS) Entity List restrictions. For our 5G network build, we entered into partnerships with Ericsson, Nokia and Samsung, consistent with our multi-vendor strategy of limiting the risk that single-vendor dependence may lead to a single point of failure, which could be triggered by adverse economic conditions, geopolitical tensions, natural disasters or other significant events or developments.

In addition, we regularly monitor the risk profiles of our key vendors and review the applicable terms and conditions of our agreements to determine whether additional contractual safeguards are required. We also promote our supplier code of conduct, which is based on generally accepted standards of ethical business conduct.

In order to offset the risks associated with a dominant supplier's market power, we offer and promote alternative devices, providing more choices for consumers and helping us limit our reliance on a few key suppliers.

Additional information on supply chain sustainability can be found in our sustainability and ESG report at **telus.com/sustainability**.

10.14 Real estate matters

Risk category: Operational

Our real estate properties (owned or leased) include administrative office spaces and mixed-use office, commercial and residential properties, all of which may be developed through joint ventures, as well as work centres, spaces for the location of our telecommunications equipment and other real estate development projects that advance our social purpose. Some buildings are constructed on leasehold land, and the majority of wireless radio antennae are located either on towers situated on lands that we hold under leases, or on buildings that are held under leases or licences with varying terms. We are currently participating in real estate joint ventures focused on the strategic redevelopment and monetization of our surplus real estate holdings (see *Section 7.11* for further information).

Investments in real estate property development, including return on investment and the realization of related benefits, may be impacted by local economic conditions, changes in construction costs and timelines, financing costs and partnership agreements. Our current and future investments in real estate may also continue to experience the effects of the pandemic, and we are monitoring the evolving return-to-office models.

Changes over the past 12 months

Over the course of 2023, we have:

- Entered into binding and non-binding joint venture development agreements for the redevelopment of several surplus real estate holdings, which we expect will deliver the benefits of monetization upon completion over the next three to five years
- Continued the execution of our future-mode-of-operation real estate projects, which involve the global consolidation of a number of office holdings representing a reduction of approximately 21% in the total floorspace at our office locations compared to our total pre-pandemic office space
- Continued to downsize the critical network infrastructure located in our existing network buildings and reduced our requirements for equipment space through customer migrations from copper to fibre-based services
- Advanced five developments that are under build at this time in British Columbia, including Victoria, Nanaimo, Sechelt, Surrey and Burnaby, with pre-leasing proceeding as planned.

Potential impact

Risks associated with our real estate investments include financing risks and uncertain future demand, occupancy and rental rates, especially over the duration of the pandemic. There can be no assurance that future real estate developments will be completed on budget or on time or will obtain lease commitments as planned. Accordingly, we are exposed to the risk of loss in relation to our loans and investments should the business plan of a real estate development project not be successfully realized.

Mitigation

For our construction projects (residential and commercial) in progress, our exposure to the risk of budget overruns is limited by fixed-price supply contracts and expert project management oversight. Costs for the real estate projects are monitored through our capital gating and approval processes, and we plan to mitigate any risks related to leasing vacant space by entering into pre-lease agreements with prospective tenants prior to completion of construction.

On new projects, joint venture partners and developers are compensated in part on a performance basis that encourages projects to meet timing and budget objectives, and we engage independent third-party consultants to verify key assumptions such as market rental rates, construction costs and management expenditures. We also rely on our internal and external legal teams to ensure that the terms of any contracts, partnerships and procurement arrangements with third parties represent our interests.

We plan our lease strategy in advance for properties that we do not directly own, including quarterly reviews of current market demand and requirements, as well as any related exposure to lease expiry risk, rental rate risk, landlord risk and physical risk (such as poor building condition or flooding).

10.15 Financing, debt and dividends

Risk category: Financial

Risk factors, such as fluctuations in capital markets, the economic environment or regulatory requirements pertaining to bank capitalization, lending activity or changes in the number of Canadian chartered banks, may impact the availability of capital and the cost of capital for investment-grade corporate issuers, including us.

The market price of our Common Shares may be affected by various factors, such as TELUS Corporation's continued access to bank credit facilities, securitization programs and public debt markets, as well as the continuation of the dividend growth plan outlined in our multi-year objectives.

The market price may also be affected by TI factors, including, but not limited to:

- The market price of TI subordinate voting shares
- TI's access to banks, investors and public markets
- Actions taken or statements made by TELUS, TI or others concerning our relationship with TI
- Changes to TI's financial and operational guidance
- Factors affecting the operating performance of TI, which may impact TI's financial performance and subsequently our financial performance.

Our financial instruments, and the nature of the credit risks, liquidity risks and market risks to which they may be subject, are described in *Section 7.9 Financial instruments, commitments and contingent liabilities* .

Changes over the past 12 months

At December 31, 2023, our senior unsecured debt was approximately $22.8 billion (see *Section 4.3*). We operate a commercial paper program (maximum of US$1.5 billion) that currently provides access to funding at a cost lower than our revolving credit facility. As at December 31, 2023, we had $1.0 billion of commercial paper outstanding, all of which was denominated in U.S. dollars (US$0.8 billion). When we issue commercial paper, it must be refinanced on an ongoing basis in order to realize the cost savings relative to borrowing on the $2.75 billion credit facility.

Potential impact

Our business plans and growth could be negatively affected if current financing is not sufficient to cover funding requirements. External capital market conditions could potentially affect our ability to make strategic investments or meet ongoing capital funding requirements, and may prohibit the roll-over of commercial paper at current rates.

There can be no assurance that we will maintain or improve our current credit ratings. Given the cash demands of the 3800 MHz spectrum auction held in 2023 and the upcoming millimeter wave spectrum auction, we may be unable to lower our net debt to EBITDA ratio to our objective range in the medium term, which could eventually have a negative impact on our credit ratings. In addition, our cost of capital could increase and our access to capital could be affected by a reduction in the credit ratings of TELUS and/or TELUS Communications Inc. (TCI). A reduction in our ratings from the current investment grade could result in an increase in our cost of capital.

While future free cash flows and sources of capital are expected to be sufficient to meet current requirements, our intention to return capital to shareholders could constrain our ability to invest in our operations for future growth.

Mitigation

We may finance future capital and funding requirements with internally generated cash flows, including the possible monetization of non-core assets and cash-generating working capital initiatives, borrowings under the unutilized portion of our bank credit facilities, use of a securitization program, use of commercial paper and/or the issuance of debt or equity securities. We have a shelf prospectus in effect until September 2024, under which we can offer an unlimited amount of securities qualified thereunder in Canada and up to $3.5 billion of securities qualified thereunder in the United States as of the date of this MD&A. We believe that our investment-grade credit ratings, coupled with our efforts to maintain constructive relationships with banks, investors and credit rating agencies, continue to provide reasonable access to capital markets.

To enable us to meet our financial objective of generally maintaining $1.0 billion of available liquidity, we have a $2.75 billion credit facility that expires on July 14, 2028, as well as availability under other bank credit facilities (see *Section 7.6 Credit facilities*). At December 31, 2023, we had an unsecured non-revolving $1.1 billion bank credit facility, maturing July 9, 2024, with a syndicate of financial institutions, which is to be used for general corporate purposes. In addition, our TCI subsidiary has an agreement with an arm's-length securitization trust, ending December 31, 2024, under which it is able to sell an interest in certain of its trade receivables up to a maximum of $600 million, of which $500 million was available at December 31, 2023 (see *Section 7.7 Sale of trade receivables*).

We successfully completed a number of debt transactions in 2022 and 2023 (see *Section 7.4*). Additionally, our TELUS Corporation senior notes have a laddered maturity schedule, including $1.1 billion maturing in April 2024 and $800 million maturing in January 2025. Foreign currency forward contracts and cross currency interest rate swaps are used to manage currency risk arising from the issuance of commercial paper and substantially all long-term, fixed-term debt denominated in U.S. dollars. Our commercial paper program is fully backstopped by our $2.75 billion credit facility.

At December 31, 2023, TI had a credit facility consisting of US$800 million of revolving components and US$1.2 billion of amortizing term loan components. For further details on the TI credit facility, see *Section 7.6 Credit facilities*.

We manage our financial capital structure and adjust it in light of changes in economic conditions and the risk characteristics of our business. We have financial policies in place that are reviewed annually and are intended to help maintain our existing investment-grade credit ratings. All credit rating agencies currently have ratings that are in line with this target. Access to our $2.75 billion credit facility would be maintained, even if our ratings were reduced to below investment grade.

Funding for future spectrum licence purchases, defined benefit pension plan obligations and any increases in corporate income tax rates will reduce the after-tax cash flow otherwise available to return to our shareholders. Should actual results differ from our expectations, there can be no assurance that we will not change our financing plans, including our intention to pay dividends according to our payout policy guidelines and to maintain our multi-year dividend growth program. No shares were purchased under the normal course issuer bid (NCIB) program approved in June 2022, which concluded on June 5, 2023. For further details on our multi-year dividend growth program and NCIB program, see *Section 4.3 Liquidity and capital resources*.

Our Board of Directors reviews and approves the declaration of a dividend each quarter, and the amount of the dividend, based on a number of factors, including our financial position and outlook. This assessment is subject to various assumptions and the impact of various risks and uncertainties, including those described here in *Section 10*.

10.16 Tax matters

Risk category: Financial

We collect and pay significant amounts of indirect taxes, such as goods and services taxes, harmonized sales taxes, provincial sales taxes, sales and use taxes and value-added taxes, to various tax authorities. As our operations are complex and the related tax interpretations, regulations, legislation and jurisprudence that pertain to our activities are subject to continual change and evolving interpretation, the final determination of the taxation of many transactions is uncertain. Moreover, the implementation of measures that are compliant with new legislation has its own complexities, including those of execution where multiple systems are involved, and the interpretation of new rules as they apply to specific transactions, products and services.

TELUS, along with TI, TELUS Health and TELUS Agriculture & Consumer Goods, operates in a number of foreign jurisdictions, including Armenia, Australia, Austria, Bahamas, Bosnia and Herzegovina, Brazil, Bulgaria, China, Costa Rica, Czechia, Denmark, El Salvador, Finland, France, Germany, Guatemala, Hungary, India, Ireland, Japan, Latvia, Mexico, Morocco, Netherlands, the Philippines, Poland, Portugal, the Republic of Korea, Romania, Singapore, Slovakia, South Africa, Spain, Switzerland, Turkey, the United Kingdom and the United States, which increases our exposure to multiple forms of taxation. Generally, each jurisdiction has certain peculiarities in the forms of taxation imposed (e.g. value-added tax, gross receipts tax, stamp and transfer tax, and income tax), and differences in the applicable tax base and tax rates, legislation and tax treaties, as well as currency and language differences. In addition, the telecommunications industry faces unique issues that lead to uncertainty in the application of tax laws and the division of tax between domestic and foreign jurisdictions.

Changes over the past 12 months

Global and local tax policies are subject to continual change, which increases the complexity of taxation.

In 2021, Canada, together with approximately 140 other countries comprising the OECD/G20 inclusive framework on base erosion and profit shifting (BEPS), approved in principle model global anti-base erosion rules. These new rules introduced a form of 15% global minimum tax, otherwise known as Pillar Two, which is now being implemented and will apply to multinational companies in 2024. Similar proposals were introduced by the European Commission in December 2021. In August 2022, the President of the United States signed into law the *Inflation Reduction Act*, a 15% corporate alternative minimum tax starting in 2023. These policies, together with related changes to domestic laws and tax treaties, may result in an increase to our effective tax rate in certain jurisdictions.

Potential impact

We are subject to the risk that income and indirect tax amounts, including tax expense, may be materially different than anticipated, and that a general tendency by domestic and foreign tax collection authorities to adopt more stringent interpretations and aggressive auditing practices could adversely affect our financial condition and operating results.

We have significant current and deferred income tax assets and liabilities, income tax expenses and cash tax payments. Income tax amounts are based on our estimates, applying accounting principles that recognize the benefit of income tax positions only when it is more likely than not that the ultimate determination of the tax treatment of a position will result in the related benefit being realized. The assessment of the likelihood and amount of income tax benefits, as well as the timing of realization of such amounts, can materially affect the determination of net income or cash flows. We expect the income taxes calculated at applicable statutory rates to range between 24.5 to 25.1% in 2024 (compared to 23.5% in 2023). These expectations can change as a result of changes in interpretations, regulations, legislation or jurisprudence.

The timing of the monetization of deferred income tax amounts is uncertain, as it is dependent upon our future earnings and other events. The amounts of deferred income tax liabilities are also uncertain, as the amounts are based on substantively enacted future income tax rates that were in effect at the time of deferral, which can be changed by tax authorities. As well, the amounts of cash tax payments and current and deferred income tax liabilities are also based on an anticipated mix of revenues among the jurisdictions in which we operate, which is also subject to change.

The audit and review activities of tax authorities affect the ultimate determination of the actual amounts of indirect taxes payable or receivable, income taxes payable or receivable, deferred income tax liabilities, taxes on certain items included within capital and income tax expense. Therefore, there can be no assurance that taxes will be payable as anticipated and/or that the amount and timing of receipt or use of the tax-related assets will be as currently expected.

Mitigation

We follow a comprehensive tax strategy that has been adopted by our Board of Directors. This strategy sets out the principles underlying and guiding the roles of team members, their responsibilities and personal conduct, the method of conducting business in relation to tax law and the approaches to working relationships with external tax authorities and external advisors. This strategy recognizes the requirement to comply with all relevant tax laws. The components necessary to manage tax risk are outlined in the strategy.

In giving effect to this strategy, we maintain an internal Taxation department composed of professionals who stay current on domestic and foreign tax obligations, supplemented where appropriate with external advisors. This team reviews systems and process changes for compliance with applicable domestic and international taxation laws and regulations. Its members are also responsible for the specialized accounting required for income taxes.

Material transactions are reviewed by our Taxation department so that transactions of an unusual or non-recurring nature are assessed from multiple risk-based perspectives. As a matter of regular practice, large transactions are reviewed by external tax advisors, while other third-party advisors may also be engaged to express their views as to the potential for tax liability. We continue to review and monitor our activities, so that we can take action to comply with any related regulatory, legal and tax obligations. In some cases, we also engage external advisors to review our systems and processes for tax-related compliance. The advice provided and tax returns prepared by such advisors and counsel are reviewed for reasonableness by our Taxation department.

10.17 The economy

Risk category: Financial

Our business operations are impacted by broad economic conditions. Unfavourable economic conditions, such as a recession, an economic slowdown, or rising rates of inflation in the markets in which we operate, could have a material adverse effect on our financial performance. It is difficult to predict the impact that these factors may have on our business operations in the future. Inflation-related impacts were evident in 2023, but the duration and future impacts of current inflationary pressures remain unknown.

The Canadian economy faces notable risks, encompassing oil price fluctuations, potential interest rate hikes, escalating levels of consumer and mortgage debt, a surge in inflation, immigration levels, housing market volatility, and uncertainties linked to trade issues, including persistent tariffs, supply chain disruptions and the impacts of climate change. Furthermore, as we extend our global footprint through acquisitions, exemplified by those within our TI, TELUS Health and TELUS Agriculture & Consumer Goods businesses, our exposure to global market conditions becomes more significant. Simultaneously, international trade conflicts and geopolitical conflicts, as well as other economic and political uncertainties beyond Canada's borders, could have global repercussions, given the notable integration of supply chains.

Our ability to successfully implement cost reduction initiatives and realize planned savings, net of restructuring and other costs, may affect our business operations and customer experiences. Those initiatives include, but are not limited to, our operating efficiency and effectiveness program to drive improvements in financial results, business integrations, business product simplification, business process automation and outsourcing, offshoring and reorganizations, as well as procurement initiatives.

Changes over the past 12 months

In 2023, both the Canadian economy and the global economy proved resilient despite challenges from rising inflation, higher interest rates and the conflicts occurring between Russia and Ukraine and in the Middle East. Central banks have raised interest rates on several occasions throughout 2023 in an attempt to slow inflation but the economic impacts are not yet measurable because of the time lag between interest rate increases and the effects they have on interest rate-sensitive sectors in the economy. Higher interest rates may impact the housing market and the economy more broadly as households cut back on spending in order to manage higher debt service costs. As inflationary pressures persist, the input costs of goods and labour are increasing, which may impact margins and overall profitability.

Interest rates are anticipated to be stable in 2024 and possibly decline as the impacts of past rate increases continue to work their way through the economy and slow demand and inflation. There continues to be a risk that the Canadian economy and the global economy may slide into recession.

Potential impact

Economic uncertainty may cause consumers and business customers to reduce or delay discretionary spending, impacting new service purchases or volumes of use, and consider substitution by lower-priced alternatives.

Globally, some countries may require financial support, sovereign credit ratings may continue to decline, and there may be a default on the sovereign debt obligations of certain countries. Any of these economic outcomes may increase the cost of borrowing and cause our access to credit to become more limited, which could have a material adverse effect on our business, financial condition, financial performance and cash flows. Economic and political uncertainty could undermine business confidence. Unfavourable economic conditions could cause our business clients to reduce, defer or eliminate spending on our services in order to reduce their operating costs.

Fluctuations in the Canadian economy could adversely impact growth in our revenue, profitability and free cash flow, and could potentially require us to record impairments in the carrying values of our assets, including, but not limited to, our intangible assets with indefinite lives (spectrum licences and goodwill). Impairments in the carrying values of our assets would result in a charge to earnings and a reduction in owners' equity, but would not affect cash flow. Continued inflationary pressures could lead to increases in input costs such as labour, which may not be offset by revenue growth and may impact margins. In addition, ongoing international supply chain disruptions may make it difficult to source key components (such as handsets) in sufficient quantities and at reasonable prices.

Fluctuations in the global economy could affect different industry verticals in different ways. Counter-cyclical industries such as consumer goods, utilities and healthcare would continue to operate. Specifically in healthcare, products and services related to logistics or vaccines should remain buoyant, and hospitals and healthcare providers in certain countries could also perform well.

Because certain acquisitions, operating costs and revenues, including TI's revenues, are denominated in U.S. dollars or other non-Canadian dollar currencies, fluctuations in the Canadian dollar exchange rate may impact our financial and operating results.

Economic and capital market fluctuations could also adversely affect the investment performance, funding and expense associated with our defined benefit pension plans, as obligations are based on specific actuarial assumptions related to expected plan asset returns, salary escalation, life expectancy, the performance of financial markets and future interest rates.

Mitigation

While economic risks cannot be completely mitigated, our top priority of putting customers first and pursuing global leadership in the likelihood of our customers recommending our products, services and people also supports our efforts to acquire and retain customers in every phase of the economic cycle, including periods of high volatility. The performance of our telecommunications services is resilient during recessionary periods, which allows us to navigate through changing market dynamics. We also continue to pursue cost reduction and efficiency initiatives across our business operations, such as labour arbitrage through our DLCX segment. See *Section 4.3 Liquidity and capital resources* for our capital structure financial policies and plans.

Foreign currency forward contracts and currency options are leveraged to fix the exchange rates on U.S. dollar-denominated transactions, commitments, commercial paper and U.S. Dollar Notes in order to mitigate risks related to exchange rate fluctuations, and we seek to mitigate pension risk through the application of policies and procedures for managing exposure to investment risk and through ongoing monitoring of our funding position. Our best estimate of cash contributions to our registered defined benefit pension plans in 2024 is $10 million ($19 million in 2023). Virtual power purchase agreements with renewable energy projects that develop solar and wind power facilities are being leveraged to manage our exposure to electrical power purchase price risk.

10.18 Litigation and legal matters

Risk category: Compliance

Given the size of our organization, investigations, claims and lawsuits seeking damages and other relief are regularly threatened or pending against us. The continued expansion of our product and service offerings in managed services, security, healthcare, and agriculture and supply chain technology, as well as the initial public offering of subordinate voting shares by TI in February 2021, have added to our compliance requirements and increased our exposure to the risk of litigation and the possibility of damages, sanctions and fines. We may also be the target of class actions due to our millions of customer relationships. In addition, like other public companies, we may be subject to civil liability for misrepresentations in written disclosure and oral statements, and liability for fraud and market manipulation.

The intellectual property and proprietary rights of owners and developers of hardware, software, business processes and other technologies may be protected under statute, such as patent, copyright and industrial design legislation, or under common law, such as trade secrets. Significant damages may be awarded in intellectual property infringement claims and defendants may incur significant costs to defend or settle such claims.

Potentially material certified and uncertified class actions, intellectual property litigation and other claims against us are detailed in *Note 29(a)* of the Consolidated financial statements.

With business operations in a number of jurisdictions, we are required to comply not only with Canadian laws and regulations, but also with local laws and regulations in other jurisdictions. These laws and regulations may differ substantially from Canadian laws and add to our regulatory, legal and tax exposures. We continue to extend our business operations into additional jurisdictions and expand our product and service offerings in such jurisdictions, and this may increase our exposure to regulatory, legal and tax risks, including potentially substantial fines and penalties (e.g. 4% of global revenues under EU data protection laws). In certain cases, laws with extraterritorial application may also impose obligations on us. See *Section 10.3 Regulatory matters*.

Changes over the past 12 months

With the growth and development of technology-based industries, the value of intellectual property and proprietary rights has increased. Trends in awards for damages, costs to defend and the likelihood of settlements may encourage property rights holders to aggressively pursue infringement claims. Given the vast array of technologies and systems that we use to deliver products and services, and the rapid change and complexity characteristic of such technologies, the number of disputes over intellectual property and proprietary rights can reasonably be expected to increase.

In Canada, the proposed Bill C-27 *Digital Charter Implementation Act*, contains a private right of action that, if it becomes law, could add to the risk of litigation and class actions. The Province of Quebec has made amendments to the *Act Respecting the Protection of Personal Information in the Private Sector*, as noted in *Section 10.3*. The majority of these amendments have been in effect as of September 2023.

As set out in *Section 9.4*, Bill C-56 amended the *Competition Act* to, among other things, repeal the efficiencies defence in respect of mergers; enhance the powers of the Commissioner of Competition with respect to market studies; extend the civil competitor collaboration provisions to include certain agreements between non-competitors; and expand the abuse of dominance provisions. Bill C-59, which was introduced in December 2023 but has not yet passed, would further amend the *Competition Act* to, among other things, increase the rights of private parties and enhance merger enforcement powers regarding competitor collaborations and mergers.

The EU Commission announced the adoption of the Corporate Sustainability Reporting Directive (CSRD) and European Sustainability Reporting Standards (ESRS) in April 2021 and July 2023, respectively, both of which are aligned with the commitment made under the European Green Deal. We may be subject to these EU standards and requirements for sustainability reporting in the future. In September 2023, California passed two Senate bills requiring climate-related disclosures, including *S.B. 253 the Climate Corporate Data Accountability Act* (U.S.) and *S.B. 261 the Climate-Related Financial Risk Act* (U.S.), which we may also be subject to in the future.

As we extend our offerings in agriculture and supply chain technology (such as animal health and management) and add to the jurisdictions in which we offer them, we also increase our exposure to litigation risks in the event of data and security breaches.

Potential impact

It is not currently possible to predict the outcome of such legal matters due to various factors, including: the preliminary nature of some claims; uncertain damage theories and demands; incomplete factual records; the uncertain nature of legal theories and procedures and their resolution by the courts, at both the trial and appellate levels; and the unpredictable nature of opposing parties and their demands.

We are typically required to process, and sometimes collect and/or store sensitive data, including, but not limited to, personal data regulated by data protection and privacy legislation, where applicable, including the *General Data Protection Regulation* (EU and U.K.), the *Personal Information Protection and Electronic Documents Act* and proposed Bill C-27 (Canada), and the *California Consumer Privacy Act*, *California Invasion of Privacy Act*, *Personal Data Protection Bill of 2018* and *Data Privacy Act of 2012* (U.S.). The adoption and enforcement by governments of increasingly stringent privacy legislation may increase our exposure to risks related to compliance and liability. A successful class action lawsuit or intellectual property infringement claim, by its nature, could result in an award of sizeable damages that could negatively affect a defendant's financial or operating results.

There can be no assurance that our financial or operating results will not be negatively impacted by any of these factors.

Mitigation

We believe that we have in place reasonable policies, controls, processes and contractual arrangements, as well as insurance coverage, all of which are intended to support compliance and reduce our exposure to any related risks. Our designated Chief Legal Officer is responsible for ensuring that we have in place appropriate processes and controls across the enterprise in order to facilitate legal compliance, and for reporting on compliance to the Audit Committee.

Our team of internal and external legal professionals advise on and manage risks related to claims and possible claims, vigorously defend class actions and other claims, pursue settlements in appropriate cases, regularly assess our business practices, and monitor legal developments that may impact risk. They seek and obtain contractual protections consistent with standard industry practices to help mitigate the risks of intellectual property infringements, and they work to protect our intellectual property rights through litigation and other means.

Our corporate disclosure policy restricts disclosure by team members, defines the role of Company spokesperson, provides a protocol for communicating with investment analysts, investors and others, and outlines our communications approach.

We rely on our team members, officers, Board of Directors, key suppliers and other business partners to demonstrate behaviour consistent with applicable legal and ethical standards in all jurisdictions within which we operate. We have an anti-bribery and corruption policy, a comprehensive code of ethics and conduct for our team members and the members of our Board, and mandatory annual integrity training for all team members and identified contractors.

Subject to the foregoing limitations, management is of the opinion, based upon legal assessments and the information presently available, that it is unlikely that any liability related to existing investigations, claims and lawsuits, to the extent not provided for through insurance or otherwise, would have a material effect on our financial position and the results of our operations, excepting the items disclosed herein and in *Note 29(a)* of the Consolidated financial statements.

11. Definitions and reconciliations

11.1 Non-GAAP and other specified financial measures

We have issued guidance on and report certain non-GAAP measures that are used to evaluate the performance of TELUS, as well as to determine compliance with debt covenants and to manage our capital structure. As non-GAAP measures generally do not have a standardized meaning, they may not be comparable to similar measures presented by other issuers. For certain financial metrics, there are definitional differences between TELUS and TELUS International reporting. These differences largely arise from TELUS International adopting definitions consistent with practice in its industry. Securities regulations require such measures to be clearly defined, qualified and reconciled with their nearest GAAP measure. Certain of the metrics do not have generally accepted industry definitions.

Adjusted Net income and adjusted basic earnings per share (EPS): These are non-GAAP measures that do not have any standardized meaning prescribed by IFRS-IASB and are therefore unlikely to be comparable to similar measures presented by other issuers. Adjusted Net income excludes the effects of restructuring and other costs, income tax-related adjustments, other equity (income) losses related to real estate joint ventures, long-term debt prepayment premium, unrealized changes in virtual power purchase agreements forward element, and other adjustments (identified in the following tables). Adjusted basic EPS is calculated as adjusted net income divided by the basic weighted-average number of Common Shares outstanding. These measures are used to evaluate performance at a consolidated level and exclude items that, in management's view, may obscure underlying trends in business performance or items of an unusual nature that do not reflect our ongoing operations. They should not be considered alternatives to Net income and basic EPS in measuring TELUS' performance.

Reconciliation of adjusted Net income

	Three-month periods ended December 31		Years ended December 31	
($ millions)	**2023**	2022	**2023**	2022
Net income attributable to Common Shares	**288**	248	**841**	1,615
Add (deduct) amounts net of amount attributable to non-controlling interests:				
Restructuring and other costs	**138**	82	**691**	219
Tax effect of restructuring and other costs	**(37)**	(21)	**(166)**	(55)
Real estate rationalization-related restructuring impairments	**8**	8	**73**	9
Tax effect of real estate rationalization-related restructuring impairments	**(2)**	(2)	**(19)**	(2)
Income tax-related adjustments	**(13)**	(1)	**(48)**	6
Other equity losses (income) related to real estate joint ventures	**2**	(3)	**1**	(3)
Unrealized changes in virtual power purchase agreements forward element	**(59)**	38	**—**	(193)
Tax effect of unrealized changes in virtual power purchase agreements forward element	**16**	(10)	**—**	51
Adjusted Net income	**341**	339	**1,373**	1,647

Reconciliation of adjusted basic EPS

	Three-month periods ended December 31		Years ended December 31	
($)	**2023**	2022	**2023**	2022
Basic EPS	**0.20**	0.17	**0.58**	1.16
Add (deduct) amounts net of amount attributable to non-controlling interests:				
Restructuring and other costs, per share	**0.09**	0.05	**0.47**	0.15
Tax effect of restructuring and other costs, per share	**(0.02)**	(0.01)	**(0.11)**	(0.04)
Real estate rationalization-related restructuring impairments, per share	**0.01**	0.01	**0.05**	0.01
Tax effect of real estate rationalization-related restructuring impairments, per share	**—**	—	**(0.01)**	—
Income tax-related adjustments, per share	**(0.01)**	—	**(0.03)**	—
Unrealized changes in virtual power purchase agreements forward element, per share	**(0.04)**	0.03	**—**	(0.14)
Tax effect of unrealized changes in virtual power purchase agreements forward element, per share	**0.01**	(0.01)	**—**	0.04
Adjusted basic EPS	**0.24**	0.24	**0.95**	1.18

Available liquidity: This is a non-GAAP measure that does not have any standardized meaning prescribed by IFRS-IASB and is therefore unlikely to be comparable to similar measures presented by other issuers. Available liquidity is calculated as the sum of Cash and temporary investments, net, amounts available from the revolving credit facility and amounts available under our trade receivables securitization program measured at the end of the period. We believe this to be a useful measure because it allows us to monitor compliance with our financial objectives. It should not be considered as an alternative to Cash and temporary investments, net in measuring TELUS' performance.

Available liquidity reconciliation

As at December 31 ($ millions)	**2023**	2022
Cash and temporary investments, net	**864**	974
Net amounts available from the TELUS Corporation revolving credit facility	**1,729**	1,292
Amounts available under trade receivables securitization program	**500**	500
Available liquidity	**3,093**	2,766

Capital expenditure intensity: This measure is calculated as capital expenditures excluding real estate development divided by Operating revenues and other income. It provides a basis for comparing the level of capital expenditures to those of other companies of varying size within the same industry.

Calculation of Capital expenditure intensity

	TTech		**DLCX**		**Eliminations**		**Total**	
Years ended December 31 ($ millions, except ratio)	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Numerator – Capital expenditures excluding real estate development	**2,611**	3,269	**125**	135	**—**	—	**2,736**	3,404
Denominator – Operating revenues and other income	**17,205**	15,752	**3,682**	3,214	**(771)**	(554)	**20,116**	18,412
Capital expenditure intensity (%)	**15**	21	**3**	4	**n/m**	n/m	**14**	18

TELUS Corporation Common Share (Common Share) dividend payout ratio: This is a historical measure calculated as the sum of the most recent four quarterly dividends declared, as recorded in the financial statements, net of dividend reinvestment plan effects, divided by the sum of free cash flow amounts for the most recent four quarters for interim reporting periods. For fiscal years, the denominator is annual free cash flow. Our objective range for the annual TELUS Corporation Common Share dividend payout ratio is on a prospective basis, rather than on a trailing basis. (See *Section 4.3 Liquidity and capital resources* and *Section 7.5 Liquidity and capital resource measures*.)

Calculation of ratio of Common Share dividends declared to cash provided by operating activities less capital expenditures (excluding spectrum licences)

Determined using most comparable IFRS-IASB measures

For the 12-month periods ended December 31 ($ millions, except ratio)	**2023**	2022
Numerator – Sum of the last four quarterly dividends declared	**2,111**	1,899
Cash provided by operating activities	**4,499**	4,811
Less:		
Capital expenditures (excluding spectrum licences)	**(2,822)**	(3,472)
Denominator – Cash provided by operating activities less capital expenditures (excluding spectrum licences)	**1,677**	1,339
Ratio (%)	**126**	142

Calculation of Common Share dividend payout ratio, net of dividend reinvestment plan effects

Determined using management measures

For the 12-month periods ended December 31 ($ millions, except ratio)	**2023**	2022
Sum of the last four quarterly dividends declared	**2,111**	1,899
Sum of the amounts of the last four quarterly dividends declared reinvested in Common Shares	**(755)**	(686)
Numerator – Sum of the last four quarterly dividends declared, net of dividend reinvestment plan effects	**1,356**	1,213
Denominator – Free cash flow	**1,759**	1,274
Ratio (%)	**77**	95

Earnings coverage: This measure is defined in the Canadian Securities Administrators' National Instrument 41-101 and related instruments, and is calculated as follows:

Calculation of Earnings coverage

For the 12-month periods ended December 31 ($ millions, except ratio)	**2023**	2022
Net income attributable to Common Shares	**841**	1,615
Income taxes (attributable to Common Shares)	**219**	566
Borrowing costs (attributable to Common Shares)[1]	**1,183**	845
Numerator	**2,243**	3,026
Denominator – Borrowing costs	**1,183**	845
Ratio (times)	**1.9**	3.6

1 Interest on Long-term debt plus Interest on short-term borrowings and other plus long-term debt prepayment premium, adding capitalized interest and deducting borrowing costs attributable to non-controlling interests.

EBITDA (earnings before interest, income taxes, depreciation and amortization): We have issued guidance on and report EBITDA because it is a key measure used to evaluate performance at a consolidated level. EBITDA is commonly reported and widely used by investors and lending institutions as an indicator of a company's operating performance and ability to incur and service debt, and as a valuation metric. EBITDA should not be considered as an alternative to Net income in measuring TELUS' performance, nor should it be used as a measure of cash flow. EBITDA as calculated by TELUS is equivalent to Operating revenues and other income less the total of Goods and services purchased expense and Employee benefits expense.

We calculate EBITDA – excluding restructuring and other costs, as it is a component of the **EBITDA – excluding restructuring and other costs interest coverage** ratio and the **Net debt to EBITDA – excluding restructuring and other costs** ratio.

We also calculate **Adjusted EBITDA** to exclude items of an unusual nature that do not reflect our ongoing operations and should not, in our opinion, be considered in a long-term valuation metric or should not be included in an assessment of our ability to service or incur debt.

EBIT (earnings before interest and income taxes) is calculated for our reportable segments because we believe it is a meaningful indicator of our operating performance, as it represents our earnings from operations before costs of capital structure and income taxes.

EBITDA and Adjusted EBITDA reconciliations

	TTech		DLCX		Total	
Three-month periods ended December 31 ($ millions)	**2023**	2022	**2023**	2022	**2023**	2022
Net income					**310**	265
Financing costs					**278**	322
Income taxes					**76**	82
EBIT	**535**	586	**129**	83	**664**	669
Depreciation	**615**	541	**50**	48	**665**	589
Amortization of intangible assets	**316**	296	**60**	44	**376**	340
EBITDA	**1,466**	1,423	**239**	175	**1,705**	1,598
Add restructuring and other costs included in EBITDA	**130**	59	**10**	35	**140**	94
EBITDA – excluding restructuring and other costs	**1,596**	1,482	**249**	210	**1,845**	1,692
Other equity losses (income) related to real estate joint ventures	**2**	(3)	**—**	—	**2**	(3)
Adjusted EBITDA	**1,598**	1,479	**249**	210	**1,847**	1,689

EBITDA and Adjusted EBITDA reconciliations

	TTech		DLCX		Total	
Years ended December 31 ($ millions)	**2023**	2022	**2023**	2022	**2023**	2022
Net income					**867**	1,718
Financing costs					**1,273**	632
Income taxes					**222**	604
EBIT	**2,085**	2,582	**277**	372	**2,362**	2,954
Depreciation	**2,328**	2,064	**186**	162	**2,514**	2,226
Amortization of intangible assets	**1,309**	1,051	**246**	175	**1,555**	1,226
EBITDA	**5,722**	5,697	**709**	709	**6,431**	6,406
Add restructuring and other costs included in EBITDA	**652**	180	**65**	60	**717**	240
EBITDA – excluding restructuring and other costs	**6,374**	5,877	**774**	769	**7,148**	6,646
Other equity losses (income) related to real estate joint ventures	**1**	(3)	**—**	—	**1**	(3)
Adjusted EBITDA	**6,375**	5,874	**774**	769	**7,149**	6,643

Adjusted EBITDA less capital expenditures is calculated for our reportable segments, as it represents a simple cash flow view that may be more comparable to other issuers.

Adjusted EBITDA less capital expenditures reconciliation

	TTech		DLCX		Total	
Three-month periods ended December 31 ($ millions)	**2023**	2022	**2023**	2022	**2023**	2022
Adjusted EBITDA	**1,598**	1,479	**249**	210	**1,847**	1,689
Capital expenditures	**(497)**	(627)	**(36)**	(33)	**(533)**	(660)
Adjusted EBITDA less capital expenditures	**1,101**	852	**213**	177	**1,314**	1,029

Adjusted EBITDA less capital expenditures reconciliation

	TTech		DLCX		Total	
Years ended December 31 ($ millions)	**2023**	2022	**2023**	2022	**2023**	2022
Adjusted EBITDA	**6,375**	5,874	**774**	769	**7,149**	6,643
Capital expenditures	**(2,697)**	(3,337)	**(125)**	(135)	**(2,822)**	(3,472)
Adjusted EBITDA less capital expenditures	**3,678**	2,537	**649**	634	**4,327**	3,171

We calculate **EBITDA margin** and **Adjusted EBITDA margin** to evaluate the performance of our operating segments and we believe these measures are also used by investors as indicators of a company's operating performance. We calculate EBITDA margin as EBITDA divided by Operating revenues and other income. Adjusted EBITDA margin is a non-GAAP ratio that does not have any standardized meaning prescribed by IFRS-IASB and is therefore unlikely to be comparable to similar measures presented by other issuers. We calculate Adjusted EBITDA margin as Adjusted EBITDA divided by adjusted Operating revenues and other income.

Calculation of EBITDA margin

	TTech		DLCX		Eliminations		Total	
Three-month periods ended December 31 ($ millions, except margin)	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Numerator – EBITDA	**1,466**	1,423	**239**	175	**—**	—	**1,705**	1,598
Denominator – Operating revenues and other income	**4,460**	4,368	**969**	855	**(231)**	(165)	**5,198**	5,058
EBITDA margin (%)	**32.9**	32.6	**24.7**	20.4	**n/m**	n/m	**32.8**	31.6

Calculation of EBITDA margin

	TTech		DLCX		Eliminations		Total	
Years ended December 31 ($ millions, except margin)	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Numerator – EBITDA	**5,722**	5,697	**709**	709	**—**	—	**6,431**	6,406
Denominator – Operating revenues and other income	**17,205**	15,752	**3,682**	3,214	**(771)**	(554)	**20,116**	18,412
EBITDA margin (%)	**33.3**	36.2	**19.3**	22.1	**n/m**	n/m	**32.0**	34.8

Calculation of Adjusted EBITDA margin

	TTech		DLCX		Eliminations		Total	
Three-month periods ended December 31 ($ millions, except margin)	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Numerator – Adjusted EBITDA	**1,598**	1,479	**249**	210	**—**	—	**1,847**	1,689
Adjusted Operating revenues and other income:								
Operating revenues and other income	**4,460**	4,368	**969**	855	**(231)**	(165)	**5,198**	5,058
Other equity losses (income) related to real estate joint ventures	**2**	(3)	**—**	—	**—**	—	**2**	(3)
Denominator – Adjusted Operating revenues and other income	**4,462**	4,365	**969**	855	**(231)**	(165)	**5,160**	5,055
Adjusted EBITDA margin (%)	**35.8**	33.9	**25.7**	24.5	**n/m**	n/m	**35.5**	33.4

Calculation of Adjusted EBITDA margin

Years ended December 31 ($ millions, except margin)	TTech 2023	TTech 2022	DLCX 2023	DLCX 2022	Eliminations 2023	Eliminations 2022	Total 2023	Total 2022
Numerator – Adjusted EBITDA	**6,375**	5,874	**774**	769	**—**	—	**7,149**	6,643
Adjusted Operating revenues and other income:								
Operating revenues and other income	**17,205**	15,752	**3,682**	3,214	**(771)**	(554)	**20,116**	18,412
Other equity losses (income) related to real estate joint ventures	**1**	(3)	**—**	—	**—**	—	**1**	(3)
Denominator – Adjusted Operating revenues and other income	**17,206**	15,749	**3,682**	3,214	**(771)**	(554)	**20,117**	18,409
Adjusted EBITDA margin (%)	**37.1**	37.3	**21.0**	23.9	**n/m**	n/m	**35.5**	36.1

EBITDA – excluding restructuring and other costs interest coverage: This measure is defined as EBITDA – excluding restructuring and other costs, divided by Net interest cost, calculated on a 12-month trailing basis. It is similar to the coverage ratio covenant in our credit facilities, as described in *Section 7.6 Credit facilities*.

Calculation of EBITDA - excluding restructuring and other costs interest coverage

For the 12-month periods ended December 31 ($ millions, except ratio)	2023	2022
Numerator – EBITDA – excluding restructuring and other costs	**7,148**	6,646
Denominator – Net interest cost	**1,272**	847
Ratio (times)	**5.6**	7.8

Free cash flow: We report this measure as a supplementary indicator of our operating performance, and there is no generally accepted industry definition of free cash flow. It should not be considered as an alternative to the measures in the Consolidated statements of cash flows. Free cash flow excludes certain working capital changes (such as trade receivables and trade payables), proceeds from divested assets and other sources and uses of cash, as found in the Consolidated statements of cash flows. It provides an indication of how much cash generated by operations is available after capital expenditures that may be used to, among other things, pay dividends, repay debt, purchase shares or make other investments. We exclude impacts of accounting standards that do not impact cash, such as IFRS 15 and IFRS 16. Free cash flow may be supplemented from time to time by proceeds from divested assets or financing activities.

Free cash flow calculation

($ millions)	Three-month periods ended December 31 2023	Three-month periods ended December 31 2022	Years ended December 31 2023	Years ended December 31 2022
EBITDA	**1,705**	1,598	**6,431**	6,406
Restructuring and other costs, net of disbursements	**16**	82	**206**	69
Effects of contract asset, acquisition and fulfilment (IFRS 15 impact) and TELUS Easy Payment device financing	**(175)**	(185)	**(143)**	(95)
Effect of lease principal (IFRS 16 impact)	**(144)**	(129)	**(538)**	(495)
Items from the statements of cash flows:				
Share-based compensation, net	**17**	24	**117**	122
Net employee defined benefit plans expense	**26**	25	**72**	101
Employer contributions to employee defined benefit plans	**(5)**	(10)	**(28)**	(44)
Loss from equity accounted investments and other	**26**	—	**26**	—
Interest paid	**(308)**	(238)	**(1,196)**	(816)
Interest received	**12**	6	**23**	17
Capital expenditures[1]	**(533)**	(660)	**(2,822)**	(3,472)
Free cash flow before income taxes	**637**	513	**2,148**	1,793
Income taxes paid, net of refunds	**(47)**	(190)	**(389)**	(519)
Free cash flow	**590**	323	**1,759**	1,274

1 Refer to *Note 31* of the Consolidated financial statements for further information.

The following reconciles our definition of free cash flow with Cash provided by operating activities.

Free cash flow reconciliation with Cash provided by operating activities

	Three-month periods ended December 31		Years ended December 31	
($ millions)	**2023**	2022	**2023**	2022
Free cash flow	**590**	323	**1,759**	1,274
Add (deduct):				
Capital expenditures[1]	**533**	660	**2,822**	3,472
Effects of lease principal	**144**	129	**538**	495
Net change in non-cash operating working capital not included in preceding line items and other individually immaterial items included in Net income neither providing nor using cash	**47**	14	**(620)**	(430)
Cash provided by operating activities	**1,314**	1,126	**4,499**	4,811

1 Refer to *Note 31* of the Consolidated financial statements for further information.

Mobile phone average revenue per subscriber per month (ARPU) is calculated as network revenue derived from monthly service plan, roaming and usage charges; divided by the average number of mobile phone subscribers on the network during the period, and is expressed as a rate per month.

Net debt: We believe that net debt is a useful measure because it represents the amount of Short-term borrowings and long-term debt obligations that are not covered by available Cash and temporary investments. The nearest IFRS measure to net debt is Long-term debt, including Current maturities of Long-term debt. Net debt is a component of the **Net debt to EBITDA – excluding restructuring and other costs** ratio.

Net debt to EBITDA – excluding restructuring and other costs: This measure is defined as net debt at the end of the period divided by 12-month trailing EBITDA – excluding restructuring and other costs. (See discussion in *Section 7.5 Liquidity and capital resource measures*.) This measure is similar to the leverage ratio covenant in our credit facilities, as described in *Section 7.6 Credit facilities*.

Calculation of Net debt to EBITDA – excluding restructuring and other costs

For the 12-month periods ended December 31 ($ millions, except ratio)	**2023**	2022
Numerator – Net debt	**26,494**	24,152
Denominator – EBITDA – excluding restructuring and other costs	**7,148**	6,646
Ratio (times)	**3.71**	3.63

Net interest cost: This measure is the denominator in the calculation of **EBITDA – excluding restructuring and other costs interest coverage**. Net interest cost is defined as financing costs, excluding capitalized long-term debt interest, employee defined benefit plans net interest, unrealized changes in virtual power purchase agreements forward element, and recoveries on redemption and repayment of debt, calculated on a 12-month trailing basis. Expenses recorded for the long-term debt prepayment premium, if any, are included in net interest cost.

Calculation of Net interest cost

For the 12-month periods ended December 31 ($ millions)	**2023**	2022
Financing costs	**1,273**	632
Deduct: Employee defined benefit plans net interest	**(7)**	(8)
Add interest on long-term debt, excluding lease liabilities – capitalized	**6**	30
Add unrealized changes in virtual power purchase agreements forward element	**—**	193
Net interest cost	**1,272**	847

11.2 Operating indicators

The following measures are industry metrics that are useful in assessing the operating performance of a mobile and fixed telecommunications entity, but do not have a standardized meaning under IFRS-IASB.

Churn is calculated as the number of subscribers deactivated during a given period divided by the average number of subscribers on the network during the period, and is expressed as a rate per month. Mobile phone churn refers to the aggregate average of both prepaid and postpaid mobile phone churn. A TELUS, Koodo or Public Mobile brand prepaid mobile phone subscriber is deactivated when the subscriber has no usage for 90 days following expiry of the prepaid credits.

Connected device subscriber means a subscriber on an active TELUS service plan with a recurring revenue-generating portable unit (e.g. tablets, internet keys, Internet of Things, wearables and connected cars) that is supported by TELUS and is intended for limited or no cellular voice capability.

Mobile phone subscriber means a subscriber on an active TELUS service plan with a recurring revenue-generating portable unit (e.g. feature phones and smartphones) where TELUS provides voice, text and/or data connectivity.

Internet subscriber means a subscriber on an active TELUS internet plan with a recurring revenue-generating unit where TELUS provides internet connectivity.

Residential voice subscriber means a subscriber on an active TELUS phone plan with a recurring revenue-generating unit where TELUS provides voice service.

Security subscriber means a subscriber on an active TELUS security plan with a recurring revenue-generating unit that is connected to the TELUS security and automation platform.

TV subscriber means a subscriber on an active TELUS TV plan with a recurring revenue-generating subscription for video services from a TELUS TV platform.

Healthcare lives covered means the number of users (primary members and their dependents) enrolled in various health programs supported by TELUS Health services (e.g. virtual care, health benefits management, preventative care, personal health security, and employee and family assistance programs). It is probable that some members and their dependents will be a user of multiple TELUS Health services.

Virtual care member means primary enrolment to receive services on an active TELUS Health virtual care plan.

Digital health transactions mean the total number of health claims, dental claims, consultations or other transactions facilitated by TELUS Health products and services.

Exhibit 99.5

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in Registration Statement No. 333-266633 on Form F-10, Registration Statement No. 333-258770 on Form F-3D and Registration Statement Nos. 333-125486, 333-181463 and 333-268186 on Form S-8 and to the use of our reports dated February 9, 2024 relating to the financial statements of TELUS Corporation (the "Company") and the effectiveness of the Company's internal control over financial reporting appearing in this Annual Report on Form 40-F for the year ended December 31, 2023.

/s/ Deloitte LLP
Chartered Professional Accountants
Vancouver, Canada
February 9, 2024