

The power of our purpose



2021 ANNUAL REPORT



Powered by purpose

TELUS is a dynamic, world-leading communications technology company with \$17 billion in annual revenue and 17 million customer connections spanning wireless, data, IP, voice, television, entertainment, video and security over our award-winning networks. We leverage our global-leading technology and compassion to drive social change and enable remarkable human outcomes. Our long-standing commitment to putting our customers first fuels every aspect of our business, making us a distinct leader in customer service excellence and loyalty.

TELUS Health is Canada's leader in digital health technology, improving access to health and wellness services; TELUS Agriculture provides innovative digital solutions throughout

the agriculture value chain, supporting better food outcomes; and TELUS International is a leading digital customer experience innovator that designs, builds and delivers next-generation solutions for global brands across high-growth industry verticals.

We are driven by our vision to connect all citizens for good, and our deeply meaningful and enduring philosophy to give where we live has inspired TELUS, our team members and retirees to contribute more than \$900 million in cash, in-kind contributions, time and programs and 1.8 million days of service since 2000. This unprecedented generosity and unparalleled volunteerism have made TELUS the most giving company in the world. Together, let's make the future friendly.



1-7

Corporate overview

Supporting our stakeholders with purpose, 2021 highlights and 2022 targets



8-13

CEO letter to investors

Making the future friendly through our global leadership in social capitalism



14-17

ESG at a glance

Focusing on environmental, social and governance initiatives to create a sustainable future



18-21

Operations at a glance

Reviewing the highlights of our operating segments



22-28

Leadership

Q&As, and our Executive Team and Board of Directors



29-204

Financial review

Detailed financial disclosure, including a letter from our CFO

Land acknowledgment

The TELUS team acknowledges that our work spans many Territories and Treaty areas and we are grateful for the traditional Knowledge Keepers and Elders who are with us today, those who have gone before us and the youth that inspire us. We recognize the land and the benefits it provides all of us, as an act of Reconciliation, as recommended by the Truth and Reconciliation Commission's (TRC) 94 Calls to Action, and express gratitude to those whose territory we reside on, work on or are visiting.



Many photos within this report were taken prior to the COVID-19 pandemic. For those photos taken during 2021, all necessary precautions were strictly followed. TELUS is committed to ensuring the health and safety of our team members, customers and communities.

All financial information is reported in Canadian dollars unless otherwise specified. Copyright © 2022 TELUS Corporation. All rights reserved. The symbols TM and ® indicate trademarks owned by TELUS Corporation or its subsidiaries used under license. All other trademarks are the property of their respective owners.

Creating meaningful change through the power of our purpose



Social capitalism is at the core of who we are and what we do. To us, doing well in business and doing good in our communities are mutually inclusive. As the global leader in social capitalism, we are committed to leveraging our innovative technology and human ingenuity to drive social change, create meaningful outcomes for customers, investors, citizens, communities and team members, and help address the world's most pressing social issues.

We're making the future friendly by...



Connecting citizens for good

We are committed to ensuring that all Canadians have access to the technology they need to stay connected to the people, information and opportunities that matter most. Our Connecting for Good® programs are bridging digital divides and helping people access the vital tools and resources they need to live fulfilling lives.



Innovating in healthcare

We are helping Canadians live healthier lives with innovative technologies that are transforming access to healthcare. Our focus is on improving digital and virtual access to quality healthcare and delivering better health outcomes for all Canadians, including our most vulnerable citizens.

At TELUS, we are leveraging our global-leading technology and compassion to drive social change and enable remarkable human outcomes. By reinvesting approximately five per cent of our 2021 pre-tax profits back into our communities, connecting Canadians in need and committing to become a zero-waste, net carbon neutral company by 2030, we hope to make the world a better place. Let's make the future friendly™, together.



Read more at telus.com/purpose



Caring for the environment

By actively focusing on sustainable solutions across our business, we are helping to build a more sustainable world for future generations. Our investments in leading-edge technology are enabling us to reduce our impact on the environment, switch to renewable energy and digitally transform food production.



Giving back to communities

Our team is passionate about giving back and providing support in the communities where we live and work, ensuring that the most vulnerable among us are not left behind. Guided by our philosophy – we give where we live® – we are dedicated to driving positive social outcomes and helping to build stronger, healthier communities.



Delivering strong results through the power of our purpose

Operations

+9.8%

Operating revenues
2021: \$16.8 billion
2020: \$15.3 billion

+35%

Net income
2021: \$1.7 billion
2020: \$1.3 billion

+6.4%

Adjusted EBITDA¹
2021: \$6.1 billion
2020: \$5.7 billion

+30%

Basic earnings per share (EPS)
2021: \$1.23
2020: \$0.95

+0.9%

Adjusted basic EPS¹
2021: \$1.07
2020: \$1.06

+7.3%

Dividends declared per share
2021: \$1.2710
2020: \$1.18495

Financial resources

+11%

Total assets
2021: \$48.0 billion
2020: \$43.3 billion

-4.1%

Cash from operations
2021: \$4.4 billion
2020: \$4.6 billion

-46%

Free cash flow¹
2021: \$0.8 billion
2020: \$1.4 billion

+26%

Capital expenditures
(excluding spectrum licences)
2021: \$3.5 billion
2020: \$2.8 billion

+2 pts

Capital expenditure intensity
2021: 20%
2020: 18%

+1.5 pts

Return on common equity²
2021: 11.6%
2020: 10.1%

Customer and health connections³

+367,000

Mobile phone subscribers
2021: 9.29 million
2020: 8.92 million

+338,000

Connected device subscribers
2021: 2.13 million
2020: 1.80 million

+133,000

Internet subscribers
2021: 2.27 million
2020: 2.14 million

+50,000

TV subscribers
2021: 1.27 million
2020: 1.22 million

+97,000

Security subscribers
2021: 804,000
2020: 707,000

+3.7 million

Healthcare lives covered
2021: 20.6 million
2020: 16.9 million

New reportable segments

Effective January 1, 2021, we transitioned to our new reportable segments: TELUS technology solutions (TTech) and digitally-led customer experiences – TELUS International (DLCX). For more information, see Sections 1.1 and 5.1 of Management's discussion and analysis (MD&A) in this report.

2021 financial and operating highlights

(\$ in millions except per share amounts)	2021	2020	% change
Operations			
Operating revenues	\$ 16,838	\$ 15,341	9.8
Operating income	\$ 3,074	\$ 2,482	23.9
Net income	\$ 1,698	\$ 1,260	34.8
Earnings before interest, taxes, depreciation and amortization (EBITDA) ¹	\$ 6,290	\$ 5,494	14.5
Adjusted EBITDA ¹	\$ 6,069	\$ 5,701	6.4
Adjusted EBITDA margin ¹ (%)	36.0	37.0	–
Basic EPS	\$ 1.23	\$ 0.95	29.5
Adjusted basic EPS ¹	\$ 1.07	\$ 1.06	0.9
Dividends declared per share	\$ 1.2710	\$ 1.18495	7.3
TTech segment			
Operating revenues	\$ 14,528	\$ 13,604	6.8
Adjusted EBITDA	\$ 5,476	\$ 5,177	5.7
Adjusted EBITDA margin ¹ (%)	37.6	37.9	–
DLCX segment			
Operating revenues	\$ 2,310	\$ 1,737	33.0
Adjusted EBITDA	\$ 593	\$ 524	13.2
Adjusted EBITDA margin ¹ (%)	21.6	24.0	–
Financial position			
Total assets	\$ 47,994	\$ 43,273	10.9
Long-term debt	\$ 20,852	\$ 20,288	2.8
Net debt ¹	\$ 20,535	\$ 19,826	3.6
Return on common equity ² (%)	11.6	10.1	–
Liquidity and capital resources			
Cash from operations	\$ 4,388	\$ 4,574	(4.1)
Capital expenditures (excluding spectrum licences)	\$ 3,498	\$ 2,775	26.1
Capital expenditure intensity (%)	20	18	–
Free cash flow ¹	\$ 777	\$ 1,435	(45.9)
Net debt to EBITDA – excluding restructuring and other costs ¹	3.17	3.45	–
Customer and health connections³ (thousands)			
Mobile phone subscribers	9,290	8,923	4.1
Connected device subscribers	2,134	1,796	18.8
Internet subscribers	2,271	2,138	6.2
TV subscribers	1,265	1,215	4.1
Residential voice subscribers	1,123	1,164	(3.5)
Security subscribers	804	707	13.7
Healthcare lives covered	20,600	16,900	21.9

1 These are non-GAAP and other specified financial measures, which do not have standardized meanings under IFRS-IASB and might not be comparable to those presented by other issuers. For more information, see Section 11.1 of the MD&A.

2 Net income attributed to equity shares for a 12-month trailing period, divided by the average common equity for the 12-month period.

3 Certain customer connections have been adjusted effective January 1, 2021. For details, see Section 1.3 of the MD&A.

Note: Certain comparative information has been restated to conform with the 2021 presentation.

Harnessing our purpose to achieve outstanding performance

	2021 targets	2021 results	Achieved
Revenues and other income ¹	Growth of 8 to 10%	Growth of 12%	✓
Net income ²	n/a	Growth of 35%	n/a
Adjusted EBITDA ³	Growth of 6 to 8%	Growth of 6.4%	✓
Cash from operations ²	n/a	\$4.39 billion	n/a
Free cash flow ^{3,4}	~ \$750 million	\$777 million	✓
Capital expenditures (excluding spectrum licences) ⁴	~ \$3.50 billion	\$3.50 billion	✓

1 2021 results include the fourth quarter 2021 gain of \$410 million on the disposition of our financial solutions business. Excluding the gain, 2021 revenues and other income increased by nine per cent.

2 As a result of applying National Instrument 52-112, these measures are presented as the most directly comparable financial measures to Adjusted EBITDA and free cash flow, respectively, and were not part of our targets for 2021.

3 These are other specified financial measures. Refer to Section 11.1 of the MD&A for further information.

4 Our targets for free cash flow and capital expenditures were revised in May 2021 to account for our decision to accelerate our broadband capital investments.

2021 results

At TELUS, we believe in setting annual financial targets to provide clarity for investors and to help drive our performance. In 2021, we achieved all four of our consolidated financial targets. Our financial results reflected strong mobile and fixed customer growth and improved margins within mobility

and fixed data services, along with a larger contribution from DLCX, while we continued to invest strategically to enhance our network leadership position and digitization strategy. See Section 1.4 in the MD&A for a detailed description of our results.

Caution regarding forward-looking statements summary

This annual report contains forward-looking statements including statements relating to our 2022 targets, environmental and sustainability targets, expected performance and plans for powering our success, including expected financial results of TELUS Agriculture, and multi-year dividend growth program. By their nature, forward-looking statements do not refer to historical facts and require the Company to make assumptions and predictions, and are subject to inherent risks. There is significant risk that the forward-looking statements will not prove to be accurate and there can be no assurance that TELUS will achieve its targets or performance goals or maintain its multi-year dividend growth program. Readers are cautioned not to place undue reliance on forward-looking statements, as a number of factors (such as the COVID-19 pandemic, regulatory developments and government decisions, the competitive environment, technological substitution, supply chain disruption and dependence on a limited number of suppliers, economic performance in Canada, our earnings and free cash flow, and our capital expenditures) could cause actual future performance and events to differ materially from those expressed in the forward-looking statements. Accordingly, this document is subject to the disclaimer and qualified by the assumptions (including assumptions on which our 2022 annual targets and guidance are based and regarding semi-annual dividend increases through 2022), qualifications and risk factors as set out in Management's discussion and analysis in this report, especially Sections 9 and 10, and in other TELUS public disclosure documents and filings with securities commissions in Canada (on SEDAR at [sedar.com](https://www.sedar.com)) and in the United States (on EDGAR at [sec.gov](https://www.sec.gov)). Except as required by law, TELUS disclaims any intention or obligation to update or revise forward-looking statements, and reserves the right to change, at any time at its sole discretion, its current practice of updating annual targets and guidance. Statements regarding our 2022 targets are presented for the purpose of assisting our investors and others in understanding certain key elements of our expected 2022 financial results, as well as our objectives, strategic priorities and business outlook. Such information may not be appropriate for other purposes.

	2022 targets
Operating revenues¹	Growth of 8 to 10%
Adjusted EBITDA²	Growth of 8 to 10%
Free cash flow²	\$1.0 billion to \$1.2 billion
Capital expenditures (excluding spectrum licences)	~ \$3.4 billion

¹ For 2022, we are guiding on operating revenues, which exclude other income. Operating revenues for 2021 were \$16,838 million.

² These are other specified financial measures. Refer to Section 11.1 of the MD&A for further information.

2022 targets

We are guided by a number of long-term financial objectives, policies and guidelines, which are detailed in Section 4.3 of the MD&A. With these policies in mind, our consolidated financial targets for 2022, as presented in the table, reflect our expectations for continued strong subscriber growth across mobile and fixed, as well as benefits from our significant ongoing investments in our leading PureFibre network and continued 5G deployment, strengthened by our accelerated broadband build program.

Supporting our growth profile in 2022 are our unique and diversified growth assets – TELUS International, TELUS Health and TELUS Agriculture. Our growth profile is underpinned by a team member culture focused on delivering customer service excellence and our ongoing pursuit of operational efficiency and effectiveness.

For more information and a complete set of 2022 financial targets and the assumptions on which they are based, see our fourth quarter 2021 results and 2022 targets news release issued on February 10, 2022.



The power of our purpose

In a year unlike most we have shared together, your Company once again led the world in social capitalism. Exemplifying the power of our purpose, we continued to put our customers first, earning us the trust and loyalty of millions of citizens and promoting the economic prosperity that enabled us to serve our communities, support our investors and inspire our high-performing team that epitomizes our award-winning culture so beautifully.

Engaging the power of our purpose to put our customers and communities first

Throughout 2021, our TELUS team demonstrated our social purpose in action by supporting our customers, our communities and each other. Even as we experienced more relaxed public health measures, our innovative digital My TELUS app, virtual call centres and touchless install, repair and fulfilment processes remained our primary means of interacting with customers. Similarly, our business clients capitalized on our expertise in digital connectivity to enable the productivity of their employees. In addition, we shared best practices for supporting the mental wellness of their teams and ensuring their own customers could do business safely. Moreover, through our #StandWithOwners campaign, we invited Canadians to support local entrepreneurs and celebrate small business heroes as they worked to sustain their companies through the pandemic.

Importantly, our team assisted with COVID-19 vaccine efforts in Quebec, Ontario, Alberta and British Columbia. Your Company enabled the largest vaccine roll-out program in B.C.'s history, booking seven million vaccination appointments while accelerating the province's timelines and ensuring our most vulnerable citizens were given access to vaccines expeditiously. At the same time, our team offered support to citizens across the country facing other challenges, including flooding and wildfires, reinforcing that when things are at their worst, our customers and communities can count on TELUS to be at our best.

Accelerating investments in our world-leading broadband networks

Our team is driven by our collective desire to leverage our technological and human innovation to enable vital connectivity for Canadians. Since 2000, TELUS has invested \$220 billion in network infrastructure, operations and spectrum to expand and evolve our networks and technology. Our world-leading wireless and PureFibre networks have earned consistent, multi-year recognition for speed, reliability, user experience and expansiveness from independent reports, including U.K.-based Opensignal, U.S.-based Ookla, PCMag and J.D. Power, and Canada's Tutela. These acknowledgments reaffirm our belief that strong, reliable networks are the backbone of Canada's digital economy, enabling positive outcomes for our fellow citizens.

We are proud of the many ways in which our wireless and PureFibre networks, with their global-best speeds, reliability and reach, are driving economic growth, innovation and job creation. Moreover, our world-leading broadband networks and technology are improving the lives of Canadians by enabling online healthcare, education and teleworking flexibility during the pandemic; and accelerating Canada's digital economy and society for heightened productivity, competitiveness and human welfare outcomes in the post-pandemic period.

Our broadband technology is supporting critical, transformational change in respect of: remediating the environmental state of our planet by bridging time and

distance through technology virtualization; advancing agriculture efficiency and effectiveness and food quality production through data analytics; and bridging socio-economic and geographic divides so every member of our society has access to the technology that yields the opportunity to realize their full potential. These aforementioned objectives for our economy and society reflect TELUS' responsibilities to progress the growth of skilled jobs, the physical and mental well-being of our citizens and the uplifting of marginalized constituencies as embodied by our brand promise, *Let's make the future friendly.*

As a demonstration of our commitment to connect communities from coast to coast, following a successful equity offering in March 2021, your Company announced an acceleration of investments in our broadband networks. These efforts are further expanding our PureFibre network in B.C., Alberta and Eastern Quebec, expediting the roll-out of our national 5G network across urban and rural Canada, and enhancing our digital capabilities to bolster the customer experience and drive additional efficiencies within our business.

Bridging digital divides and enabling vital connections for underserved communities

At a time when the human connection has never been more important, TELUS remains dedicated to ensuring all Canadians can stay connected to the people and information that matter the most. Our sustained network leadership powers our purpose, as evidenced by the connectivity your Company provides to millions of underserved Canadians through our Connecting for Good programs.

Notably, TELUS Internet for Good offers low-cost, high-speed internet to qualified low-income families, seniors and people living with disabilities. Through TELUS Mobility for Good, we offer a free smartphone and fully subsidized data plan to youth transitioning out of foster care, eligible low-income senior citizens and Indigenous women at risk or surviving violence. TELUS Tech for Good provides differently abled Canadians facing challenges using smartphones and tablets with assistive technology and training that help them live more independently. Lastly, TELUS Health for Good enables TELUS mobile health clinics to bring primary healthcare to people in need and living on the streets across Canada.

Building meaningful relationships with Indigenous communities and organizations

We continue to focus on connecting Indigenous communities to our PureFibre network. Indeed, we have invested more than \$75 million, alongside our co-funding



Small businesses have been especially hard hit by the pandemic, and our team was proud to be able to support entrepreneurs like Nicole and Paulo of Gourmet Girl Cafe + Catering through our #StandWithOwners program.

partners, to connect 91 Indigenous communities and 151 Indigenous lands, with 48 Indigenous lands enabled in 2021 alone. Altogether, we are providing more than 80,000 people living in Indigenous communities with vital access to our PureFibre network.

In 2021, we launched our Indigenous Reconciliation and Connectivity Report detailing the many ways your Company is working collaboratively with Indigenous partners to support long-term prosperity in communities around the country. Building on our long-standing, respectful and productive relationships with Indigenous Peoples, we engaged Elders, leaders and TELUS team members to create our Reconciliation Commitment and five-year Indigenous Reconciliation Action Plan.

Central to our Reconciliation Commitment is the desire to support the diverse needs of Indigenous Peoples to build relationships between Indigenous and non-Indigenous businesses, helping to grow the economy and enabling prosperity for Indigenous Peoples. In this regard, we were proud to stand in solidarity with residential school survivors and their families through our \$8 million commitment in 2021 toward Indigenous-led entrepreneurs, projects and initiatives. This includes a \$1 million gift to digitize, promote and distribute the Witness Blanket (see sidebar), as well as investments from the TELUS Pollinator Fund in Indigenous-led businesses, and grants from the TELUS Community Boards and TELUS Friendly Future Foundation (TFFF).

Taking accountability to invest in sustainable businesses and charitable organizations

The TELUS Pollinator Fund – one of the world's largest social impact investing funds – celebrated its first



Digitizing the Witness Blanket

As part of our \$1 million leadership commitment, we are working alongside Indigenous artist Carey Newman (Hayalthkin'geme) and the Canadian Museum for Human Rights to digitize and amplify the reach of the Witness Blanket, created to pay homage to the children and families affected by Canada's residential school system and recognize the intergenerational impacts that continue to be felt today. We will help ensure the Witness Blanket has a lasting and powerful impact, standing as a national monument to recognize the atrocities of the residential school era.

anniversary in 2021, as it continued to invest in startups that are both enabling better social outcomes and achieving strong financial returns. Throughout the year, the Fund invested nearly \$20 million to help scale socially responsible and innovative startups, of which 40 per cent are women-led and 50 per cent are led by Indigenous or racialized founders. These businesses are focused on social innovation that drives better health outcomes, sustainable food systems, inclusive communities and a greener planet.

Likewise, the TFFF marked its third year and, in 2021, committed more than \$8.7 million in cash donations to 500 charitable organizations, while fundraising more than \$3 million. The TFFF has contributed over \$25 million to our communities since its inception, supporting the incredible work of our TELUS Community Boards. Notably, since 2005, TELUS' Community Boards have invested \$91 million in cash donations to nearly 7,800 initiatives, providing support for underserved citizens, especially young people, around the world.

Improving human and social outcomes, thanks to the most engaged team on the planet

Your Company's ability to support our customers and communities in a meaningful way is owing to the dedication, spirited teamwork and grit of the best team on the planet. Indeed, as the pandemic continued throughout 2021, we remained committed to the health and mental wellness of our team members. In alignment with the National Standard for Psychological Health and Safety in the Workplace, we introduced our TELUS Mental Health Commitment to reinforce the role we all play in promoting healthy practices and offer meaningful solutions and support to colleagues. These included the creation of our team member-led mental health first aid network and a customized training program to help team members identify and address potential mental health issues.

In 2021, your Company again earned a world-leading team member engagement score of 84 per cent, placing TELUS in the top 10 per cent of all employers globally. This result, which would be impressive in a normal year, was extraordinary considering the highly dynamic environment that characterized 2021.

In keeping with our belief that a diverse work environment facilitates a broader exchange of ideas and elasticity of thought, helping us to better understand and support the needs of our stakeholders, your Company progressed our diversity and inclusion strategy across our TELUS family. This included launching a new TELUS Resource Group to support Black team members, and implementing an enhanced Board diversity policy that has enabled us to achieve 46 per cent female representation and 23 per cent of independent directors who represent a visible minority or are Indigenous.

Exemplifying the symbiotic relationship between doing good in our communities and doing well in business

Undeniably, our culture of caring was displayed throughout 2021 as our highly engaged team offered its support to those who needed us most. Through our TELUS Days of Giving, more than 55,000 members of our TELUS family contributed 1.3 million volunteer hours in communities worldwide. TELUS, our team members and retirees contributed \$90 million in cash, in-kind contributions, time and programs to charitable and community organizations, representing approximately five per cent of our pre-tax profits. Since 2000, our extended TELUS family has gifted \$1.4 billion, including \$900 million and 1.8 million days of volunteerism, to make the world a better place.

Increasingly, citizens are choosing to do business with organizations that share their values. In this regard, our team's dedication to our customers, communities

and one another, drove our leading operational and financial results in 2021. Your Company, once again, led our industry in customer growth across our mobile and fixed portfolios, supported by world-leading customer loyalty and an unprecedented churn rate of less than one per cent within mobile phone, internet, Optik TV, security and voice.

Driving industry-leading business and financial results

We achieved strong financial results across our business as evidenced by operating revenues, net income and Adjusted EBITDA increasing by 9.8, 35 and 6.4 per cent, respectively. Across TELUS technology solutions (TTech), we generated industry-leading results in 2021. Overall, TTech revenue was \$15 billion, while Adjusted EBITDA was \$5.5 billion. Our team drove leading operational and financial results in our fixed portfolio, including data services revenue growth of more than 12 per cent.

These results were bolstered by our highly differentiated and potent asset mix geared towards high-growth, technology-oriented verticals, including TELUS International (TI), TELUS Health and TELUS Agriculture (TAG). When looking at TELUS' two-year performance through the pandemic period, from 2019 to 2021, our total revenue and EBITDA growth of close to 18 and seven per cent, respectively, as well as our more than 1.7 million net new total customer additions, represented industry-leading performance by a substantial margin and demonstrates the significant economic value we are creating through our superior product portfolio.

TI continues to generate strong, double-digit revenue, net income and Adjusted EBITDA growth, concluding their first year as a public company with impressive results that surpassed their financial targets for 2021. These robust results reinforce TI's position as the partner of choice for premier digital customer experiences, as clients around the world look to TI to design, build and deliver end-to-end next-generation digital solutions and services, including a unique and unparalleled mix of content moderation and artificial intelligence capabilities.

Similarly, TELUS Business Solutions contributed to TELUS' strong performance and is expected to continue delivering robust outcomes with the expansion of 5G, Internet of Things and new industry-based solutions. For example, we launched a strategic alliance with GM Canada, the first of its kind in Canada, leveraging our world-leading 5G network to enable an unparalleled experience to keep millions of citizens safe and connected.

Welcoming a historic number of new mobile and fixed customers

In 2021, TELUS' operational excellence was again characterized by the consistent combination of industry-leading and profitable customer growth, with an all-time

record 960,000 total new client additions – ranking TELUS number one in the industry for new customer growth, driven by industry-best mobile and fixed wireline additions.

In mobile, TELUS achieved industry-leading customer growth of 705,000 net additions. This included 367,000 mobile phone and 338,000 connected device net new customers, representing an all-time record high for connected devices for your Company. Mobile network revenue increased three per cent, reflective of our focus on high-quality customer growth, underpinned by an exceptional service experience, leading customer loyalty and strong base management. Moreover, postpaid mobile churn of 0.74 per cent improved by four basis points over 2020, representing our eighth consecutive year of industry-leading customer loyalty, with postpaid churn below one per cent.

Notably, we earned a record 255,000 new TV, internet, voice and security customers, reflecting the potency of our expansive PureFibre network capabilities, as well as our superior bundled offerings and success in driving higher product intensity with our customers. Indeed, during a year fraught with anxiety and ambiguity, TELUS SmartHome Security and TELUS Secure Business provided increased peace of mind for consumers and businesses. As a result, we welcomed our 800,000th security client by the end of 2021, reflecting our innovation in virtual and do-it-yourself installations, and capacity for acquiring and integrating new assets, nationally.

Answering the world's most pressing social challenges in healthcare and agriculture

Our leading results were supported by our high-growth verticals, which once again reflected the strength of our digital capabilities. TELUS Health continued to deliver improved health outcomes for citizens, driving double-digit year-over-year health services revenue growth. Indeed, our rebranded virtual care services, TELUS Health MyCare for consumers and our employer-subscribed TELUS Health Virtual Care, as well as our Home Health Monitoring and Virtual Visit services, enabled healthcare providers to safely support patients virtually throughout the pandemic. Similarly, our team launched TELUS Health LivingWell Companion on Apple Watch, becoming the first company in Canada to offer personal emergency response service through Apple Watch. This service enables Canadians with health issues or who may be at risk of falling with improved safety and peace of mind with 24/7 emergency monitoring. Notably, by year-end 2021, we covered more than 20 million lives through our health solutions, an increase of nearly 22 per cent, year-over-year, completed over 550 million digital health transactions and earned more than one million new virtual healthcare members, representing a 65 per cent

increase over 2020. Impressively, TELUS Health MyCare is now the number one virtual care brand in respect of familiarity and usage across all of the markets in which we operate. Moreover, in early 2022, our team launched TELUS Health Virtual Pharmacy, providing Canadians with fast and reliable online access to prescription medications and refills.

Furthermore, through our ongoing efforts to scale and integrate our unique TAG business, we generated double-digit revenue growth across our three lines of business – agribusiness; food, beverage and consumer goods; and animal health – concluding the year with annual revenue of over \$400 million. These results are illustrative of the efforts of our skilled team of innovators at TAG who are working diligently toward the creation of a fully connected producer-to-consumer value chain, improving the quality, safety, distribution and sustainability of food and consumer goods. As one of the largest agriculture technology companies globally, TAG has more than 1,500 team members in 10 countries serving customers in over 50 countries, including nine of the 10 top agriculture companies in the world.

Fuelling consistently industry-leading results for the benefit of the stakeholders we serve

Our industry-leading financial returns reflect the collective efforts of our team, delivering on a proven and sustainable growth strategy that generates rewards for all stakeholders, including you, our investors. Throughout another challenging year, your Company returned significant capital to shareholders, while maintaining a robust balance sheet and making ongoing generational investments in innovative broadband technologies.

Indeed, through our accelerated broadband investment program, we advanced approximately \$1.5 billion of incremental capital expenditures into 2021 and 2022. Investing from a position of strength and leadership, these transformational investments bolster TELUS' superior competitive position, including connecting thousands of additional homes and businesses to our PureFibre network, enhancing the speed and coverage of our 5G capabilities and amplifying the digital customer experience. Furthermore, as part of this accelerated broadband build, we are advancing our copper-to-fibre migration program. In this regard, our team exceeded our copper-to-fibre migration target in 2021 and is on track to substantially complete the migration by the end of 2022.

Importantly, these generational investments, combined with the accelerated decommissioning of legacy copper infrastructure, will fuel enhanced customer growth and improved connectivity, alongside significant operating

efficiencies and positive cash flow benefits as our expedited broadband build nears completion. By advancing our world-leading networks, we are generating improved social and economic outcomes in the communities we serve.

Additionally, as a result of the pull-forward of our broadband investments, commencing in 2023, we are targeting a significant decline in our annual capital expenditures to \$2.5 billion, or less. Free cash flow will be strengthened by the expected capex decline of approximately \$1 billion over 2022, in addition to strong ongoing EBITDA expansion. Importantly, this initiative will support the sustained advancement of our operational and financial performance well into the future, strengthening our confidence in the robust outlook for our business, amplified by strong anticipated future growth in our emerging growth businesses.

Our consistently strong results, supported by transformational investments in communities across Canada, underpin your Company's ability to create unparalleled long-term value for our shareholders. Since the beginning of 2000 through December 31, 2021, TELUS has generated a total shareholder return of 700 per cent. This result is 357 points higher than the return for the Toronto Stock Exchange's S&P/TSX Composite Index (TSX) of 343 per cent and 694 percentage points higher than the return from the MSCI World Telecom Services Index of six per cent. Moreover, over the past five, 10 and 15 years, TELUS has surpassed the TSX return by an average of 87 percentage points.

Building value for Canadians through our industry-leading dividend growth program

Importantly, we anticipate that our accelerated broadband investment initiative, coupled with your Company's ongoing, leading operational and financial performance, will augment the long-term sustainability of our industry-leading dividend growth program, now in its 12th year. In 2021, we announced our 21st dividend increase, raising our annual dividends declared by 7.3 per cent over 2020. Notably, since 2004, TELUS has returned \$21 billion to shareholders, including \$15.7 billion in dividends and \$5.2 billion in share purchases, representing over \$15 per share.

Through individual holdings, mutual funds and pension plans, as well as our own TELUS team members who collectively represent our fourth largest shareholder, TELUS investors are our neighbours, friends and colleagues. Undeniably, when our team puts our customers and communities first, the resulting prosperity enables us to improve the outcomes of Canadian families, retirees and pensioners who invest in TELUS.

Taking accountability to improve the health of our planet and embrace tax morality

Your Company further demonstrated the power of our purpose through the issuance of our inaugural sustainability-linked bond in 2021 – the first in Canada – raising \$750 million of 10-year notes. This sustainable financing structure ties the effective interest rate to the achievement of our long-term, impactful operational greenhouse gas (GHG) reduction target, specifically, a 46 per cent reduction in scope 1 and 2 GHG emissions over 2019 levels by 2030, in addition to becoming net carbon neutral in our operations by 2030 or sooner.

Similarly, embracing tax morality is a means of investing in our communities. Since 2000, your Company has paid circa \$51 billion in total tax and spectrum remittances to our federal, provincial and municipal governments in Canada, consisting of corporate income taxes, sales taxes, property taxes, employer portion of payroll taxes and various regulatory fees. These funds support public works projects, education, healthcare, cultural pursuits and other initiatives that improve the social and economic well-being of our communities.

Evolving our brand promise to Let's make the future friendly

For 20 years, we have been guided by our brand promise, the future is friendly, as we leverage the power of technology to create positive experiences and meaningful social outcomes for people around the world. The pandemic and social injustices have prompted us to reflect on what is truly important, including the values we hold dear. Our refreshed brand promise, *Let's make the future friendly*, welcomes everyone to join us as we strive to make the world a better place.

Your Company was recognized as one of Strategy Magazine's 2021 Brands of the Year for our leadership in social capitalism. We meaningfully integrated purpose into marketing communications across all customer touchpoints, increasing socially responsible perceptions of TELUS by 30 per cent and reaching more than 10 million customers. In addition, TELUS enabled our team members to share our social purpose messaging on their own social networks.

Taking leadership in 2022 through inspiring social and financial targets

Leveraging the momentum gained over the long term, in concert with the power of our globally leading networks, our high-performing team anticipates an equally successful 2022, as exemplified through our new community giving, social impact and financial targets.

As we continue to empower citizens to lead healthier, safer, more connected lives, our social impact and giving targets for 2022 include: inspiring our TELUS family to contribute 1.4 million hours of volunteerism, improving the economic and health outcomes for a cumulative 320,000 low-income Canadians through our Connecting for Good programs, contributing \$90 million to charitable and community organizations, inspiring \$3.3 million in fundraising and stewardship for the TFFF and launching a new signature national student bursary program, and investing \$20 million to support new socially responsible businesses through our TELUS Pollinator social impact investment fund.

In terms of our sustainability goals, we anticipate that 100 per cent of our electricity requirements will come from renewable or low-emitting sources by 2025, our operations will be net carbon neutral by 2030 or earlier, we will become a zero waste company by 2030, and energy efficiency will improve by 50 per cent over 2019 levels by 2030. As signatories to the United Nations Global Compact, we take action and share progress in respect of human rights, labour, environment and anti-corruption practices, reinforcing our commitment to creating stronger, more sustainable communities.

Financially, our targets for 2022 include growth in both revenue and Adjusted EBITDA of eight to 10 per cent, capital expenditures of approximately \$3.4 billion, and robust free cash flow of \$1 billion to \$1.2 billion. Notably, when compared to 2019, our targets for 2022 represent 25 to 27 per cent revenue growth, and 15 to 17 per cent EBITDA growth, versus the pre-pandemic period.

Thanking you for your ongoing support

In 2021, our TELUS family passionately demonstrated the power of our purpose, driving positive outcomes for the many stakeholders we serve. Throughout 2022, you can count on our 100,000 TELUS team members and retirees, globally, to leverage that same passion and purpose to put our customers first and to drive the operational and financial results that allow us to invest in our philanthropy, the expansion of our networks and the success of our team, our communities, and you, our shareholders.

Together, we are making the future friendly and I remain grateful for your ongoing support.



Darren Entwistle
Proud member of the TELUS team
for more than two decades
February 18, 2022

Powered by our social purpose

At TELUS, we are guided by our social purpose – to leverage our global-leading technology and compassion to drive social change and enable remarkable human outcomes. With our purpose leading the way, we are focused on environmental, social and governance initiatives that positively impact our stakeholders.

Leading with our social purpose

As a company powered by our social purpose, we are using our core business to serve a greater purpose that benefits all our stakeholders. Together, we are empowering Canadians with connectivity, transforming healthcare, caring for the planet, enabling responsible agriculture and giving back to our communities. Visit telus.com/purpose for more information.

Connecting those who need us most

In 2021, we continued to extend our Mobility for Good® program, offering free or subsidized mobile phone rate plans and devices to all youth aging out of foster care and to low-income seniors across Canada. During the year, we added 7,000 Canadians to the program, helping them stay connected to vital support networks and resources. Importantly, more than 28,000 Canadians have benefited since the program began in 2017.

In October, we launched Mobility for Good for Indigenous Women at Risk, providing free smartphones and data plans to Indigenous women at risk of or surviving violence.

In partnership with grassroots Indigenous-led organizations, the program offers a vital lifeline to the critical services and resources they need for their health, safety and wellness.

In May, we expanded Tech for Good™ nationally through a partnership with March of Dimes Canada. Launched in 2019, this newly expanded program will empower more Canadians living with disabilities to use their smartphones and tablets independently and improve their quality of life with customized support, training and assistive technology. At the end of 2021, more than 4,600 Canadians had participated in the program and/or benefited from the TELUS accessibility discount for people living with disabilities.

Our Internet for Good® program also continued to grow in 2021, providing close to 12,000 low-income families, youth aging out of foster care and people living with disabilities with vital access to low-cost, high-speed internet service. By the end of 2021, 106,000 Canadians had benefited from low-cost internet since the program began in 2016.



Driving better health outcomes

We expanded Health for Good® during the year with the launch of four new mobile health clinics in Victoria, Vancouver, Toronto and the Niagara Region of Ontario. The program provides primary care, mental health and addiction support services to individuals experiencing homelessness in 14 communities across the country. Through our mobile health clinics, we supported 35,000 patient visits in 2021 and administered more than 9,000 COVID-19 vaccinations.

Our innovative virtual care offerings also continued to grow to meet the increasing demand and evolving healthcare needs of Canadians. In April, we introduced TELUS Health Virtual Care and became the first digital health provider in Canada to integrate an employer-focused virtual care platform with electronic medical records (EMRs). With TELUS Health Virtual Care, critical patient health information from virtual care sessions can be shared securely, with consent, with any of the 34,000 health professionals who are using our EMR solutions across Canada.

In June, we expanded TELUS Health MyCare to provide Canadians with a robust suite of physical and mental health and well-being services, including in-person clinics and advanced digital health tools, as well as greater access to physicians, counsellors and dietitians. TELUS Health MyCare is now available to millions of Canadians in multiple languages.

Enabling stronger, healthier communities

Our team is passionate about making a positive difference in our communities across Canada and internationally.

In 2021, the TELUS Friendly Future Foundation® and TELUS Community Boards contributed more than \$8.7 million to 500 Canadian registered charities that promote mental health and well-being for youth through virtual counselling, mentoring and peer support, tutoring and other programs enabled by technology.

1.3 million

hours of giving by our team members, retirees, family and friends

230,000

Canadians positively impacted by our Connecting for Good programs

\$90 million

contributed to charitable and community organizations

nearly \$20 million

invested by the TELUS Pollinator Fund for Good



Helping communities in need

When support is needed most, our team responds with passion and purpose. As one example, when massive flooding hit B.C. in November, our team sprang into action. In Hope, team members quickly reached out to impacted communities to ensure they had access to vital supplies. Our team leveraged our resources and relationships with local vendors to deliver, by boat, more than 3,500 pounds of essential supplies to five First Nations and other communities severely affected by the floods.

The Foundation connects youth to a world of opportunities so they can learn, be creative, innovate and stay healthy.

During our 16th annual TELUS Days of Giving, more than 55,000 team members, retirees, friends and family were inspired to give back with TELUS, contributing to 1.3 million hours of service around the world. Additionally, in 2021, TELUS, our team members and retirees provided \$90 million in cash, in-kind contributions, time and programs to charitable and community organizations.

Investing in a world of good

During its first year, the TELUS Pollinator Fund for Good™ invested nearly \$20 million in debt and equity securities of 10 new purpose-driven for-profit companies that are dedicated to driving social innovation and making a difference in communities. As one of the largest impact funds in the world, the Fund invests in early-stage socially responsible companies that are driven by both profit and purpose, and helps scale socially innovative ideas and initiatives to ensure they have greater impact.

Powered by our environmental focus

Environmental sustainability is foundational to our leadership in social capitalism and to our long-standing efforts to help preserve and protect the planet. We remain dedicated to exploring new and innovative ways to lessen our impact on the global environment. Visit telus.com/sustainability for more details.

Caring for our planet

We are on track to achieve our ambitious environmental and sustainability targets and reduce our impact on the environment. After achieving our 2020 targets one year early, we set new targets, which include:

- Effectively procuring 100 per cent of our electricity requirements from renewable or low-emitting sources by 2025
- Improving energy efficiency by 50 per cent over 2019 levels by 2030
- Achieving net carbon neutrality for our operations by 2030
- Achieving our Science Based Targets initiative (SBTi)-approved scope 1, 2 and 3 greenhouse gas (GHG) emissions reduction targets by 2030.

Powering our operations from wind and solar energy

Investing in renewable energy helps us grow our core business sustainably while powering our networks from cleaner electricity sources. With this in mind, we have entered into four power purchase agreements in Alberta that will enable the development of new solar and wind power facilities. When these facilities become operational in 2022, in effect, 100 per cent of our electricity needs in Alberta will be met by wind or solar sources.

Linking financing to achieving sustainability targets

We issued Canada's first sustainability-linked bond in June 2021, linking financing to our environmental performance. The bond uniquely ties our cost of borrowing to TELUS achieving a target to reduce scope 1 and 2 GHG emissions by 46 per cent over 2019 levels by 2030. If we miss the target, interest payable will increase by one per cent in the final year of maturity. This target was approved by the SBTi, demonstrating our global leadership in sustainability and the world's fight against climate change.

Using resources responsibly

In our efforts to become a zero-waste company, we continually look for ways to apply circular economy principles with the goal being to reuse, refurbish or recycle as much as possible. As an example, we have enhanced our Bring-It-Back® device program, enabling customers to receive credit for returning used mobile devices. We then use those devices to support programs like Mobility for Good, which ensures connectivity for vulnerable citizens. Since the start of the COVID-19 pandemic, we have donated more than 14,000 refurbished mobile devices and free rate plans to help isolated seniors, hospital patients and vulnerable Canadians stay connected.

Committed to good governance

We are strongly committed to high standards in corporate governance. Our ongoing efforts to enhance our practices enable us to pursue greater transparency and ensure integrity in all our actions. Visit telus.com/governance for more information.

Cultivating diversity

We are dedicated to fostering and celebrating diversity and inclusion within our team, our Company and our communities. We recognize that, in all areas of our business, different perspectives and experiences bring innovative ways of thinking that enable us to deliver better insights, decisions and solutions.

In late 2020, we updated our Board diversity targets, establishing specific goals of having women and men each represent at least one-third of independent directors and at least two directors who represent a visible minority or are Indigenous by the annual meeting in 2023. In May 2021, we surpassed these targets two years early, with our Board including six independent directors (46 per cent) who are women and three directors who represent a visible minority or are Indigenous.

In 2021, we launched our sixth TELUS resource group (TRG), called Reach, to advance diverse representation in decision-making and to shine light on systemic issues that disproportionately and uniquely affect the Black community. The other five TRGs have been established over time to support women, Indigenous team members, team members with varying abilities, new immigrants and multicultural team members, and lesbian, gay, bisexual, transgender, queer and Two-Spirit (LGBTQ2+) team members. Since the first group was launched in 2006, our TRGs have grown to more than 7,000 members worldwide.

We appreciate and celebrate every team member's unique talents, voice and abilities, and encourage everyone to always bring their whole selves to work. To measure our progress in cultivating an inclusive culture, we introduced an inclusion index in 2021 as part of our annual engagement survey and achieved a score of 85 per cent, indicating

a strong sense of inclusion and belonging among team members.

Reinforcing our commitment to Indigenous Peoples

Building on our long-standing commitment to foster respectful relationships with Indigenous Peoples, we formalized our commitment to reconciliation in 2021 and launched a five-year Indigenous Reconciliation Action Plan that sets out how we will bring our commitment to life. Developed with guidance from Indigenous voices and Indigenous-led frameworks of reconciliation, the Plan is based on four pillars where we believe we can drive meaningful change – connectivity, enabling social outcomes, cultural responsiveness and relationships, and economic reconciliation. For more information, visit telus.com/reconciliation.

We continue to collaborate with Indigenous governments and organizations to deliver advanced broadband connectivity to Indigenous communities within our servicing area. In 2021, we connected 48 Indigenous lands to our advanced broadband networks and enabled 382 Indigenous lands with 5G technology.

Enhancing data literacy

As the digital world evolves, more possibilities for data innovation arise, bringing new challenges and opportunities. To ensure we continue to manage data responsibly while also protecting the privacy of Canadians, we implemented a comprehensive data literacy campaign for team members in 2021. The initiative provides them with enhanced knowledge and the tools they need to effectively and responsibly unlock the value of data in a way that continues to protect the privacy and maintain the trust of Canadians.

Sustaining a culture of trust and integrity

Integrity is a cornerstone of our culture at TELUS and is incorporated into everything we do. Building and sustaining a strong ethical culture is the shared commitment and responsibility of all team members and ensures decisions are made with the highest level of integrity and respect.

In 2021, we created a new version of our mandatory online Integrity course, which brings to life the policies and guidelines that inform the way we work and help us make sound decisions. The course is narrated and translated in 11 languages and is available to approximately 90,000 team members around the world.

We continue to provide an EthicsLine for anonymous and confidential questions or complaints on internal control and other issues related to integrity. Calls are handled by an independent agency, offering multi-language services to internal and external callers 24 hours a day. For the 19th consecutive year, none of the calls reported to the Ethics Office in 2021 involved officers or team members with a significant role in internal control over financial reporting.

Best practices in corporate governance

- Say-on-pay vote
- Majority voting policy
- Clawback policy
- Board diversity policy
- Shareholder engagement policy
- Insider trading policy
- Code of ethics and conduct and EthicsLine
- Privacy management program framework
- Enterprise risk governance and oversight
- Board recruitment process and orientation programs
- Mandatory education sessions for the Board
- Board and committee succession planning
- CEO succession planning
- Independent third-party evaluations of the Board
- Director term limits
- Share ownership guidelines for directors and executives
- Extensive and transparent disclosure.



Putting our customers first through the power of our purpose

Combining outstanding customer service with our high-performance team culture, underpinned by our world-leading network and innovative technology, TELUS has consistently achieved strong operational and financial results. Building on our track record of excellence, in 2021, we realized many positive outcomes for our customers and communities across our diversified and high-growth operations.

TELUS technology solutions: Providing diverse solutions

Within TELUS technology solutions (TTech), we offer a diverse set of solutions across mobile and fixed, which includes home and business, as well as the emerging high-growth areas of health and agriculture.

Mobile: Keeping customers connected

Backed by our world-leading network, we continued to provide reliable high-speed mobility services across the country, ensuring Canadians stayed connected, informed and entertained. Once again, we led our industry in customer loyalty in 2021, with a mobile phone churn rate of 0.91 per cent, driven by our long-standing focus on putting customers first. Additionally, we welcomed 705,000 new mobile phone and connected device customers, and 1.24 million over the last two years.

We were again recognized for our superior network, earning the top spot in major independent awards.



During the year, we expanded our next-generation 5G network to reach 70 per cent of Canada's population. Importantly, our expanded 5G coverage is bringing transformational connectivity to Canadians, ensuring they have the necessary reliability, speed and low latency to realize positive outcomes in an increasingly digital world.

Advancing our mobile strategy:

- Enhancing our award-winning network through the deployment of newly acquired spectrum, offering a world-leading 5G experience across Canada
- Elevating our customers' experience with our best-in-class customer service, world-leading network and advanced digital capabilities, supported by the technology-focused expertise of TELUS International
- Sustaining our focus on high-quality, profitable customer growth by offering simplified rate plans with easier access to the latest smartphones through affordability initiatives,

+4.1%

Mobile phone
subscribers

2021: 9.29 million
2020: 8.92 million

+19%

Connected device
subscribers

2021: 2.13 million
2020: 1.80 million

5 bps
improvement

Mobile phone churn

2021: 0.91%
2020: 0.96%

+3.0%

Mobile network
revenue

2021: \$6.21 billion
2020: \$6.03 billion

such as our TELUS Easy Payment® device financing, Bring-It-Back and Certified Pre-Owned device programs

- Strengthening our business and public service offerings with tailored services and solutions, as evidenced by TELUS being named GM Canada's 5G network provider for its connected vehicle service
- Continuing our unwavering commitment to putting customers first, reflected by TELUS receiving the fewest customer complaints of any national carrier for the 10th consecutive year in the annual Commission for Complaints for Telecom-television Services report
- Enabling equal access to mobile technology and better community outcomes by expanding our Mobility for Good program to Indigenous women at risk.

Fixed: Driving innovation for homes and businesses

The ongoing expansion of our TELUS PureFibre® network resulted in another strong year for our fixed solutions. We saw robust demand for high-speed internet and added 149,000 new internet customers in 2021, and 306,000 over the last two years. As a part of our generational investments in fibre, we continue to migrate a significant number of customers from our legacy copper network to our next-generation fibre network, paving the way for the future decommissioning of our copper infrastructure within our fibre footprint – a notable feat on a global basis.

We grew our TV subscriber base in 2021 with the addition of 50,000 new TV customers, as they continued to respond positively to our broad content lineup and innovative bundled offerings. With a growing emphasis on staying safe in person and online, we added 97,000 security and automation customers in 2021 and realized an important milestone by welcoming our 800,000th customer, establishing our position as Canada's top security service provider.

As businesses work to keep pace with new and emerging technology, we are providing tailored, next-generation solutions to businesses large and small, making significant progress toward our goal of becoming the digital-first



technology provider of choice within the evolving business market.

Advancing our home and business solutions strategy:

- Expanding our TELUS PureFibre network and enhancing its capabilities, speed and reliability to strengthen our network leadership position
- Growing our internet, TV and security customer base through superior bundled product offerings and our targeted mobile and home go-to-market strategy
- Demonstrating our customer loyalty leadership, with customer churn rates of less than one per cent for TELUS PureFibre internet, Optik TV®, security and voice services, reflecting our team's relentless focus on our customers first priority
- Protecting our customers by offering virtual installations and repairs, leveraging innovative tools and approaches to keep our customers and team members safe and connected
- Driving growth within our business offerings by enabling customers' digital transformation through next-generation services and applications
- Leveraging our leading PureFibre and 5G networks to enable meaningful outcomes for business through our Internet of Things, security and cloud-based solutions
- Providing low-cost, high-speed internet access to more Canadians in need through our Internet for Good program, ensuring all Canadians have the connectivity required to participate in our digital world.

Fixed: Enabling healthier communities

Leveraging technology to create better health outcomes, we strengthened our leadership position across the primary healthcare continuum. In 2021, we completed 551 million digital healthcare transactions, illustrating the significant scope and scale of our healthcare offerings. These transactions span across TELUS Health's wide range of services, such as health benefits management, electronic medical records (EMRs), virtual care services and virtual pharmacy. Importantly,

+6.2%

Internet subscribers

2021: 2.27 million
2020: 2.14 million

+4.1%

TV subscribers

2021: 1.27 million
2020: 1.22 million

+14%

Security subscribers

2021: 804,000
2020: 707,000

+12%

Fixed data revenue

2021: \$4.42 billion
2020: \$3.94 billion



TELUS Health facilitates the integration of electronic health records from the home to the doctor's office to the hospital, making critical health information available to healthcare providers over our world-leading network.

Demand for virtual offerings remained strong as we continued to see the adoption of our consumer-focused TELUS Health MyCare application, as well as our employer-subscribed TELUS Health Virtual Care services. Within our physical TELUS Health Care Centres, in-person patient activity resumed as Canadians emerged from restrictions related to the COVID-19 pandemic.

Advancing our healthcare strategy:

- Leveraging technological innovation, artificial intelligence (AI) and human ingenuity to create better healthcare outcomes and empower people to live healthier lives
- Ensuring healthcare professionals have the right tools to focus on what matters most as Canada's leading EMR provider, with more than 34,000 Canadian healthcare professionals using a TELUS Health EMR solution

- Enhancing our healthcare offerings with the launch of our national network of care centres and virtual care services, helping patients access healthcare resources in a safe and convenient way
- Facilitating the online renewal of prescriptions and e-prescribing services through TELUS Health Virtual Pharmacy
- Helping individuals, companies and industry professionals cope with mental health challenges through our state-of-the-art mental health practices, virtual care services and custom industry tools and resources
- Building healthier communities through our Health for Good program, providing primary care, mental health and addiction support services to marginalized Canadians.

Fixed: Progressing agriculture on a global basis

On a mission to help the agriculture industry produce and deliver food in a more efficient, safe and sustainable manner, TELUS Agriculture made strong progress in 2021. Through solid execution, innovative technology and continued expansion of our operations, we advanced our position as one of the largest agriculture technology companies, globally, serving customers across the agriculture value chain in over 50 countries. Augmenting TELUS Agriculture's growth profile, we acquired Conservis, a leading farm management system platform company, and Blacksmith Applications, a trade promotions management, optimization and analytics company, further advancing our growth strategy within the agriculture value chain.

With TELUS committed to providing world-class connectivity to rural Canadians, TELUS Agriculture is using 5G technology to enable a more autonomous and intelligent future for farming. Backed by more than 1,500 team members, TELUS Agriculture is well-positioned to continue leveraging technology to digitally enhance food quality and security, with the goal of increasing food availability for communities around the globe.

Advancing our agriculture strategy:

- Continuing on our path towards digitally connecting the agriculture industry by delivering data insights and innovative technology to reduce food waste, increase efficiency and mitigate risk
- Integrating and optimizing recent acquisitions under one unified brand

+16%

Health services revenue

2021: \$521 million
2020: \$448 million

+22%

Healthcare lives covered

2021: 20.6 million
2020: 16.9 million

+65%

Virtual care members

2021: 2.8 million
2020: 1.7 million

+3.0%

Digital health transactions

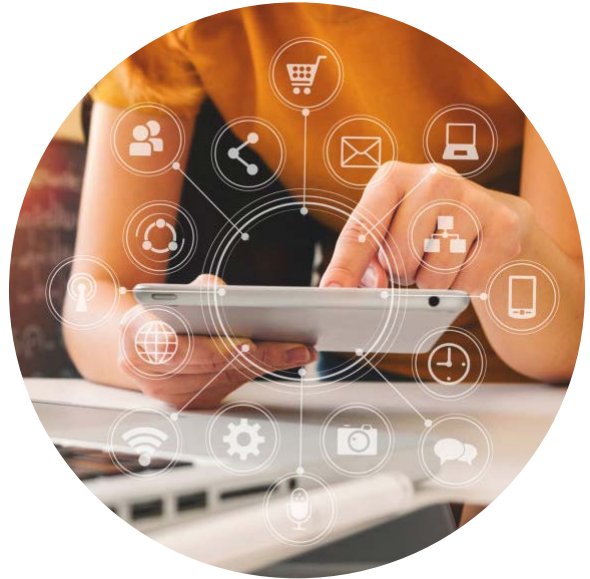
2021: 551.1 million
2020: 534.9 million

50+

Countries served

1,500+

Agriculture team members



- Providing integrated data solutions to the global consumer goods industry, helping companies become more agile and efficient and make more informed decisions
- Offering connected solutions for farm management that optimize operations and improve data insights to enable more accurate and timely farming decisions, in turn helping farmers and ranchers to maximize their profitability
- Creating better food outcomes by tackling one of the most significant social challenges of our generation, feeding the world, while improving the quality and safety of our food by leveraging technology innovation and human compassion.

TELUS International: Delivering exceptional digital experiences

TELUS International (TI) completed its highly anticipated initial public offering (IPO) in early 2021, debuting on both the New York Stock Exchange and the Toronto Stock Exchange. Following this historic event, TI continued to deliver impressive financial and operational results throughout the year, reflected by strong double-digit revenue and Adjusted EBITDA growth. These results, as reported in our digitally-led customer experiences (DLCX) segment, demonstrate TI's position as the partner of choice for clients around the world looking for end-to-end, next-generation solutions to power a differentiated customer experience.

With its focus on higher-value digital customer experience solutions, TI completed the acquisition of Playment, a leader in data annotation and computer vision tools and services. Importantly, TI also remains a pivotal partner for TELUS, playing an essential role in our world-leading customer service excellence and advancing our digitization strategy.

Advancing our DLCX strategy:

- Achieving the right balance of leading technology and authentic, empathetic human interaction to design, build and deliver next-generation solutions for more than 600 global and disruptive brands

- Attracting and retaining top global talent by leaning on TI's caring culture as a sustainable competitive advantage
- Realizing strong financial outcomes through a strategic focus on fast-growing offerings, including AI services and content moderation, as well as technology-driven efficiency gains
- Maintaining a strong balance sheet to enable strategic growth opportunities within TI's comprehensive acquisition pipeline
- Raising TI's profile in the financial markets following its IPO, including efforts such as TI's successful secondary offering of subordinate voting shares in September, which generated significant institutional investor interest
- Making meaningful differences in global communities with TI team members volunteering 70,000 hours in 2021, demonstrating the resiliency of their caring culture.

+33%

DLCX operating revenues

2021: \$2.31 billion
2020: \$1.74 billion

+13%

DLCX Adjusted EBITDA

2021: \$593 million
2020: \$524 million

600+

Global clients

62,000+

TI team members

Leading with purpose and enabling positive outcomes

We asked some of our senior leaders for their thoughts on how TELUS is adapting to an ever-changing competitive landscape while developing new areas of our business, keeping our customers connected and bringing our social purpose to life.



Sandy McIntosh

Executive Vice-president (EVP), People and Culture, and Chief Human Resources Officer



Tony Geheran

EVP and Chief Operations Officer



Zainul Mawji

EVP and President, Home Solutions and Customer Excellence



Navin Arora

EVP and President, TELUS Business Solutions



John Raines

President, TELUS Agriculture

How does TELUS' early adoption of a hybrid work model enhance and shape its world-leading culture and engagement?

Sandy

We anticipated the mobile work trend in 2006 and established our Work Styles® program to transform our organizational experience for sustained competitive advantage. Nothing served as a more effective test of our flexible work culture than the global health pandemic. While we were ahead of the curve, it accelerated how we enable genuine connections anytime, anywhere.

Moving forward, approximately 90 per cent of our team will continue to work virtually. Unlike many companies with prescribed three to five days per week or 9 a.m. to 5 p.m. in the office constructs, we will offer true flexibility and use the office to collaborate and connect when and how often it makes sense. The choice will be with team members and their leader. It's a partnership grounded in trust, and it supports productivity and well-being.

Human connection will remain a cornerstone of our culture, and we are transforming our office spaces to promote collaboration, innovation, connection and well-being. We are also continuing to invest in best-in-class technology to provide a seamless and intuitive virtual experience whenever and wherever our team members work.

We anticipated the mobile work trend in 2006 and established our Work Styles program to transform our organizational experience for sustained competitive advantage.

Over the years, Work Styles has helped drive exceptional results, including our world-leading engagement scores. It has also helped reduce our environmental impact as we work toward our goal of achieving net carbon neutrality by 2030.

Why is TELUS' network leadership key to putting customers first?

Tony

Our TELUS team is driven by a shared commitment to offer the very best products and services, keep our customers connected on our world-class networks and support Canadians when they need us most.

The unrivalled resiliency of our PureFibre network meant that it was able to withstand the demands of the pandemic and extreme weather events, such as last year's devastating wildfires and flooding in British Columbia.

Building on our long history of operating the fastest, most reliable networks and delivering award-winning, industry-leading customer experiences, we continued to expand our reach in 2021, providing essential connectivity during these challenging times. Our blazing-fast 5G network now covers 70 per cent of the Canadian population, from urban to rural, including 382 Indigenous lands. Meanwhile, our gigabit TELUS PureFibre network brings reliable, high-speed connectivity to more than 2.7 million premises, enabling Canadians to work, learn and socialize safely from home.

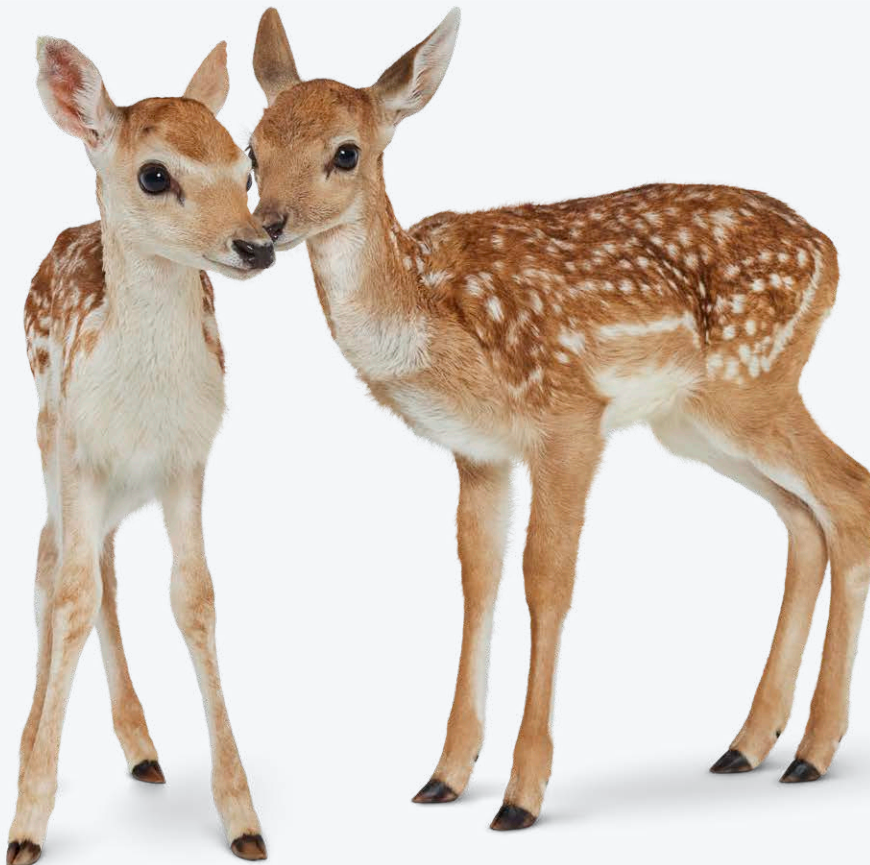
The unrivalled resiliency of our PureFibre network meant that it was able to withstand the demands of the pandemic and extreme weather events, such as last year's devastating wildfires and flooding in British Columbia. TELUS PureFibre is reliable and sustainable and it provides a much better experience for our customers. That's why, where our networks overlap, we are actively migrating customers off our legacy copper network, unlocking the many benefits of TELUS PureFibre and driving higher product intensity within the home.

Together, our expanded and enhanced broadband network technologies will continue to enable improved health and educational outcomes, unleash human potential and productivity, bridge the socio-economic divide and drive economic growth that will be felt for generations to come.

How does TELUS' focus on the whole home create more connected communities?

Zainul

As the global health pandemic evolved, our homes became our offices, classrooms, gyms, virtual clinics and so much more. In an increasingly digital world, TELUS has continued to provide a differentiated and industry-leading suite of products and services on our globally unmatched TELUS PureFibre network, facilitating essential human connections in homes and communities across the country.





Through lockdowns and re-openings, we have supported Canadians every step of the way. In 2021, our customers watched more than 200 million hours of video a month – and we were right there, providing award-winning entertainment, leading multicultural and live content from around the world, and over-the-top platforms like Netflix and Amazon Prime. We are continuing to enhance an already diverse collection of content across entertainment, education, fitness and health, providing our customers with an unrivalled selection of programming.

Ultimately, our homes are where we feel the most safe and secure. We are committed to providing what matters most to our customers and driving remarkable social outcomes by bringing world-leading speeds, reliability and expansive coverage to every aspect of their lives.

When more and more Canadians turn to digital tools to foster human connections, it can create openings for cyberattacks. That's why, in addition to our integrated smart security and automation solutions, we offer online security options to ensure they remain protected, no matter where they are.

Ultimately, our homes are where we feel the most safe and secure. We are committed to providing what matters most to our customers and driving remarkable social outcomes by bringing world-leading speeds, reliability and expansive coverage to every aspect of their lives.

What will 5G technology unlock for your targeted areas of focus?

Navin

The expansion of 5G is coming at such an opportune time as it will underpin the future of work and how we use technology to drive meaningful outcomes for business. Businesses can run more efficiently using artificial intelligence or virtual reality applications to manage inventory, cities can become smarter and more sustainable with environmental and transportation sensors, and workplaces can become safer with connected devices that monitor a plant or work environment.

5G is also transformative for society as a whole. A great example is with GM Canada, which recently selected TELUS as its first-ever domestic provider to power millions of connected vehicles on TELUS' world-leading 5G network, to enable an unparalleled experience that will keep Canadians safe and connected.

In healthcare, we are harnessing 5G to help create better, more connected experiences, such as enabling virtual healthcare with augmented and virtual reality applications, which will revolutionize real-time care and communications between medical experts and their patients.

In agriculture, we are exploring 5G and Internet of Things applications to digitally transform the global food system. For example, in our partnership with Olds College in Alberta, we are working to develop innovations in food production and drive better yields, efficiency and sustainability by testing new solutions for rural connectivity, keeping farmers connected across vast acreages.

Given the importance of connectivity and bridging digital divides, in 2021, we expanded our award-winning



5G network and will continue to enhance the 5G experience in the years ahead as we operationalize spectrum and new technologies so we can drive better outcomes for Canadians and enhance Canada's leadership in a digital world.

The expansion of 5G is coming at such an opportune time as it will underpin the future of work and how we use technology to drive meaningful outcomes for business.

How is TELUS' innovative technology helping to protect and improve the global food system?

John

Following the launch of TELUS Agriculture in November 2020, our team took important steps to increase agility and focus by integrating eight distinct entities into one unified team in 2021. We have also welcomed three new companies to our family this year: Conservis, Herdtrax and Blacksmith Applications. Today, more than 1,500 team members collaborate across four continents. With over 6,600 customers across more than 50 countries, including six of the 10 top food and beverage suppliers and nine of the 10 top agriculture companies in the world, we are well positioned to be the largest global independent provider of digital technologies and data insights, connecting producers to consumers across the agricultural products, food and packaged goods industries.



As climate change and the pandemic continue to wreak havoc on global food supplies, finding solutions to achieve greater food security has never been more important. At TELUS, we believe in using our technology for good, and there is no better way to improve social outcomes than by enabling sustainable food production and distribution. By investing in new technologies, especially applications supported by 5G, TELUS plans to optimize production by better monitoring environmental factors and crop conditions. Additionally, our solutions for food service, retail execution and delivery, trade promotion and optimization can help offset the rising cost of food, 70 per cent of which is related to transportation.

At TELUS, we believe in using our technology for good, and there is no better way to improve social outcomes than by enabling sustainable food production and distribution.

Solving complex data management challenges by linking systems together in new ways helps connect the agriculture value chain and offers convenient solutions that incentivize producers to shift to digital solutions, driving industry-wide profitability and better human outcomes.

Executive Team

Our Executive Team has a long-standing commitment to help improve our communities. Here are their thoughts about the importance of our social purpose, with photos that show some of the ways they have given back over the years.



Navin Arora
Executive Vice-president (EVP) and President, TELUS Business Solutions
Location: Calgary, AB
Joined TELUS: 1999
TELUS shareholdings: 261,422

It is very special how we are united by our purpose, and to me, it is about championing entrepreneurs, businesses and organizations with technology so we can all do our part in creating positive and lasting changes in our society.



Doug French
EVP and Chief Financial Officer
Location: Whitby, ON
Joined TELUS: 2000 (Clearnet: 1996)
TELUS shareholdings: 326,433

I am proud of our team's industry-leading commitment to ESG initiatives and our leadership in delivering amazing human and social outcomes through the power of our technology. With our sustainability-linked bond framework, we are demonstrating our dedication to environmental sustainability.



Tony Geheran
EVP and Chief Operations Officer
Location: Vancouver, B.C.
Joined TELUS: 2001
TELUS shareholdings: 331,507

Through our shared commitment to bridging the digital divide and supporting those in need, we are building stronger, healthier communities and driving change that will be felt by generations to come.



Zainul Mawji
EVP and President, Home Solutions and Customer Excellence
Location: Edmonton, AB
Joined TELUS: 2001
TELUS shareholdings: 202,575

Our mission is to connect, protect and support all Canadians, no matter who they are or where they live. It is at the heart of everything we do.



Sandy McIntosh
EVP, People and Culture, and Chief Human Resources Officer
Location: Toronto, ON
Joined TELUS: 2007
TELUS shareholdings: 252,868

There is a positive correlation between purpose and well-being, and I am reminded of the value when I think about our team. By engaging in purpose-filled acts, our team is enabling better human outcomes; and science shows it benefits our health. To me, it is a vital investment of time and energy.



Jeffrey Puritt
TELUS EVP and TELUS International President and Chief Executive Officer
Location: Las Vegas, NV
Joined TELUS: 2001

Our social purpose drives meaningful change around the world as we spread a spirit of volunteerism. The impact is awe-inspiring for team members, customers and investors, especially in developing countries where needs are significant.



John Raines
President,
TELUS Agriculture
Location: St. Louis, MO
Joined TELUS: 2021

A key pillar of our social purpose is caring for our planet by enabling responsible agriculture. I am proud to lead our work at TELUS Agriculture, improving the quality, safety, distribution and sustainability of food and consumer goods globally.



Jill Schnarr
Chief Communications
Officer
Location: Vancouver, B.C.
Joined TELUS: 1992
TELUS shareholdings:
71,813

As a business, and as a leader at TELUS, we have an obligation to make the world a better place. Our social purpose connects our expertise, passion and compassion to action – addressing the world's most pressing social issues.



Jim Senko
EVP and President,
Mobility Solutions
Location: Toronto, ON
Joined TELUS: 2001
TELUS shareholdings:
192,556

Reflecting on another year that has amplified the importance of human connection, I am proud to say that at TELUS we're creating the infrastructure, products and services that enable all Canadians to stay connected with each other. It is our priority in making the future friendly for all.



Andrea Wood
Chief Legal and
Governance Officer
Location: Toronto, ON
Joined TELUS: 2013
TELUS shareholdings:
131,301

Our social purpose is embedded throughout our organization's strategic business plan, something I believe is essential to driving meaningful change. It gives me a great sense of purpose and pride to be part of a team and organization dedicated to improving the lives of individuals and the communities where we live and serve.

Darren Entwistle
President and Chief Executive Officer
More information can be found on page 28.

TELUS shareholdings represent the total common shares and restricted share units held as at December 31, 2021. Jeffrey Puritt's shareholdings are not listed as he primarily holds shares in TELUS International. Shareholdings for John Raines are not listed as he joined TELUS in late 2021.



For more information, visit telus.com/executive

Board of Directors



R.H. (Dick) Auchinleck,
TELUS Chair
Director since: 2003
TELUS shareholdings: 541,879



Lisa de Wilde
Director since: 2015
TELUS Committees: Pension;
and Chair, Corporate
Governance
TELUS shareholdings: 61,421



Kathy Kinloch
Director since: 2017
TELUS Committees: Corporate
Governance, and Human
Resources and Compensation
TELUS shareholdings: 52,923



David Mowat
Director since: 2016
TELUS Committee: Chair, Audit
TELUS shareholdings: 65,890



Raymond T. Chan
Director since: 2013
TELUS Committees:
Human Resources and
Compensation; and Chair,
Pension
TELUS shareholdings: 107,911



Darren Entwistle
Director since: 2000
TELUS shareholdings: 1,265,719



Christine Magee
Director since: 2018
TELUS Committees: Human
Resources and Compensation,
and Pension
TELUS shareholdings: 38,237



Marc Parent
Director since: 2017
TELUS Committees: Human
Resources and Compensation,
and Pension
TELUS shareholdings: 51,172



Hazel Claxton
Director since: 2021
TELUS Committee: Audit
TELUS shareholdings: 9,973



Thomas E. Flynn
Director since: 2020
TELUS Committee: Audit
TELUS shareholdings: 28,535



John Manley
Director since: 2012
TELUS Committees: Corporate
Governance, and Human
Resources and Compensation
TELUS shareholdings: 124,427



Denise Pickett
Director since: 2018
TELUS Committees: Audit
and Corporate Governance
TELUS shareholdings: 35,251



Mary Jo Haddad
Director since: 2014
TELUS Committees: Corporate
Governance; and Chair, Human
Resources and Compensation
TELUS shareholdings: 85,093



W. Sean Willy
Director since: 2021
TELUS Committee: Audit
TELUS shareholdings: 6,973



For further information,
visit telus.com/board

TELUS shareholdings represent the total common shares and
deferred share units (restricted share units for Darren Entwistle)
held as at December 31, 2021.

Financial review

What's inside



30–31

CFO letter

A look at our financial performance and how we create sustainable value for our stakeholders



32–37

Financial and operating statistics

Annual and quarterly financial and operating information



38–137

Management's discussion and analysis

A discussion of our financial position and performance



138–198

Consolidated financial statements

Consolidated financial statements and accompanying notes



199–Back cover

Additional investor resources

Glossary, investor information and reasons to invest in TELUS



Driving sustainable value through the power of our purpose

In 2021, our team delivered outstanding financial and operational results, accelerated our strategic investments, and demonstrated our unique ability to achieve sustainable growth and shareholder value while also advancing our environmental, social and governance commitments.

Investing in a sustainable future

Building on the foundation of social capitalism, we continue to progress our track record of delivering sustainable value creation for our investors by driving positive social, economic and health outcomes for Canadians. Our team's ability to connect our customers and build healthier communities is fundamental to our success. In 2021, we again demonstrated our long-standing leadership position on environmental sustainability when we introduced the first sustainability-linked bond (SLB) framework in Canada and then successfully issued our inaugural SLB – also a Canadian first – linking our cost of borrowing directly to our environmental performance.

Putting customers first through network leadership and digitization

We continued our pursuit of network excellence by investing strategically to accelerate our broadband build program, which includes the expansion of our PureFibre and 5G networks in 2021 and through 2022. Indeed, in 2021 we invested \$3.5 billion strengthening our competitive position, driving strong profitable customer growth and operating efficiencies, and delivering sustainable cash flow benefits. Our intensive focus on reliability and accessibility is ensuring all Canadians can benefit from the social, environmental and economic opportunities that our leading broadband networks unlock.

Our dedicated team remains committed to putting customers first and delivering exceptional customer experiences. In addition, as more of our customers look for a convenient way to connect with us online, we have simplified and enhanced our digital and self-serve capabilities. The success of this strategy, combined with our award-winning mobile and fixed broadband networks, allows us to realize more efficient service delivery and has earned us the highest customer loyalty results in our industry.

A differentiated approach

With our unique technology-oriented asset mix, including TELUS International (TI), TELUS Health (TH) and TELUS Agriculture (TAG), we are demonstrating to our customers and investors that our consistent pursuit of strategic diversification has positioned us to accelerate growth and to anticipate and deliver on the needs of citizens around the world, today and into the future.

Our intensive focus on reliability and accessibility is ensuring all Canadians can benefit from the social, environmental and economic opportunities that our leading broadband networks unlock.

Following TI's very successful initial public offering in February 2021, it continues to achieve strong growth despite the ongoing COVID-19 pandemic, generating double-digit growth in revenue and Adjusted EBITDA in 2021. This growth illustrates the long-term financial and strategic advantages we are realizing from this unique and diversified digital revenue stream.

In TH, our team is achieving important milestones as we continue to build significant scale in our health operations. In 2021, we completed 551 million digital health transactions and added 1.1 million new virtual healthcare members to reach nearly three million members now using our virtual care solutions. Indeed, these positive trends supported strong health services revenue growth of 16 per cent. In 2022 and beyond, we will continue to leverage our leading position in healthcare technology solutions to provide access to better health information and deliver improved health outcomes for citizens.

In 2021, TAG continued to build breadth and scale as a global leader in agriculture technology solutions while delivering strong revenue growth, more than doubling its 2020 performance. We expect this business to be a meaningful growth engine for TELUS, contributing double-digit annual increases in revenue and EBITDA in the coming years. Our strategic objectives for TAG involve connecting the entire agricultural value chain with smart, secure, end-to-end technology and software solutions that will deliver a safer and more nutritious food supply for people around the world.

Leadership in customer loyalty

In 2021, we continued to experience strong growth in our customer base. Impressively, we added a record 960,000 total new customer connections across our mobility and fixed product portfolios, highlighting the success of our bundled offerings and our leading customer loyalty. Notably, customer churn rates across our mobile phone and fixed products were all less than one per cent in 2021. Our ongoing pursuit of network excellence and our superior bundled offerings ensure that our customers continue to have reliable access to our trusted services to stay safe and connected in today's digital society and economy.

Delivering strong financial results

Our continued commitment to social capitalism and leading execution cadence is driving our consistent, long-term financial success. In 2021, operating revenue grew by 9.8 per cent, while net income increased by 35 per cent and Adjusted EBITDA increased by 6.4 per cent. Notably, our strong annual results were in line with our 2021 financial targets.

Our track record of delivering on our shareholder-friendly initiatives is unmatched, and we continue to generate significant value for our investors. In 2021, our strong financial performance allowed us to announce two dividend increases as part of our multi-year dividend growth program, and to return approximately \$1.7 billion to shareholders in dividends. In December, we surfaced value with the sale of our financial solutions business for \$500 million, with proceeds used to support strategic investments and debt repayment. Our continued strong operational and financial performance, alongside maintaining a healthy balance sheet and robust liquidity position, will enable us to continue investing strategically and delivering on our targeted seven to 10 per cent annual dividend growth program through the end of 2022.

Building on our momentum

Looking ahead, we will continue to build on our strong track record of operational and financial execution excellence by further advancing our unique growth strategy and delivering on our efficiency and effectiveness commitments. We are energized and ready to achieve the ambitious



Doug French volunteered alongside his dad, Don French (1931 to 2021), at the Dr. Peter Centre for people living with HIV, exemplifying his dedication to giving back to our communities.

2022 consolidated financial targets we have set for ourselves, including growth in both operating revenue and Adjusted EBITDA of eight to 10 per cent, capital expenditures of approximately \$3.4 billion, and free cash flow of \$1 billion to \$1.2 billion. As the global leader in social capitalism, we will continue bringing our social purpose to life, delivering exceptional experiences that deepen customer loyalty and drive economic growth. Thank you for your continued support, I look forward to another successful year ahead.

Best regards,

Doug French
Executive Vice-president and Chief Financial Officer
February 18, 2022



Annual consolidated financial information

Statement of income (millions)	Applying IFRS 16			Excluding IFRS 16	
	2021	2020	2019	2018	2017
Operating revenues	\$ 16,838	\$ 15,341	\$ 14,589	\$ 14,095	\$ 13,305
Other income ^{1,2}	420	122	69	273	103
Operating revenues and other income ^{1,2}	\$ 17,258	\$ 15,463	\$ 14,658	\$ 14,368	\$ 13,408
Goods and services purchased	6,699	6,268	6,070	6,368	5,904
Employee benefits expense	4,269	3,701	3,034	2,896	2,594
Depreciation and amortization	3,216	3,012	2,577	2,267	2,169
Operating income ^{1,2}	\$ 3,074	\$ 2,482	\$ 2,977	\$ 2,837	\$ 2,741
Financing costs before long-term debt prepayment premium	786	753	705	627	573
Long-term debt prepayment premium	10	18	28	34	–
Income before income taxes ^{1,2}	\$ 2,278	\$ 1,711	\$ 2,244	\$ 2,176	\$ 2,168
Income taxes	580	451	468	552	590
Net income ^{1,2}	\$ 1,698	\$ 1,260	\$ 1,776	\$ 1,624	\$ 1,578
Net income attributable to common shares ^{1,2}	\$ 1,655	\$ 1,207	\$ 1,746	\$ 1,600	\$ 1,559
EBITDA ^{1,2,3}	\$ 6,290	\$ 5,494	\$ 5,554	\$ 5,104	\$ 4,910
Adjusted EBITDA ³	\$ 6,069	\$ 5,701	\$ 5,693	\$ 5,250	\$ 5,005
Share information⁴	2021	2020	2019	2018	2017
Basic total weighted average shares outstanding (millions)	1,346	1,275	1,204	1,193	1,186
Year-end shares outstanding (millions)	1,370	1,291	1,209	1,197	1,189
Basic earnings per share (EPS) ^{1,2}	\$ 1.23	\$ 0.95	\$ 1.45	\$ 1.34	\$ 1.31
Dividends declared per share	1.2710	1.18495	1.12625	1.05	0.99
Financial position (millions)	2021	2020	2019	2018	2017
Total assets	\$ 47,994	\$ 43,273	\$ 37,985	\$ 33,057	\$ 31,053
Long-term debt (includes current maturities)	20,852	20,288	18,474	14,101	13,660
Net debt ³	20,535	19,826	18,199	13,770	13,422
Owners' equity	16,059	12,568	10,659	10,341	9,458

Operating revenues (\$ millions)

2021	16,838
2020	15,341
2019	14,589
2018	14,095
2017	13,305

Dividends declared per share⁴ (\$)

2021	1.2710
2020	1.18495
2019	1.12625
2018	1.05
2017	0.99

Quarterly consolidated financial information

	Applying IFRS 16							
Statement of income (millions)	Q4 2021	Q3 2021	Q2 2021	Q1 2021	Q4 2020	Q3 2020	Q2 2020	Q1 2020
Operating revenues	\$ 4,461	\$ 4,246	\$ 4,109	\$ 4,022	\$ 4,061	\$ 3,961	\$ 3,656	\$ 3,663
Other income (loss) ¹	411	5	2	2	(1)	20	72	31
Operating revenues and other income ¹	\$ 4,872	\$ 4,251	\$ 4,111	\$ 4,024	\$ 4,060	\$ 3,981	\$ 3,728	\$ 3,694
Goods and services purchased	1,882	1,660	1,609	1,548	1,766	1,632	1,458	1,412
Employee benefits expense	1,108	1,095	1,051	1,015	958	959	911	873
Depreciation and amortization	830	804	793	789	789	773	725	725
Operating income ¹	\$ 1,052	\$ 692	\$ 658	\$ 672	\$ 547	\$ 617	\$ 634	\$ 684
Financing costs before long-term debt prepayment premium	192	184	203	207	190	187	184	192
Long-term debt prepayment premium	-	10	-	-	-	-	18	-
Income before income taxes ¹	\$ 860	\$ 498	\$ 455	\$ 465	\$ 357	\$ 430	\$ 432	\$ 492
Income taxes	197	140	111	132	86	109	117	139
Net income ¹	\$ 663	\$ 358	\$ 344	\$ 333	\$ 271	\$ 321	\$ 315	\$ 353
Net income attributable to common shares ¹	\$ 644	\$ 345	\$ 335	\$ 331	\$ 260	\$ 307	\$ 290	\$ 350
EBITDA ^{1,3}	\$ 1,882	\$ 1,496	\$ 1,451	\$ 1,461	\$ 1,336	\$ 1,390	\$ 1,359	\$ 1,409
Adjusted EBITDA ³	\$ 1,517	\$ 1,559	\$ 1,490	\$ 1,503	\$ 1,409	\$ 1,456	\$ 1,361	\$ 1,475
Share information ⁴	Q4 2021	Q3 2021	Q2 2021	Q1 2021	Q4 2020	Q3 2020	Q2 2020	Q1 2020
Basic total weighted average shares outstanding (millions)	1,368	1,361	1,355	1,298	1,291	1,284	1,278	1,248
Period-end shares outstanding (millions)	1,370	1,361	1,355	1,349	1,291	1,284	1,278	1,272
Basic EPS ¹	\$ 0.47	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.20	\$ 0.24	\$ 0.23	\$ 0.28
Dividends declared per share	0.3274	0.3162	0.3162	0.3112	0.3112	0.29125	0.29125	0.29125

1 Included a pre-tax gain of \$410 million on the disposition of our financial solutions business in the fourth quarter of 2021.

2 In 2018, we recorded equity income of \$171 million related to real estate joint ventures arising from the sale of TELUS Garden.

3 These are non-GAAP and other specified financial measures, which do not have standardized meanings under IFRS-IASB and might not be comparable to those presented by other issuers. For more information, see Section 11.1 of Management's discussion and analysis (MD&A) in this report.

4 Adjusted to reflect the two-for-one share split effective March 17, 2020.

Note: Certain comparative information has been restated to conform with the 2021 presentation.

Operating revenues

(\$ millions)

Q4 21	4,461
Q3 21	4,246
Q2 21	4,109
Q1 21	4,022
Q4 20	4,061
Q3 20	3,961
Q2 20	3,656
Q1 20	3,663

Dividends declared per share⁴

(\$)

Q4 21	0.3274
Q3 21	0.3162
Q2 21	0.3162
Q1 21	0.3112
Q4 20	0.3112
Q3 20	0.29125
Q2 20	0.29125
Q1 20	0.29125

Annual operating statistics

	Applying IFRS 16			Excluding IFRS 16	
	2021	2020	2019	2018	2017
Cash flow statement information					
Cash provided by operating activities (millions)	\$ 4,388	\$ 4,574	\$ 3,927	\$ 4,058	\$ 3,947
Cash used by investing activities (millions)	(5,466)	(6,165)	(5,044)	(2,977)	(3,643)
Cash provided (used) by financing activities (millions)	953	1,904	1,238	(1,176)	(227)
Profitability ratios					
Ratio of dividends declared to cash provided by operating activities less capital expenditures (excluding spectrum licences) ¹	192%	84%	133%	n/a	n/a
Dividend payout ratio, net of dividend reinvestment plan effects ^{1,2}	140%	67%	115%	n/a	n/a
Return on common equity ³	11.6%	10.1%	16.7%	16.4%	17.1%
Debt and coverage ratios					
Earnings coverage ratio	3.9	3.2	4.0	4.4	4.6
EBITDA interest coverage ratio ²	8.4	7.3	7.5	8.4	8.9
Net debt to EBITDA – excluding restructuring and other costs ²	3.17	3.45	3.20	2.54	2.67
Other metrics					
Free cash flow ² (millions)	\$ 777	\$ 1,435	\$ 932	\$ 1,207	\$ 966
EBITDA ⁴ less capital expenditures (millions)	\$ 2,978	\$ 2,978	\$ 2,782	\$ 2,507	\$ 1,933
Capital expenditures (excluding spectrum licences) (millions)	\$ 3,498	\$ 2,775	\$ 2,906	\$ 2,914	\$ 3,094
Capital expenditure intensity ⁵	20%	18%	20%	20%	23%
Cash payments for spectrum licences (millions)	\$ 2,219	–	\$ 942	\$ 1	–
Total customer connections ⁶ (thousands)	16,887	15,943	15,166	13,947	13,050
Employee-related information					
Total salaries and benefits ⁴ (millions)	\$ 4,775	\$ 4,200	\$ 3,493	\$ 3,254	\$ 3,036
Total active employees ⁷	90,800	78,100	65,600	58,000	53,600
Full-time equivalent employees	90,000	77,200	64,600	56,900	52,900

n/a – not applicable

Cash provided by operating activities (\$ millions)

2021	4,388
2020	4,574
2019	3,927
2018	4,058
2017	3,947

Capital expenditures (excluding spectrum licences) (\$ millions)

2021	3,498
2020	2,775
2019	2,906
2018	2,914
2017	3,094

Quarterly operating statistics

	Applying IFRS 16							
	Q4 2021	Q3 2021	Q2 2021	Q1 2021	Q4 2020	Q3 2020	Q2 2020	Q1 2020
Cash flow statement information								
Cash provided by operating activities (millions)	\$ 896	\$ 1,309	\$ 1,244	\$ 939	\$ 1,033	\$ 902	\$ 1,462	\$ 1,177
Cash used by investing activities (millions)	(1,989)	(1,464)	(860)	(1,153)	(2,207)	(1,176)	(823)	(1,959)
Cash provided (used) by financing activities (millions)	(48)	(164)	(104)	1,269	1,401	(76)	(726)	1,305
Profitability ratios								
Ratio of dividends declared to cash provided by operating activities less capital expenditures (excluding spectrum licences)	192%	126%	138%	101%	84%	100%	84%	101%
Dividend payout ratio, net of dividend reinvestment plan effects ²	140%	110%	111%	80%	67%	69%	61%	76%
Return on common equity ³	11.6%	9.3%	9.4%	9.3%	10.1%	11.3%	12.7%	15.2%
Debt and coverage ratios								
Earnings coverage ratio	3.9	3.3	3.2	3.1	3.2	3.4	3.6	3.8
EBITDA interest coverage ratio ²	8.4	7.6	7.4	7.3	7.3	7.4	7.2	7.3
Net debt to EBITDA – excluding restructuring and other costs ²	3.17	3.19	3.11	3.15	3.45	3.21	3.06	3.13
Other metrics								
Free cash flow ² (millions)	\$ 43	\$ 203	\$ 210	\$ 321	\$ 218	\$ 161	\$ 511	\$ 545
EBITDA ⁴ less capital expenditures (millions)	\$ 1,017	\$ 568	\$ 576	\$ 817	\$ 794	\$ 707	\$ 673	\$ 804
Capital expenditures (excluding spectrum licences) (millions)	\$ 909	\$ 991	\$ 913	\$ 685	\$ 613	\$ 741	\$ 756	\$ 665
Capital expenditure intensity ⁵	19%	23%	22%	17%	15%	19%	20%	18%
Cash payments for spectrum licences (millions)	\$ 1,558	\$ 389	\$ 21	\$ 251	–	–	–	–
Total customer connections ⁶ (thousands)	16,887	16,615	16,295	16,072	15,943	15,690	15,382	15,241
Employee-related information								
Total salaries and benefits ⁴ (millions)	\$ 1,230	\$ 1,215	\$ 1,185	\$ 1,145	\$ 1,090	\$ 1,075	\$ 1,035	\$ 1,000

1 Commencing in 2020, we revised the methodology for calculating these metrics. Periods prior to 2019 have not been recast in accordance with these revised calculations. See Note 3 of the Consolidated financial statements.

2 These are other specified financial measures. Refer to Section 11.1 of the MD&A.

3 Net income attributed to equity shares for a 12-month trailing period, divided by the average common equity for the 12-month period.

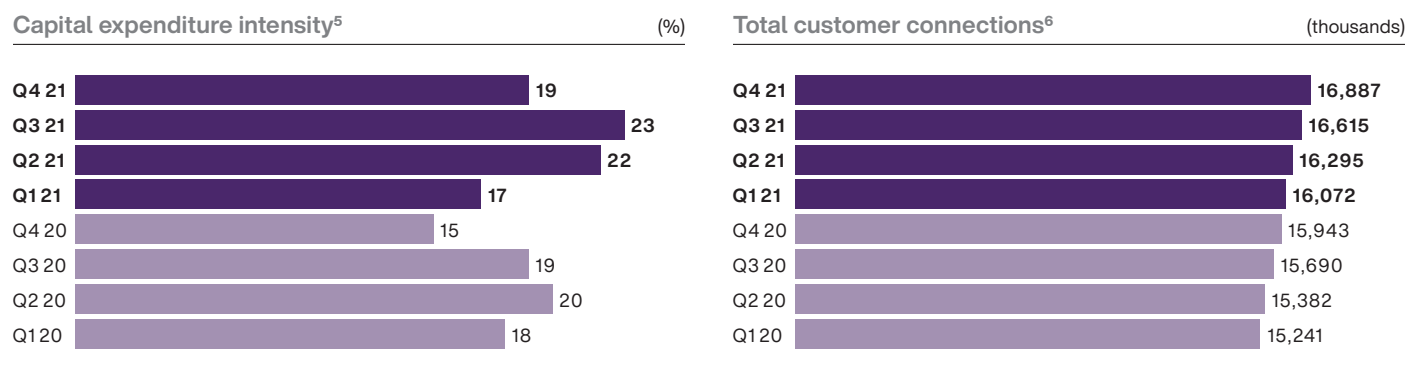
4 Excludes restructuring and other costs.

5 Capital expenditures (excluding spectrum licences) divided by Operating revenues and other income.

6 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. Certain customer connections have been adjusted effective January 1, 2021. For details on adjustments, see Section 1.3 of the MD&A. Total customer connections excludes 20.6 million healthcare lives covered.

7 Excluding employees in TELUS International, total active employees were 28,700 in 2021, 28,400 in 2020, 27,600 in 2019, 25,700 in 2018, and 25,700 in 2017.

Note: Certain comparative information has been restated to conform with the 2021 presentation.



Annual segment statistics

	Applying IFRS 16	
	2021	2020
TELUS technology solutions (TTech) segment¹		
Operating revenues (millions)	\$ 14,528	\$ 13,604
Other income ² (millions)	420	19
Intersegment revenue (millions)	18	13
Operating revenues and other income ² (millions)	\$ 14,966	\$ 13,636
EBITDA ² (millions)	\$ 5,735	\$ 4,976
EBITDA margin ²	38.3%	36.5%
Adjusted EBITDA (millions)	\$ 5,476	\$ 5,177
Adjusted EBITDA margin ³	37.6%	37.9%
Capital expenditures (excluding spectrum licences) (millions)	\$ 3,372	\$ 2,675
Total TTech net additions (thousands)	960	777
Mobile phone subscribers ⁴ (thousands)	9,290	8,923
Connected device subscribers (thousands)	2,134	1,796
Internet subscribers ⁵ (thousands)	2,271	2,138
TV subscribers (thousands)	1,265	1,215
Residential voice subscribers (thousands)	1,123	1,164
Security subscribers (thousands)	804	707
Mobile phone monthly average revenue per unit (ARPU) ^{3,4}	\$ 57.07	\$ 57.41
Mobile phone monthly churn rate ⁴	0.91%	0.96%
Virtual care members (millions)	2.8	1.7
Healthcare lives covered (millions)	20.6	16.9
Digital health transactions (millions)	551.1	534.9
Digitally-led customer experiences – TELUS International (DLCX) segment¹		
Operating revenues (millions)	\$ 2,310	\$ 1,737
Other income (millions)	–	103
Intersegment revenue (millions)	444	416
Operating revenues and other income (millions)	\$ 2,754	\$ 2,256
EBITDA (millions)	\$ 555	\$ 518
EBITDA margin	20.2%	22.9%
Adjusted EBITDA (millions)	\$ 593	\$ 524
Adjusted EBITDA margin ³	21.6%	24.0%
Capital expenditures (millions)	\$ 126	\$ 100

TTech Operating revenues (\$ millions)

2021	14,528
2020	13,604

DLCX Operating revenues (\$ millions)

2021	2,310
2020	1,737

Quarterly segment statistics

	Applying IFRS 16							
	Q4 2021	Q3 2021	Q2 2021	Q1 2021	Q4 2020	Q3 2020	Q2 2020	Q1 2020
TTech segment¹								
Operating revenues (millions)	\$ 3,823	\$ 3,659	\$ 3,559	\$ 3,487	\$ 3,592	\$ 3,500	\$ 3,219	\$ 3,293
Other income (loss) ² (millions)	411	5	2	2	(1)	20	1	(1)
Intersegment revenue (millions)	3	5	5	5	4	4	4	1
Operating revenues and other income ² (millions)	\$ 4,237	\$ 3,669	\$ 3,566	\$ 3,494	\$ 3,595	\$ 3,524	\$ 3,224	\$ 3,293
EBITDA ² (millions)	\$ 1,721	\$ 1,355	\$ 1,323	\$ 1,336	\$ 1,220	\$ 1,258	\$ 1,197	\$ 1,301
EBITDA margin ²	40.6%	37.0%	37.1%	38.3%	34.0%	35.7%	37.1%	39.5%
Adjusted EBITDA (millions)	\$ 1,348	\$ 1,410	\$ 1,353	\$ 1,365	\$ 1,261	\$ 1,314	\$ 1,260	\$ 1,342
Adjusted EBITDA margin ³	35.2%	38.4%	37.9%	39.1%	35.1%	37.2%	39.1%	40.7%
Capital expenditures (excluding spectrum licences) (millions)	\$ 866	\$ 962	\$ 882	\$ 662	\$ 588	\$ 714	\$ 727	\$ 646
Total TTech net additions (thousands)	272	320	223	145	253	277	141	106
Mobile phone subscribers ⁴ (thousands)	9,290	9,178	9,043	8,954	8,923	8,836	8,725	8,664
Connected device subscribers (thousands)	2,134	2,053	1,943	1,859	1,796	1,708	1,621	1,588
Internet subscribers ⁵ (thousands)	2,271	2,231	2,185	2,155	2,138	2,094	2,044	2,007
TV subscribers (thousands)	1,265	1,247	1,237	1,226	1,215	1,195	1,176	1,168
Residential voice subscribers (thousands)	1,123	1,133	1,144	1,154	1,164	1,173	1,181	1,191
Security subscribers (thousands)	804	773	743	724	707	684	635	623
Mobile phone monthly ARPU ^{3,4}	\$ 57.45	\$ 58.13	\$ 56.56	\$ 56.10	\$ 56.88	\$ 58.12	\$ 56.44	\$ 58.24
Mobile phone monthly churn rate ⁴	1.04%	0.90%	0.81%	0.89%	1.09%	0.99%	0.80%	0.94%
Virtual care members (millions)	2.8	2.3	2.2	2.0	1.7	1.4	1.2	0.7
Healthcare lives covered (millions)	20.6	19.3	18.1	17.5	16.9	16.0	15.5	14.6
Digital health transactions (millions)	142.8	137.9	137.1	133.3	135.1	136.0	124.1	139.7
DLCX segment¹								
Operating revenues (millions)	\$ 638	\$ 587	\$ 550	\$ 535	\$ 469	\$ 461	\$ 437	\$ 370
Other income (millions)	–	–	–	–	–	–	71	32
Intersegment revenue (millions)	119	113	108	104	108	107	104	97
Operating revenues and other income (millions)	\$ 757	\$ 700	\$ 658	\$ 639	\$ 577	\$ 568	\$ 612	\$ 499
EBITDA (millions)	\$ 161	\$ 141	\$ 128	\$ 125	\$ 116	\$ 132	\$ 162	\$ 108
EBITDA margin	21.4%	20.0%	19.6%	19.5%	20.1%	23.1%	26.6%	21.7%
Adjusted EBITDA (millions)	\$ 169	\$ 149	\$ 137	\$ 138	\$ 148	\$ 142	\$ 101	\$ 133
Adjusted EBITDA margin ³	22.5%	21.1%	20.9%	21.6%	25.8%	24.8%	18.6%	26.8%
Capital expenditures (millions)	\$ 43	\$ 29	\$ 31	\$ 23	\$ 25	\$ 27	\$ 29	\$ 19

1 Effective January 1, 2021, we transitioned to our new reportable segments: TTech and DLCX. For more information, see Sections 1.1 and 5.1 of the MD&A.

2 Included a gain of \$410 million on the disposition of our financial solutions business in the fourth quarter of 2021.

3 These are non-GAAP and other specified financial measures, which do not have standardized meanings under IFRS-IASB and might not be comparable to those presented by other issuers. For more information, see Section 11.1 of the MD&A.

4 Effective January 1, 2021, with retrospective application to January 1, 2020, in alignment with our segment reporting changes, we made a retroactive adjustment to remove internal network service revenue and approximately 29,000 subscribers from our mobile phone subscriber base and associated operating statistics (ARPU and churn). Internal network service revenue consists of earned revenue from both our internal mobile phone and connected devices subscribers, neither of which contribute to our restated subscriber base.

5 Effective January 1, 2021, on a prospective basis, following an in-depth review of customer accounts within a legacy subscriber provisioning system to be decommissioned, we adjusted our internet subscriber base to remove 16,000 subscribers.

Note: Certain comparative information has been restated to conform with the 2021 presentation.

Management's discussion and analysis

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 plans and expectations regarding the impact of the COVID-19 pandemic and responses to it, our expectations regarding trends in the telecommunications industry including demand for mobile data and ongoing internet 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 events may differ materially from expectations expressed in or implied by the forward-looking statements. Our general outlook and assumptions for 2022 are presented in *Section 9 General trends, outlook and assumptions, and regulatory developments and proceedings* in this Management's discussion and analysis (MD&A).

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

- **The COVID-19 pandemic** including its impacts on our customers, suppliers and vendors, our team members and our communities, as well as changes resulting from the pandemic to our business and operations, including changes to the demand for and supply of the products and services that we offer and the channels through which we offer them.
- **Regulatory decisions and developments** including: changes to our regulatory regime (the timing of announcement or implementation of which are uncertain) 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, such as the potential for government to allow consolidation of competitors in our industry or conversely for government intervention intended to further increase competition, for example, through mandated wholesale access; the potential for additional government intervention on pricing, including the March 2020 announcement by the federal government targeting a 25% price reduction over a two-year period by the national mobile carriers in postpaid mobile bring-your-own-device plans using between 2 to 6 GB of data; federal and provincial consumer protection legislation and the possible re-introduction by the federal government of privacy legislation to give consumers new privacy rights and to impose new monetary penalties for non-compliance; amendments to existing federal legislation; potential threats to unitary federal regulatory authority over communications in Canada; potential threats to the CRTC's ability to enforce the *Wholesale Code*, which aims to ensure the fair treatment by vertically integrated firms of rival broadcasting distributors and programming services; regulatory action by the Competition Bureau or other regulatory agencies; spectrum 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; the impact on us and other Canadian telecommunications carriers of government or regulatory actions with respect to certain countries or suppliers, including U.S. federal regulations pertaining to certain technology transactions deemed to constitute national security risks and the imposition of additional licence requirements on the export, re-export and transfer of goods, services and technology to Huawei Technologies Co. Ltd. and its non-U.S. affiliates, and decisions of other foreign governments, which could result in a general shortage of chipsets and other equipment; 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; and our ability to comply with complex and changing regulation of the healthcare and medical devices industry in the jurisdictions in which we operate, including as an operator of health clinics. The jurisdictions in which we operate, as well as the contracts that we enter into (particularly contracts entered into by TELUS International (Cda) Inc. (TELUS International or TI)), require us to comply with or facilitate our clients' compliance with numerous, complex and sometimes conflicting legal regimes, both domestically and internationally. See *TELUS International's financial performance which impacts our financial performance* below.
- **Competitive environment** including: our ability to continue to retain customers through an enhanced customer service experience that is differentiated from our competitors, including through the deployment and operation of evolving network infrastructure; intense competition, including the ability of industry competitors to successfully combine a mix of new service offerings and, in some cases, under one bundled and/or discounted monthly rate, along with their existing services; the success of new products, services and supporting systems, such as home automation, security and Internet of Things (IoT) services for internet-connected devices; continued intense competition across all services among telecommunications companies, cable companies, other communications companies and over-the-top (OTT) services, which, among other things, places pressures on current and future average billing per subscriber per month (ABPU), average revenue per subscriber per month (ARPU), cost of acquisition, cost of retention and churn rates for all services, as do market conditions, government actions, customer usage patterns, increased data bucket sizes or flat-rate pricing trends for voice and data, inclusive rate plans for voice and data and availability of Wi-Fi networks for data; consolidation, mergers and acquisitions of industry competitors; subscriber additions, losses and retention volumes; 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 electronic medical records and pharmacy management products, claims adjudicators, systems integrators and health service providers including those that own a vertically integrated mix of health services delivery, IT solutions and related services, global providers that could achieve expanded Canadian footprints, and in the provision of virtual healthcare services, preventative health services and personal emergency response services; and in our TELUS Agriculture business, our ability to compete with focused software and IoT competitors.
- **Technological substitution** including: 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, including as a result of 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 that have only mobile and/or internet-based telephone services; potential declines in ABPU and ARPU as a result of, among other factors, substitution by messaging and OTT applications; substitution by increasingly available Wi-Fi services; and 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.
- **Challenges to our ability to deploy technology** including: high subscriber demand for data that challenges wireless networks and spectrum capacity levels and may be accompanied by increases in delivery cost; our reliance on information technology and our ability to streamline our legacy systems; the roll-out, anticipated benefits and efficiencies, and the evolution of wireless broadband technologies and systems, including video distribution platforms and telecommunications network technologies (broadband initiatives, such as fibre-to-the-premises (FTTP), wireless small-cell deployment, 5G wireless and 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.
- **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 to improve coverage and capacity; investments in network resiliency and reliability, including to address changes in usage resulting from restrictions imposed in response to the COVID-19 pandemic; the allocation of resources to acquisitions and future spectrum auctions held by Innovation, Science and Economic Development Canada (ISED), including the announcement of a second consultation on the auctioning of the 3800 MHz spectrum, which the Minister of Innovation, Science and Industry stated is expected to take place in 2023, and 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 by changes to our regulatory environment.
- **Operational performance and business combination risks** including: 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 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; and our ability to effectively manage the growth of our infrastructure and integrate new team members.

- **Data protection** including risks that malfunctions or unlawful acts could result in unauthorized access to, change, loss, or distribution of data, which may compromise the privacy of individuals and could result in financial loss and harm to our reputation and brand.
- **Security threats** including intentional damage, or unauthorized access or attempted access, to our physical assets or our IT systems and networks, or those of our customers or vendors, which could prevent us from providing reliable service or result in unauthorized access to our information or that of our customers.
- **Ability to successfully implement cost reduction initiatives and realize planned savings, net of restructuring and other costs, without losing customer service focus or negatively affecting business operations.** Examples of these initiatives are: 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; procurement initiatives; and real estate rationalization.
- **Foreign operations** and our ability to successfully manage operations in foreign jurisdictions, including managing risks such as currency fluctuations and exposure to various economic, international trade, political and other risks of doing business globally. See also *TELUS International's financial performance which impacts our financial performance*.
- **Business continuity events** including: 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; supply chain disruptions, delays and rising costs, including as a result of government restrictions or trade actions; natural disaster threats; extreme weather events; epidemics; pandemics (including the ongoing COVID-19 pandemic); political instability in certain international locations; information security and privacy breaches, including loss or theft of data; and the completeness and effectiveness of business continuity and disaster recovery plans and responses.
- **TELUS International's financial performance which impacts our financial performance.** Factors that may affect TI's financial performance are described in TI's public filings available on SEDAR and EDGAR and may include: intense competition from companies offering similar services; attracting and retaining qualified team members to support its operations; TI's ability to grow and maintain profitability if changes in technology or if client expectations outpace service offerings and internal tools and processes; TI maintaining its culture as it grows; effects of economic and geopolitical conditions on its clients' businesses and demand for its services; a significant portion of TI's revenue being dependent on a limited number of large clients; continued consolidation in many of the verticals in which TI offers services could result in the loss of a client; adverse impacts of the COVID-19 pandemic on TI's business and financial results; TI's business being adversely affected if certain independent contractors were classified as employees, and the costs associated with defending, settling or resolving any future lawsuits (including demands for arbitration) relating to the independent contractor classification; TI's ability to successfully identify, complete, integrate and realize the benefits of acquisitions and manage associated risks; cyberattacks or unauthorized disclosure resulting in access to sensitive or confidential information and data of its clients or their end customers, which could have a negative impact on its reputation and client confidence; TI's business not developing in ways it currently anticipates due to negative public reaction to offshore outsourcing, proposed legislation or otherwise; ability to meet client expectations regarding its content moderation services being adversely impacted due to factors beyond its control and its content moderation team members suffering adverse emotional or cognitive effects in the course of performing their work; and TI's short history operating as a separate, publicly traded company. TELUS International's primary functional and reporting currency is the U.S. dollar and the contribution to our consolidated results of positive results in our digitally-led customer experiences – TELUS International (DLCX) segment may be offset by any strengthening of the Canadian dollar (our reporting currency) compared to the U.S. dollar. The price of the subordinate voting shares of TI (TI Subordinate Voting Shares) may be volatile and is likely to fluctuate due to a number of factors beyond its control, including actual or anticipated changes in profitability; general economic, social or political developments; changes in industry conditions; changes in governance regulation; inflation; low trading volume; the general state of the securities markets; and other material events. TI may choose to publicize targets or provide other guidance regarding its business and it may not achieve such targets. Failure to do so could also result in a reduction in the trading price of the TI Subordinate Voting Shares. A reduction in the trading price of the TI Subordinate Voting Shares due to these or other factors could result in a reduction in the fair value of TI multiple voting shares held by TELUS.
- **Human resource matters** including: recruitment, retention and appropriate training in a highly competitive industry (including retention of team members leading recent acquisitions 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 as we grow, the risk that certain independent contractors in our business could be classified as employees, unanticipated reaction to our COVID-19 vaccine policy or the reopening of our administrative offices and the health of our team.

- **Financing and debt requirements** including: our ability to carry out financing activities, refinance our maturing debt, lower our net debt to EBITDA ratio to our objective range given the cash demands of spectrum auctions, and/or our ability to maintain investment grade credit ratings in the range of BBB+ or the equivalent. Our business plans and growth could be negatively affected if existing financing is not sufficient to cover our funding requirements.
- **Lower than planned free cash flow could constrain our ability to invest in operations, reduce leverage or return capital to shareholders, and could affect our ability to sustain our dividend growth program through 2022 and any further dividend growth programs.** 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, 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. Common Shares may be purchased under our normal course issuer bid (NCIB) when and if we consider it opportunistic, based on our financial position and outlook, and the market price of our Common Shares. There can be no assurance that our dividend growth program or our NCIB will be maintained, unchanged and/or completed.
- **Taxation matters** including: 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 tax depreciation and operating expenses; tax credits or other attributes; changes in tax laws, including tax rates; tax expenses being 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 through the use of different tax year-ends for operating partnerships and corporate partners; 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.
- **Litigation and legal matters** including: 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 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.
- **Health, safety and the environment** including: lost employee work time resulting from illness or injury; public concerns related to radio frequency emissions; environmental issues affecting our business, including climate-related risk (such as extreme weather events and other natural hazards), waste and waste recycling, risks relating to fuel systems on our properties, changing government and public expectations regarding environmental matters and our responses; and challenges associated with epidemics or pandemics, including the COVID-19 pandemic and our response to it, which may add to or accentuate these factors.
- **Economic growth and fluctuations** including: the state of the economy in Canada, which may be influenced by economic and other developments outside of Canada, including potential outcomes of yet unknown policies and actions of foreign governments and the ongoing COVID-19 pandemic, as well as public and private sector responses to the pandemic; expectations regarding future interest rates; inflation; unemployment levels; effects of fluctuating 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 in the regions 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.
- **Energy use** including: our ability to identify 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 power purchase agreements; our ability to continue to realize significant absolute reductions in energy use and the resulting greenhouse gas (GHG) emissions in our operations (including as a result of programs and initiatives focused on our buildings and network); and other risks associated with achieving our goals to achieve carbon neutrality and reduce our GHG emissions by 2030.

These risks 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 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.

Many of these factors 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.

February 10, 2022

Section	Page	Section	Page
1 Introduction	41	8 Accounting matters	92
1.1 Preparation of the MD&A	41	8.1 Critical accounting estimates and judgments	92
1.2 The environment in which we operate	41	8.2 Accounting policy developments	95
1.3 Highlights of 2021	43	9 General trends, outlook and assumptions, and regulatory developments and proceedings	96
1.4 Performance targets (key performance measures)	46	9.1 Telecommunications industry in 2021	96
2 Core business and strategy	48	9.2 Telecommunications industry general outlook and trends	98
2.1 Core business	48	9.3 TELUS assumptions for 2022	101
2.2 Strategic imperatives	48	9.4 Communications industry regulatory developments and proceedings	102
3 Corporate priorities	49	10 Risks and risk management	107
4 Capabilities	56	10.1 Overview	107
4.1 Principal markets addressed and competition	56	10.2 Principal risks and uncertainties	107
4.2 Operational resources	60	10.3 Regulatory matters	111
4.3 Liquidity and capital resources	64	10.4 Competitive environment	113
4.4 Disclosure controls and procedures and changes in internal control over financial reporting	66	10.5 Technology	115
5 Discussion of operations	66	10.6 Suppliers	116
5.1 General	66	10.7 Organizational change	117
5.2 Summary of consolidated quarterly results, trends and fourth quarter recap	68	10.8 Customer service	119
5.3 Consolidated operations	71	10.9 Our systems and processes	120
5.4 TELUS technology solutions segment	74	10.10 Security and data protection	121
5.5 Digitally-led customer experiences – TELUS International segment	80	10.11 Our team	123
6 Changes in financial position	82	10.12 Our environment	124
7 Liquidity and capital resources	84	10.13 Real estate matters	126
7.1 Overview	84	10.14 Financing, debt and dividends	126
7.2 Cash provided by operating activities	84	10.15 Tax matters	128
7.3 Cash used by investing activities	85	10.16 The economy	128
7.4 Cash provided by financing activities	86	10.17 Litigation and legal matters	130
7.5 Liquidity and capital resource measures	87	11 Definitions and reconciliations	131
7.6 Credit facilities	89	11.1 Non-GAAP and other specified financial measures	131
7.7 Sale of trade receivables	89	11.2 Operating indicators	137
7.8 Credit ratings	90		
7.9 Financial instruments, commitments and contingent liabilities	90		
7.10 Outstanding share information	91		
7.11 Transactions between related parties	92		

1 Introduction

The forward-looking statements in this section, including, for example, statements relating to the expected impact of the COVID-19 pandemic on our operations and financial condition, 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, 2021, and should be read together with our December 31, 2021 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 (sedar.com). Our filings with the Securities and Exchange Commission in the United States, including Form 40-F, are 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.

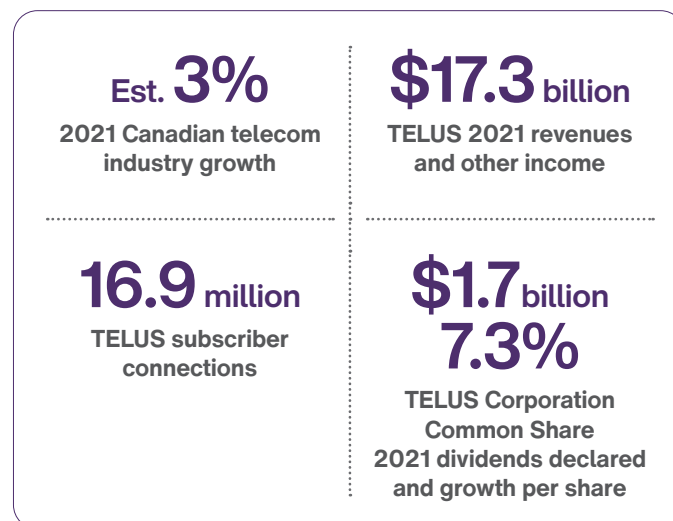
Our disclosure controls and procedures are designed to provide reasonable assurance that all relevant information is gathered and reported to senior management on a timely basis, so that appropriate decisions can be made regarding public disclosure. This MD&A and the Consolidated financial statements were reviewed by our Audit Committee and authorized by our Board of Directors (Board) for issuance on February 10, 2022.

In this MD&A, unless otherwise indicated, results for the year ended December 31, 2021 are compared with results for the year ended December 31, 2020.

Effective January 1, 2021, our segmented reporting structure was retrospectively re-cast. This change arose from continually increasing technological convergence pushing the difference between mobile and fixed access further from the core network and closer to the customer point of access, the increasing significance of digitally-led customer experience services and the evolution of information regularly reported to our chief operating decision-maker for purposes of allocating capital resources and assessing performance. See *Section 5.1 General* for additional details.

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 our customers and us, and the competitive nature of our operations.



COVID-19

The COVID-19 pandemic, which emerged in the first quarter of 2020, continued to have a pervasive global impact throughout 2021. Since the beginning of the pandemic, we have focused relentlessly on keeping Canadians connected and on the health, safety and well-being of our team members, customers and communities. Our Executive Team continues to be guided by advice from our Emergency Management Operating Committee (EMOC) and the TELUS Medical Advisory Council (MAC).

We expect the pandemic to continue to affect our operations until at least 2023. Whether this occurs will depend on both domestic and international factors, including rates of vaccination and the potential proliferation of COVID-19 variants of concern.

We are committed to prioritizing the health and safety of team members and customers and the significant majority of team members have continued to work remotely during the pandemic. During the third quarter of 2021, we announced our COVID-19 vaccination policy for all Canadian team members. We currently plan to reopen our Canadian administrative offices in April 2022 at the earliest, based on an assessment of the public health and safety guidance at that time. When our team members return to the office, they will have an opportunity to participate in the next evolution of our Work Styles program. Originally launched in 2006, Work Styles provides team members with flexible work options to accommodate their work preferences and the ability to connect and collaborate seamlessly no matter where they are.

With respect to TELUS International's operations, the intent is for team members to return to traditional work environments in offices when it has been deemed safe to do so by local governments and healthcare officials. However, this varies significantly by geography and each region's vaccination progress.

Canadian telecommunications industry

After almost two years of operating within the COVID-19 environment, the pandemic continues to highlight the essential nature of connectivity in enabling Canadians to participate in the digital economy. The telecommunications industry remains a key lifeline for Canada's economic and social survival during the pandemic, and facilities-based operators continue to invest in building additional capacity and upgrading infrastructure. We estimate that Canadian telecommunications industry revenues (including TV revenue and excluding equipment and media revenue) grew by approximately 3% in 2021, with mobile network revenue growth of approximately 2.7%. Mobile revenues continued to account for the largest portion of telecommunications sector revenues and Canadians are using ever-increasing amounts of data through both fixed internet and mobile services. We estimate that the Canadian mobile phone industry added approximately 0.9 million net new subscribers in 2021 as compared to approximately 1.1 million in 2020. With respect to fixed products and services, we estimate the Canadian consumer high-speed internet penetration rate grew by approximately 2 percentage points to 90% in 2021, and subscriber growth is expected to continue. More Canadians are subscribing to internet services, and during the pandemic, Canadians relied on their internet service for remote work, education

and entertainment, and for access to news and information, while the shift from the traditional television landscape to internet-based television continued. Competitive pressures continued in both the fixed products and services consumer and business markets, while declines in higher-margin legacy voice services were ongoing, mainly attributable to technological substitution. (See *Section 9 General trends, outlook and assumptions, and regulatory developments and proceedings, Section 10.4 Competitive environment and Section 10.16 The economy.*)

Digitally-led customer experiences – TELUS International (DLCX)

Technology is transforming the way businesses interact with their customers at an accelerating pace and scale and, across industries, customer experience has become a critically important competitive differentiator. DLCX clients and their customers have more information and more choices than ever before and their expectations surrounding brand experiences and the speed at which companies must process and respond to customer interactions are changing rapidly. The proliferation of mobile devices, social media platforms and other methods of digital interaction has enabled customers to access information 24/7 and engage with companies through multiple digital channels. The COVID-19 pandemic has further accelerated the use of digital channels as the first, and sometimes only, points of customer interaction. Customers value a consistent and personalized experience across channels 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 authentic human experience that is capable of demonstrating a sincere commitment to customer satisfaction.

Economic estimates

Our estimates regarding our environment, including economic growth, unemployment and housing starts, form an important part of 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 experience of specific sectors of the Canadian economy.

	Economic growth (Percentage points)			Unemployment (Percentage points)			Housing starts (000s of units)		
	Estimated gross domestic product (GDP) growth rates		Our estimated GDP growth rates ¹	Unemployment rates		Our estimated annual unemployment rates ¹	Seasonally adjusted annual rate of housing starts ²		Our estimated annual rate of housing starts on an unadjusted basis ¹
				For the month of			For the month of		
	2022	2021	2022	December 2021 ³	December 2020 ³	2022	December 2021	December 2020	2022
	Canada	4.0 ⁴	4.6 ⁴	4.3	5.9	8.6	6.1	236	230
B.C.	4.0 ⁵	6.0 ⁵	4.2	5.3	7.2	5.2	55	44	39
Alberta	4.3 ⁵	6.7 ⁵	4.4	7.3	11.0	7.1	31	31	30
Ontario	4.5 ⁵	4.3 ⁵	4.5	6.0	9.5	6.1	70	72	83
Quebec	3.3 ⁵	6.5 ⁵	3.7	4.6	6.7	5.3	52	57	55

1 Assumptions are as of September 20, 2021 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: Statistics Canada Labour Force Survey, December 2021 and December 2020, respectively.

4 Source: Bank of Canada Monetary Policy Report, January 2022.

5 Source: British Columbia Ministry of Finance, First Quarterly Report, September 2021; Alberta Ministry of Treasury Board and Finance, 2021 – 22 First Quarter Fiscal Update and Economic Statement, August 2021; Ontario Ministry of Finance, 2021 Ontario Economic Outlook and Fiscal Review: Build Ontario, November 2021; and Ministère des Finances du Québec, Update on Quebec's economic and financial situation – Fall 2021, November 2021, respectively.

1.3 Highlights of 2021

TELUS International IPO

On February 5, 2021, TELUS Corporation and TELUS International, our DLCX subsidiary, announced the closing of the upsized TI initial public offering (IPO) of 42.55 million TI subordinate voting shares at a price of US\$25.00 per share, which included 5.55 million TI subordinate voting shares purchased upon the full exercise of the underwriters' over-allotment option to purchase additional TI subordinate voting shares from TELUS Corporation and Baring Private Equity Asia (Baring), the selling shareholders. The offering generated aggregate gross proceeds to TI, TELUS Corporation and Baring of approximately \$1.4 billion (US\$1.1 billion), including the exercise of the over-allotment option in full. The net proceeds to TI totalled approximately \$0.6 billion (US\$0.5 billion), which was used to repay outstanding borrowings under its revolving credit facilities. TI did not receive any proceeds from the TI subordinate voting shares sold by the selling shareholders. The TI subordinate voting shares began trading on the New York Stock Exchange (NYSE) and the Toronto Stock Exchange (TSX) on February 3, 2021 under the ticker "TIXT". The offering represented the largest tech IPO in TSX history and the fifth largest by proceeds raised at the time. TI's initial market capitalization of \$8.5 billion at the time of its IPO surpassed TELUS' market capitalization in 2000. With its differentiated portfolio of integrated digital IT and customer experience (CX) solutions spanning the design, build and deliver lifecycle, TI has a strategic position in the digital transformation ecosystem and is poised to benefit from the acceleration of digital adoption across various sectors of the global economy.

Strategic alliance with Google

On February 9, 2021, we announced a strategic alliance with Google Cloud to co-innovate on new services and solutions that support digital transformation within key industries, including communications technology, healthcare, agriculture, security and connected home. The 10-year collaboration is intended to accelerate our IT and network modernization initiatives, enabling further operational agility and supporting improved customer experiences.

Equity offering

On March 25, 2021, we announced an equity offering pursuant to which a syndicate of underwriters agreed to purchase from TELUS, on a bought-deal basis, and sell to the public, 51 million common shares of TELUS Corporation (Common Shares) at a price of \$25.35 per Common Share for gross proceeds of approximately \$1.3 billion. On March 31, 2021, we announced the closing of the offering. Proceeds are being used to capitalize on a unique strategic opportunity to accelerate our broadband capital investment program through 2021 and 2022, including substantial advancement of the build-out of our TELUS PureFibre infrastructure in Alberta, B.C. and Eastern Quebec, as well as an accelerated roll-out of our 5G network. These planned accelerated capital investments are over and above our previous capital expenditures target originally announced on February 11, 2021.

Long-term debt issue, inaugural sustainability-linked bond and early redemption of 2022 Notes

On April 5, 2021, we issued \$500 million of senior unsecured 4.10% Notes, Series CAE, which will mature on April 5, 2051. The net proceeds from this offering were used to fund the repayment upon maturity of the Series 3, 10.65% debentures of TELUS Communications Inc. due June 2021, the repayment of commercial paper and for general corporate purposes.

On June 28, 2021, we announced the successful closing of our inaugural sustainability-linked bond, the first of its kind in Canada. The \$750 million of senior unsecured 2.85% Sustainability-Linked Notes, Series CAF, will mature on November 13, 2031, and were issued pursuant to our sustainability-linked bond framework announced on June 14, 2021 (see *Section 3* for additional details). As part of this framework, we have committed to reducing our absolute scope 1 and 2 greenhouse gas emissions by 46% from 2019 levels by 2030 (our sustainability performance target). If we fail to achieve this target by December 31, 2030, the interest payable on these notes will increase by 1.00% in the final year of maturity. We will report annually on our performance against the sustainability performance target and will also obtain an annual independent and external verification of our performance against the target.

On August 17, 2021, we early redeemed all of our \$1 billion 2.35% Notes, Series CT, due March 28, 2022. The long-term debt prepayment premium recorded in the three-month period ended September 30, 2021 was \$10 million before income taxes (\$0.01 per share after income taxes). Subsequent to this early redemption, there are no TELUS Corporation notes maturing in 2022.

Our Board of Directors

At our 2021 annual general meeting held on May 7, 2021, the nominees listed in the TELUS 2021 information circular were elected as directors of TELUS, including two new nominees, Hazel Claxton and Sean Willy.

Hazel is a corporate director. She served as Executive Vice-President and Chief Human Resources Officer with LifeWorks Inc. (formerly Morneau Shepell Inc.) 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 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.

Sean 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. Sean holds a Bachelor of Commerce from the Edwards School of Business of the University of Saskatchewan.

Our Board diversity policy includes separate diversity targets of having (i) at least two directors who represent a visible minority or are Indigenous and (ii) women and men each represent at least one-third of the independent directors. With the appointment of directors at our May 2021 annual meeting, we surpassed both targets.

3500 MHz spectrum auction developments

Innovation, Science and Economic Development Canada (ISED) held its 3500 MHz band spectrum auction from June 15, 2021, through July 23, 2021. We acquired 142 licences equating to 16.4 MHz of spectrum for a total purchase price of \$1.95 billion. Combined with the spectrum we acquired privately ahead of the auction, we now hold 25 MHz of spectrum in the 3500 MHz spectrum band nationally and 40 MHz within key markets, at an average price of \$2.53 per MHz-pop (where pop refers to the population in a licence area). In accordance with the terms

of the auction, 20% (\$389 million) was remitted to ISED on its due date, August 13, 2021. On September 22, 2021, ISED sought further consultation on the Standard Radio Systems Plan (SRSP)-520 affecting the deployment of 3500 MHz spectrum and advised that it would issue the 3500 MHz spectrum licences after determining whether amendments were needed to SRSP-520. ISED also notified prospective 3500 MHz licensees that the final auction payments and issuance of licences, originally scheduled for October 4, 2021, were delayed until December 17, 2021, at which time we made the final payment.

Blacksmith Applications acquisition

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 is complementary to, and was made with a view to growing, our existing smart data solutions business.

Sale of financial solutions business

On December 6, 2021, we announced the disposition of our financial solutions business for \$500 million. Net proceeds from the transaction will be 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. Proceeds will also support debt retirement.

Business acquisition – subsequent to 2021

On January 1, 2022, we acquired 100% ownership of Fully Managed Inc. for cash and contingent consideration of approximately \$137 million. Fully Managed Inc. provides managed information technology support, technology strategy and network management. This investment was made with a view to growing our end-to-end capabilities to support small and medium-sized business customers.

Consolidated highlights

Years ended December 31 (\$ millions, except footnotes and unless noted otherwise)	2021	2020	Change
Consolidated statements of income			
Operating revenues and other income	17,258	15,463	11.6%
Operating income	3,074	2,482	23.9%
Income before income taxes	2,278	1,711	33.1%
Net income	1,698	1,260	34.8%
Net income attributable to Common Shares	1,655	1,207	37.1%
Adjusted Net income ¹	1,430	1,361	5.1%
Earnings per share (EPS) (\$)			
Basic EPS	1.23	0.95	29.5%
Adjusted basic EPS ¹	1.07	1.06	0.9%
Diluted EPS	1.22	0.94	29.8%
Dividends declared per Common Share (\$)	1.2710	1.18495	7.3%
Basic weighted-average Common Shares outstanding (millions)	1,346	1,275	5.6%
Consolidated statements of cash flows			
Cash provided by operating activities	4,388	4,574	(4.1)%
Cash used by investing activities	(5,466)	(6,165)	(11.3)%
Acquisitions	(468)	(3,205)	(85.4)%
Capital expenditures ²	(3,498)	(2,775)	26.1%
Cash provided by financing activities	953	1,904	(49.9)%
Other highlights			
Subscriber connections ³ (thousands)	16,887	15,943	5.9%
Earnings before interest, income taxes, depreciation and amortization ¹ (EBITDA)	6,290	5,494	14.5%
EBITDA margin ¹ (%)	36.4	35.5	0.9 pts.
Restructuring and other costs	186	259	(28.2)%
Adjusted EBITDA ¹	6,069	5,701	6.4%
Adjusted EBITDA margin ¹ (%)	36.0	37.0	(1.0) pt.
Free cash flow ¹	777	1,435	(45.9)%
Net debt to EBITDA – excluding restructuring and other costs ¹ (times)	3.17	3.45	(0.28)

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, 2021, with retrospective application to January 1, 2020, in alignment with our segment reporting changes, we made a retroactive adjustment to remove internal network service revenue and approximately 29,000 subscribers from our mobile phone subscriber base and associated operating statistics (average billing per subscriber per month (ABPU) / average revenue per subscriber per month (ARPU) and churn). Effective January 1, 2021, on a prospective basis, following an in-depth review of customer accounts within a legacy subscriber provisioning system to be decommissioned, we adjusted our internet subscriber base to remove 16,000 subscribers.

Operating highlights

- **Consolidated Operating revenues and Other income** increased by \$1.8 billion in 2021.

Service revenues increased by \$1.3 billion in 2021. TTECH service revenue growth of \$685 million was driven by growth in internet and data service revenues, as well as smart food-chain technology and other fixed data services revenues; higher mobile network revenue; and growth in health services revenue. Increased DLCX revenues were due to business acquisitions, and organic growth from both new clients and expanded services for existing customers.

Equipment revenues increased by \$239 million in 2021, reflecting higher-value smartphones in the sales mix, higher handset upgrade volumes and greater collectability of mobile device balances.

Other income increased by \$298 million in 2021, largely due to a \$410 million gain arising from the disposition of our financial solutions business in the fourth quarter of 2021, as described earlier in this section within *Highlights of 2021*.

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** increased by \$592 million in 2021. In addition to the gain on sale of our financial solutions business, this increase was driven by growth in network revenue; growth in mobile equipment margins; growth in internet and data service margins, as well as other fixed data service margins; an increased contribution from DLCX; and lower bad debt expense. This was partly offset by higher employee benefits expense and lower legacy fixed voice and legacy fixed data services. This growth also reflects lower non-labour restructuring and other costs related to the pandemic, partly offset by the dilutive lingering impacts of the pandemic, including reduced roaming margins related to travel restrictions. (See *Section 5.3 Consolidated operations* for additional details.)

EBITDA, which includes restructuring and other costs, other equity losses related to real estate joint ventures, the gain on disposition of our financial solutions business and a gain on a retirement of a provision arising from business acquisition-related written put options within DLCX, increased by \$796 million in 2021.

Adjusted EBITDA, which excludes restructuring and other costs, other equity losses related to real estate joint ventures, the gain on disposition of our financial solutions business and a gain on a retirement of a provision arising from business acquisition-related written put options within DLCX, increased by \$368 million in 2021, reflecting the factors mentioned in the Operating income discussion above. (See *Section 5.3 Consolidated operations* for additional details.)

- **Income before income taxes** increased by \$567 million in 2021 as a result of higher Operating income, partly offset by increased Financing costs. The increase in Financing costs in 2021 largely resulted from the cessation of capitalized long-term debt interest costs in the first quarter of 2021 for 600 MHz spectrum licences that are now being deployed. (See *Financing costs* in *Section 5.3*.)
- **Income tax expense** increased by \$129 million in 2021. The effective income tax rate decreased from 26.3 to 25.5% in 2021, largely due to the non-taxable portion of the gain on the disposition of our financial solutions business partially offset by lower adjustments to prior period income taxes.
- **Net income attributable to Common Shares** increased by \$448 million in 2021, resulting from the after-tax impacts of higher Operating income offset by higher 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, long-term debt prepayment premium, the gain on disposition of our financial solutions business, and a gain on a retirement of a provision arising from business acquisition-related written put options within DLCX. Adjusted Net income increased by \$69 million or 5.1% in 2021.

- **Basic EPS** increased by \$0.28 or 29.5% in 2021 as a result of the after-tax impacts of higher Operating income and higher Financing costs, which were partially offset by 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, long-term debt prepayment premium, the gain on disposition of our financial solutions business, and a gain on a retirement of a provision arising from business acquisition-related written put options within DLCX. Adjusted basic EPS increased by \$0.01 or 0.9% in 2021.

- **Dividends declared per Common Share** were \$1.2710 in 2021, an increase of 7.3% from 2020. Consistent with our target of increasing dividends between 7 to 10% in the near term, the Board declared a first quarter dividend of \$0.3274 per share on our issued and outstanding Common Shares, payable on April 1, 2022, to shareholders of record at the close of business on March 11, 2022. The first quarter dividend increased by \$0.0162 per share or 5.2% from the \$0.3112 per share dividend declared one year earlier, consistent with our multi-year dividend growth program described in *Section 4.3 Liquidity and capital resources*.
- During 2021, our total **subscriber connections** increased by 944,000. This reflected an increase of 4.1% in mobile phone subscribers, 18.8% in connected device subscribers, 6.2% in internet subscribers, 4.1% in TV subscribers and 13.7% in security subscribers, partly offset by a decline of 3.5% 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 \$186 million in 2021, largely attributable to other working capital changes, as well as higher income taxes paid related to the disposition of our financial solutions business. (See *Section 7.2 Cash provided by operating activities*.)
- **Cash used by investing activities** decreased by \$699 million in 2021, largely attributable to a reduced number of business acquisitions and the proceeds received upon the disposition of our financial solutions business. This was partially offset by the cash payments for the 3500 MHz spectrum acquired for \$1.95 billion in the most recent spectrum auction and higher cash payments for capital assets. Acquisitions decreased by \$2.7 billion in 2021, as we made larger cash payments for business acquisitions in 2020, primarily Competence Call Center (CCC) (since rebranded as TELUS International Northern Europe or TINE and comprised substantially of CCC), Mobile Klinik®, AFS Technologies Inc., EQ Care and Lionbridge AI. Capital expenditures increased by \$723 million in 2021, due to accelerated investments in our 5G network, our broadband build, enhanced product development and digitization to increase system capacity and reliability, in addition to strong security subscriber growth and the advanced purchase of customer equipment to mitigate supply chain risks and support subscriber growth. (See *Section 7.3 Cash used by investing activities*.)
- **Cash provided by financing activities** decreased by \$951 million in 2021 as we had higher redemptions and repayment of long-term

debt, including the application of net cash proceeds from the TELUS International initial public offering (IPO) in the first quarter of 2021 which were used to reduce TI credit facility indebtedness. The proceeds from equity issuance in the first quarter of 2021 were lower than the proceeds from equity issuance in the first quarter of 2020, as we issued approximately 6 million fewer Common Shares. As well, cash payments for dividends were also higher in 2021. (See *Section 7.4 Cash provided by financing activities.*)

- **Net debt to EBITDA – excluding restructuring and other costs ratio** was 3.17 times at December 31, 2021, an improvement from 3.45 times at December 31, 2020, as the effect of the increase in EBITDA – excluding restructuring and other costs exceeded the effect of the increase in net debt, notwithstanding the COVID-19 pandemic impacts that have reduced EBITDA. As at December 31, 2021, the acquisition of spectrum licences increased the ratio by approximately 0.49 and business acquisitions over the past 12 months increased the ratio by approximately 0.05, while business dispositions over the same period decreased the ratio by approximately 0.26. (See *Section 4.3 Liquidity and capital resources* and *Section 7.5 Liquidity and capital resource measures.*)
- **Free cash flow** decreased by \$658 million in 2021, driven by: higher capital expenditures as previously noted; higher lease principal payments; higher income taxes paid; and the net impact of increased customer additions and the timing related to device subsidy repayments and associated revenue recognition and our TELUS Easy Payment device financing program; partly offset by higher EBITDA. The increase in capital expenditures was announced on March 25, 2021 to advance our fibre build and 5G coverage which utilized proceeds from our first quarter 2021 equity offering. Our definition of free cash flow, for which there is no industry alignment, is unaffected by accounting changes that do not impact cash, such as IFRS 15 and IFRS 16.

1.4 Performance targets (key performance measures)

In 2021, we achieved all four of our consolidated financial targets. Our original targets were announced on February 11, 2021. On May 7, 2021, we updated the financial targets for free cash flow and capital expenditures

based on our March 25, 2021 announcement that we intended to strategically bring forward transformational capital investments in broadband connectivity, including fibre and 5G, to enhance our industry-best customer experience, leading networks and competitive position.

We exceeded our consolidated revenue target and met the target when excluding the gain on disposition of our financial solutions business. Growth in our mobile phone and connected devices subscriber bases contributed to the revenue achievement, as well as higher-value smartphones in the sales mix and higher handset upgrade volumes. We also experienced increased fixed data service revenues resulting from increased internet and data services and smart food chain technology, as well as increased health services revenues, partly offset by the ongoing decline in legacy fixed voice revenue. Additionally, DLCX operating revenues increased, reflecting both business acquisitions and organic growth.

We achieved our Adjusted EBITDA target largely from growth in internet and data services margins. Fixed data services margins also improved, driven by a growing customer base and expanded services. Mobile network revenue and improved mobile equipment margins supported the achievement of the target, as well as increased contribution from DLCX. These factors were partly offset by declines in legacy fixed voice and legacy fixed data services and higher Employee benefits expense.

Our free cash flow target was met, attributable to EBITDA growth and strong cash flow management, including our disciplined focus on profitable loading and effective inventory management to drive strong customer net additions growth.

Our capital expenditures in 2021 met our consolidated target, as we advanced our investments in our broadband build, including connecting more homes and businesses directly to our fibre-optic infrastructure, enabling us to significantly expand our broadband footprint. In addition, investments in our 5G network build allowed us to expand coverage to 70% of the Canadian population at December 31, 2021. Other capital investments enabled us to support continuing subscriber growth, deliver on our digitization strategy, and enhance our systems reliability and operational efficiency.

Our capital structure financial policies and report on financing and capital structure management plans are included in *Section 4.3*.

The following scorecard compares TELUS' performance to our consolidated 2021 targets.

SCORECARD		2021 PERFORMANCE	
	Consolidated targets ¹ and growth	Actual results and growth	Result
Revenues and other income	An increase of 8 to 10%	\$17.26 billion² 11.6%	✓
Net income ³	n/a	\$1.70 billion 34.8%	n/a
Adjusted EBITDA	An increase of 6 to 8%	\$6.07 billion 6.4%	✓
Cash provided by operating activities ³	n/a	\$4.39 billion (4.1)%	n/a
Free cash flow	Approximately \$750 million ^{1a}	\$777 million	✓
Capital expenditures (excluding spectrum licences)	Approximately \$3.5 billion ^{1b}	\$3.50 billion	✓
¹ Reflects the 2021 revised targets that were announced on May 7, 2021 to reflect our capital acceleration program. ^a The original target for free cash flow was approximately \$1.5 billion. ^b The original target for capital expenditures was approximately \$2.75 billion. ² Includes a \$410 million gain on disposition of our financial solutions business. Excluding the gain, Revenues and other income increased by 9.0%. ³ 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 2021.			✓ met target n/a – not applicable

We made the following key assumptions when we announced the 2021 targets in February 2021.

ASSUMPTIONS FOR 2021 TARGETS AND RESULTS

- Our economic assumptions are based on a composite of estimates from Canadian banks and other sources. Our original assumptions for 2021 economic growth in Canada, B.C., Alberta, Ontario and Quebec were 4.5%, 4.5%, 4.4%, 4.8% and 4.6%, respectively.
In our first quarter 2021 MD&A, we revised our 2021 economic growth assumptions in Canada, B.C., Alberta, Ontario and Quebec to 5.9%, 5.7%, 5.6%, 5.7% and 5.8%, respectively. In our third quarter 2021 MD&A, we further revised our 2021 economic growth assumptions in Canada, B.C., Alberta, Ontario and Quebec to 5.4%, 5.6%, 6.0%, 5.1% and 6.1%, respectively.
- With respect to annual unemployment rates, our original assumptions for 2021 in Canada, B.C., Alberta, Ontario and Quebec were 7.8%, 6.9%, 9.9%, 8.0% and 6.9%, respectively.
In our first quarter 2021 MD&A, we revised our 2021 annual unemployment rate assumptions in Canada, B.C., and Alberta to 7.7%, 6.7% and 9.6%, respectively. In our third quarter 2021 MD&A, we further revised our 2021 annual unemployment rate assumptions in Canada, B.C., Alberta and Quebec to 7.6%, 6.6%, 8.7% and 6.3%, respectively.
- With respect to the pace of housing starts, our original assumptions for 2021 on an unadjusted basis in Canada, B.C., Alberta, Ontario and Quebec were 202,000 units, 35,000 units, 24,000 units, 77,000 units and 48,000 units, respectively.
In our first quarter 2021 MD&A, we revised our 2021 assumptions for the pace of housing starts on an unadjusted basis in Canada, B.C., Alberta, Ontario and Quebec to 232,000 units, 39,000 units, 28,000 units, 82,000 units and 60,000 units, respectively. In our third quarter 2021 MD&A, we further revised our 2021 assumptions for the pace of housing starts on an unadjusted basis in Canada, B.C., Alberta, Ontario and Quebec to 270,000 units, 47,000 units, 32,000 units, 96,000 units and 72,000 units, respectively.
- Our assumption for 2021 restructuring and other costs was approximately \$150 million. Our actual 2021 restructuring and other costs were \$186 million, as we incurred higher than expected costs for continuing operational effectiveness initiatives, with margin enhancement initiatives to mitigate pressures related to intense competition, technological substitution, repricing of our services, increasing subscriber growth and retention costs, and integration costs associated with business acquisitions.
- Our assumption for 2021 Depreciation and Amortization of intangible assets was approximately \$3.25 billion to \$3.35 billion. Actual Depreciation and Amortization of intangible assets was \$3.22 billion.
- Our assumption for 2021 net Cash interest paid was approximately \$755 million to \$805 million. Actual net Cash interest paid was \$727 million.
- Our assumption for 2021 income taxes was computed at an applicable statutory rate of 25.3 to 25.9%, and cash income tax payments of approximately \$540 million to \$620 million. In our third quarter 2021 MD&A, our cash income tax payments assumption was revised downward to a range of \$480 million to \$560 million, primarily due to a refund received upon conclusion of a prior year income tax audit. Our actual results were at a statutory income tax rate of 25.8% and cash income tax payments in respect of net income of \$563 million, which includes \$61 million for the gain on disposition of our financial solutions business.
- Our assumption was for continued stabilization in the average Canadian dollar: U.S. dollar exchange rate, which was \$1.34 in 2020. The average Canadian dollar: U.S. dollar exchange rate was \$1.25 in 2021 and closed at \$1.27 on December 31, 2021, compared to \$1.27 on December 31, 2020.

Confirmed:

- No material adverse regulatory rulings or government actions. 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 of the Canadian market.
- Ongoing subscriber adoption of, and upgrades to, data-intensive smartphones, as customers seek more mobile connectivity to the internet.
- Mobile products and services revenue growth resulting from improvements in subscriber loading, with continued competitive pressure on blended ARPU. Roaming revenue remained at levels similar to the latter half of 2020.
- Continued pressure on mobile products and services acquisition and retention expenses, dependent on gross loading and customer renewal volumes, competitive intensity and customer preferences, as well as continued connected devices growth.
- Continued growth in fixed products and services data revenue, reflecting an increase in internet, TV subscribers and security subscribers, speed upgrades, rate plans with larger data buckets or endless data usage, and expansion of our broadband infrastructure, healthcare 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 growth of TI revenue and EBITDA generated by expanded services for existing and new clients and strategic business acquisitions.
- Continued focus on our customers first initiatives and maintaining our customers' likelihood-to-recommend.
- Employee defined benefit pension plans assumptions for 2021: current service costs of approximately \$107 million recorded in Employee benefits expense and interest expense of approximately \$25 million recorded in Financing costs; a rate of 2.50% for discounting the obligation and a rate of 2.70% for current service costs for employee defined benefit pension plan accounting purposes; and defined benefit pension plan funding of approximately \$51 million.
Actual results were: \$107 million recorded in Employee benefits expense for current service costs, \$6 million recorded in Employee benefits expense for past service costs and interest expense of \$26 million recorded in Financing costs; a rate of 2.95% for discounting the obligation and a rate of 2.70% for current service costs for employee defined benefit pension plan accounting purposes; and defined benefit pension plan funding of \$53 million.
- Participation in ISED's 3500 MHz band spectrum auction in June to July 2021. We acquired 142 licences in B.C., Alberta, Manitoba, Ontario and Quebec, which equate to a national average of 16.4 MHz.
- Continued deployment of access-agnostic technology in our network.
- Small and medium-sized businesses (SMB) continued to be negatively impacted by lockdown measures.
- Government funding programs to support consumers' ability to pay bills eased in the latter half of 2021.

ASSUMPTIONS FOR 2021 TARGETS AND RESULTS

- We operated our retail stores as effectively as we had in the second half of 2020, with additional safety measures in place but still allowed us to serve our customers in person, in addition to the digital capabilities that have enabled us to continue serving our customers throughout the pandemic.
- We experienced continued impacts on our TELUS Health Care Centres as a result of lockdown and stay-at-home measures resulting in cancellation of appointments, reduced capacity or closure of clinics. We experienced a recovery in the second half of 2021 through effective deployment of value-added services and optimizing efficiency within the clinics.
- Our international operations were impacted by the recoveries in other global economies based on vaccine availability, distribution and effectiveness on their respective populations and regional lockdown measures.

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, and digitally-led customer experiences, as well as related equipment. Data services include: internet protocol; television; hosting, managed information technology and cloud-based services; software, data management and data-analytics-driven smart-food chain technologies; and home and business security. Our TELUS International subsidiary provides digital customer experience and digital-enablement transformation opportunities, and designs, builds and delivers next-generation digital solutions, including artificial intelligence and content management solutions, 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. We believe that a 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.

- Focusing relentlessly on growth markets of data, IP and wireless
- Providing integrated solutions that differentiate TELUS from our competitors
- Building national capabilities across data, IP, voice and wireless
- Partnering, acquiring and divesting to accelerate the implementation of our strategy and focus our resources on core business
- 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 2021 corporate priorities.

Elevating our customers, communities and social purpose by honouring our brand promise, Let's make the future friendly

- In December 2021, the Commission for Complaints for Telecom-television Services (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%.
- 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. TELUS is the most engaged organization globally compared to organizations of our size and composition according to our survey provider, Kincentric.
- As the global leader in social capitalism, we are evolving our brand promise to "Let's make the future friendly." By placing an invitation at the heart of our new brand promise, we are inviting all Canadians to join us in partnership to shape and create remarkable human outcomes together. We will ensure every connection is a promise to help create a better future for Canadians.
- Throughout 2021, we continued to leverage our Connecting for Good programs to support marginalized individuals 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 this year, 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, serving 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 are also directly supporting 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 are 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 are 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, supported by the work of our TELUS Community Boards. Since 2005, the TELUS Community Boards have invested \$91 million in cash donations to 7,800 initiatives, providing resources and support for underserved citizens, especially young people, around the world.

Elevating our customers, communities and social purpose by honouring our brand promise, Let's make the future friendly (continued)

- 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% are women-led and 50% are led by Indigenous or racialized founders. The Fund was also 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 has also been confirmed as a global finalist for the social impact award in Reuters Events Responsible Business Awards.
- In January 2021, we were named to the Corporate Knights 2021 Global 100 Most Sustainable Corporations in the World for the ninth time since inception of the recognition in 2005. In June 2021, we ranked 17th on the Corporate Knights Best 50 Corporate Citizens in Canada for 2021, up from 20th in 2020. This represents our ninth consecutive year and 15th time overall of being recognized, reflecting our commitment to creating a more sustainable future for the next generation
- In February 2021, we were named Canada's Most Respected Mobile Service Provider by Canadians in Canada's Most Respected Corporation Awards program, ranking first out of 22 mobile service providers. The award was based on our reputation across customer service excellence, team culture, contribution to communities, diversity and inclusion efforts, and overall brand trust.
- 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 March, May and November of 2021, we were named one of: Canada's Best Diversity Employers (2021), Canada's Greenest Employers 2021, and Canada's Top 100 Employers (2022), respectively, by Mediacorp Canada Inc.
- During the first quarter of 2021, we announced that we were inducted into the Business Continuity Institute (BCI) Hall of Fame, an honour awarded to organizations worldwide that are consistently the best in an award category, winning three or more awards in the same category. In recognition of our emergency response and going above and beyond to help our communities, we won three BCI awards in the Most Effective Recovery category for our work that helped thousands of displaced Albertans stay connected with their families and find safety after the 2013 Southern Alberta floods, the 2016 Fort McMurray wildfires and the 2019 Northern Alberta wildfires.
- In April 2021, Mobile Klinik launched on-site repair units, a van service that offers consumers and businesses nationwide the convenience of professional smartphone and tablet repair at the location of their choice.
- In April 2021, the BlackNorth Initiative recognized TELUS for being a Canadian leader in diversity and inclusion and one of a small number of Canadian publicly traded companies to adopt Board targets that include visible minority and Indigenous representation.
- 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.
- As noted in *Section 1.3*, we surpassed our Board diversity targets.
- As described in *Section 1.3*, 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. We are exploring potential partnership arrangements that would assist Radicle to expand into new business lines and geographies and support our goal of net zero emissions by 2030.
- In the fall, we donated 14,000 backpacks that were filled with essential school supplies to local schools across Canada to support students in need. Since 2006, our annual Kits for Kids program has 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. This includes 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. This year's report also includes 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, TELUS was recognized as one of Strategy Magazine's 2021 Brands of the Year. The result is an award-winning brand – valued at almost \$9 billion – that is driving real, meaningful change, from transforming healthcare to empowering Canadians with connectivity.

Elevating our customers, communities and social purpose by honouring our brand promise, Let's make the future friendly (continued)

- 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.
- In December 2021, we were recognized for corporate social responsibility by being named to the Dow Jones Sustainability North America Index for the 21st year in a row, ranking at the 90th percentile in the telecommunications industry for our leadership in sustainability. This ranking demonstrates our global leadership in key categories, including corporate citizenship and philanthropy, innovation management, and environmental and social reporting.
- In the fourth quarter of 2021, we won the 2021 COVID-19 Response and Recovery award from the Disaster Recovery Institute Canada. This recognition is awarded to an organization that has demonstrated a capability to meet the challenges presented by the COVID-19 pandemic, not only to the organization itself, but also to the community it serves. Such commitment would include maintaining operations and ensuring the viability of the organization, providing a safe environment for its employees, relieving the financial pressure that employees face, aiding medical personnel, and providing support for the welfare of the community as a whole.
- Our renewable energy power purchase agreement (PPA) with the Brooks I Solar facility in Alberta has seen production of over 20.5 GWh in 2021, while three additional PPAs are pending commercial operations in the first half of 2022.
- We received the BEST Award for excellence in employee learning and development from the Association for Talent Development for the 16th consecutive year.
- Throughout 2021, 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 competitor for home phone, TV and internet services. Additionally, our Business Solutions L2R continued to lead among the national telecom providers.
- In January 2022, we were named to the Corporate Knights 2021 Global 100 Most Sustainable Corporations in the World for the 10th time since inception of the recognition in 2005.

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, Optik TV and Pik TV® offerings and business services, as well as our Mobility solutions, and helped us deploy our 5G technology in 2020.
 - Our 4G LTE infrastructure covered 99% of Canada's population at December 31, 2021.
 - Over 2.7 million households and businesses in B.C., Alberta and Eastern Quebec were connected with fibre-optic cable, which provides these premises with immediate access to our fibre-optic infrastructure. This is 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.
- We were recognized with various accolades from U.K.-based 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.
- We won two Speedtest Awards from U.S.-based Ookla for Canada's Fastest Mobile Network and Canada's Best Mobile Coverage. Also, according to Ookla's Speedtest Intelligence, we were the fastest mobile operator among top providers in Canada in the third quarter of 2021. Additionally, we won the award for Canada's Fastest Mobile Provider for Q3-Q4 2021, for the ninth consecutive time.
- 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 internet service provider (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 January 2021, we expanded our relationship with RingCentral, Inc., a leading provider of global enterprise cloud communications, video meetings, collaboration and contact centre solutions. We are working together to enable Canadian small businesses to easily transition their legacy phone systems to the cloud via TELUS Business Connect®, an all-in-one communications solution for message, video and phone.
- In February 2021, we launched TELUS Global Connect, enabling our customers to customize and manage Internet of Things (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.

Leveraging TELUS' world-leading technology to drive superior growth across mobile, home and business services (continued)

- 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 February 2021, we announced a relationship with Worldplay Communications, a global SaaS company and leader in video management, to offer Canadian businesses, non-profit organizations and consumers a new way to stay virtually connected. Consumers have the ability to stream live events online and through the Optik TV platform, including community events, cultural or faith-based services and local sporting events, while businesses can evolve the delivery of virtual conferences, connect through secure video solutions, and create branded content pages where they can engage with their partners and customers.
- 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 May 2021, we were recognized as one of the *Best B2B Brands* in Canada in 2021 by Report on Business, ranking eighth out of 74 companies in Canada. This recognition 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 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 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 invested in Car IQ, a payment technology for vehicle fleets to pay for goods and services without the need for a credit card. The California-based company leverages the car's telematics to identify the location and user in order to validate payment and significantly reduce fraud. The company is exploring working with our fleet and opportunities for potential resale.
- 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 August 2021, we announced that customers can now control and monitor their TELUS SmartHome Security and entertainment system hands-free by using voice commands with the new TELUS Home Assistant skill for Amazon Alexa. Customers can now use hands-free voice commands to set TELUS SmartHome Security functions such as arming their panel, locking and unlocking doors, setting the thermostat and turning lights on and off.
- In August 2021, we made an investment in Australia-based Quintessence Labs, which has brought commercially ready, quantum-ready cryptography and true random number generation solutions to the cybersecurity market. We are making strategic investments in companies that will protect us and our customers against cybersecurity adversaries who are expected to be able to break current encryption technology within the next five to 10 years.
- 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.
- In September 2021, we announced the expansion of our Smart Building footprint by leveraging our technology to simplify day-to-day operations, reduce costs and elevate the resident experience. Partnering with Arlington Street Investments, we are transforming a new boutique retail and residential rental development located on 17th Avenue in Calgary into a TELUS Smart Building, allowing residents and building operators the comfort of knowing that the property is safe, sustainable and connected.
- In September 2021, we invested in U.K.-based Unmanned Life, an autonomous ground and aerial drone platform. Initially focused on telecom infrastructure inspection, drones represent an opportunity to disrupt many industries, including ones that are routine, dangerous and surveillance-based. Leveraging our 5G network, we believe we are at an inflection point in drone adoption.
- Together with Hilo, the Hydro Quebec subsidiary that offers complete smart energy services for homes and businesses, in the third quarter of 2021, we launched a pilot project in Quebec City to bundle our home automation and security technologies with Hilo's smart home solutions to help make Quebec homes smarter and more eco-friendly while saving residents money.
- 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.

Scaling our innovative digital capabilities in TELUS Health and TELUS Agriculture to build assets of consequence

- During the ongoing COVID-19 pandemic, TELUS Health MyCare and TELUS Health Virtual Care have benefited from significant adoption. These solutions have helped Canadians stay safe at home and avoid higher-risk environments such as clinics and emergency rooms wherever possible and, in turn, freed up healthcare system capacity to respond to the pandemic. Our two virtual care offerings provide millions of Canadians with the opportunity to seek primary care and mental healthcare, virtually, across the country and also reach Canadians who do not have access to a family doctor or those who seek medical care after-hours.
- Our LivingWell Companion™ personal emergency response service (PERS) continues to support the health and well-being of seniors across Canada. With COVID-19 disproportionately impacting the elderly, LivingWell Companion helps seniors stay connected to emergency support and offers a remote caregiving solution to those who may be unable to physically support their elderly loved ones. In the second quarter of 2021, we launched TELUS Health Companion on Apple Watch, now available to English and French speakers across Canada, which is a 24/7 emergency monitoring service provided through TELUS Health's LivingWell Companion national response service combined with the Apple Watch Fall Detection application programming interface (API) and proactive monitoring functionalities.
- Throughout the pandemic, the TELUS Healthy Living Network® has been providing Optik TV customers with informative and compelling content related to COVID-19 prevention and well-being, and helping them to stay active and healthy at home with over 1,300 leading fitness, yoga, nutrition and mental health titles available for free, for rent or to own. In the fourth quarter of 2020, we announced a global-first partnership with Calm to offer leading mental health content on the TELUS Healthy Living Network, providing support to Canadians as they deal with the stresses brought on by the pandemic. We offer free content for all Optik TV and Pik TV subscribers, as well as additional premium content via our Calm Optik TV theme pack, which includes guided meditations, breathing exercises and Calm's Sleep Stories (bedtime stories for adults). We are Calm's only Canadian telecom partner, and the first to bring Calm's content to a TV service and offer subscriptions through redemptions of TELUS Rewards® loyalty points.
- In the early part of the second quarter of 2020, TELUS Health began enabling Canadian clinicians to conduct virtual visits with their patients by integrating patient videoconferencing into its electronic medical records (EMR) across Canada. This feature allows clinicians to virtually support their own roster of patients, while maintaining continuity of care and fully up-to-date health records. As of December 31, 2021, over 557,000 consultations had been conducted through the TELUS EMR Virtual Visit solution since launch.
- TELUS Health Virtual Care launched LifeJourney™ in February 2021, an integrated virtual health and wellness platform for modern Canadian workplaces. LifeJourney evolves Employee Assistance Programs (EAPs) into a single convenient and collaborative access point. It also ensures dedicated Care Advocates are available to provide personalized, virtual care-centric care plans to Canadian employees.
- In February 2021, the province of Prince Edward Island announced it had selected TELUS Health as the provincial EMR provider.
- In March 2021, TELUS Health Virtual Care announced the next advancement in the digital integration of its employer-focused virtual care service with its own EMR solutions used by 34,000 clinicians across Canada, and with Ontario's Health Report Manager, the provincial report delivery system. This integration means that more informed primary care can be provided as critical patient health information is delivered seamlessly into one medical chart, so patients using this virtual care platform through their employee benefits program will effectively receive better continuity of care.
- In September 2021, we invested in RecoveryOne, which directly supports our virtual healthcare quality efforts, as it provides a comprehensive software solution to optimize a patient's unique recovery journey following musculoskeletal surgery. The California-based company will work with us as its preferred Canadian partner.
- 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 providing 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 2021, Olds College, located in Olds, Alberta, announced that TELUS Agriculture was selected as the Olds College 2021 Partner of the Year. The Olds College Smart Farm, a partnership between Olds College and TELUS Agriculture, has been testing innovations such as security solutions, weather stations, field sensors and rural connectivity solutions. In June 2021, we brought our 5G network to the Olds College Smart Farm. Having improved connectivity on the field will allow for easily accessible cloud computing and responsiveness to data that is gathered and used in precision agriculture, and will help unlock the potential of agriculture technology innovations to enhance productivity and sustainability. 5G will also improve connectivity for farm security and IoT solutions. To address the issue of a loss of cellular connectivity (i.e. dead zones) on farms, in the second quarter of 2021, we began testing a new repeater solution at the Olds College Smart Farm that is quick to install, easy to maintain and cost efficient. The repeater solution captures a signal from the nearest cellular tower and boosts it to extend coverage. This particular design is a trial for a solution that, once installed, is a do-it-yourself operation for farms and is non-intrusive, as it is solar-powered. If successful, the repeater will provide connectivity to mobile devices and agriculture technology like drones, autonomous equipment and field sensors in the area, and will enable the Smart Farm team to complete their day-to-day research such as monitoring crop nutrients and soil moisture.
- In May 2021, we made an investment in Rise Gardens, a direct-to-consumer gardening product that is servicing the emerging connected indoor gardening segment. By leveraging modern hydroponic techniques, consumers will be able to grow leafy greens and rooted vegetables, supported by a mobile app to track, manage and engage with the growing experience. This investment is the latest in our larger agriculture strategy, offering a natural complement to more traditional forms of production.
- In June 2021, Ignition® by TELUS, our supply chain software division, was a recipient of the Food Logistics 2021 Top Green Providers award, which recognizes companies that enhance sustainability within the cold food and beverage industry. Ignition by TELUS exists to combat food supply waste by producing a comprehensive suite of solutions designed to help distributors reduce waste, increase flexibility and agility, and increase visibility across the supply chain.

Scaling our innovative digital capabilities in TELUS Health and TELUS Agriculture to build assets of consequence (continued)

- In July 2021, TELUS Agriculture, together with Rabobank, a global food and agriculture bank, acquired Conservis, a company that integrates disparate farm technologies into one streamlined interface to manage the business of farming. Improving on-farm profitability and enabling the efficient sharing of farm data with trusted partners are foundational ingredients to ensure the sustainability and security of our food system. With Rabobank and with the technology available in the Conservis platform, we will be able to make the financial management of farms a more efficient process and unlock new opportunities for our customers across the food value chain.
- 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 is 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.
- As noted in *Section 1.3*, in September 2021, we acquired Blacksmith Applications Holdings Inc., a SaaS-based trade promotion management, optimization and analytics (TPx) solutions provider, serving consumer goods manufacturers and retail customers. With Blacksmith Applications, TELUS Agriculture now has a complete set of TPx and analytics capabilities, which strengthens our position as a marketing leader in the space. Our complementary solutions have high cross-sell potential with Exceedra, Ignition and Muddy Boots customers. Combined, we aspire to offer a market-leading solution for retail and the food, beverage and consumer goods industries.
- In November 2021, we invested in Toronto-based Ukko Agro, which provides a predictive analytics platform aggregating weather, soil and crop data to guide farmers on when to apply crop inputs (such as water and pesticides) up to a week in advance. The company will be working with us on resale and integration opportunities.
- In December 2021, we made an investment in Full Harvest Technologies to help the company expand its ability to source and sell imperfect and surplus fruits and vegetables to customers across North America. This investment will support our goal to make food more available and decrease waste.

Scaling our innovative digital capabilities in TELUS International to build an asset of consequence

- As noted in *Section 1.3*, in February 2021, TELUS International successfully completed its initial public offering (IPO), further positioning it for continued growth.
- In February 2021, TI announced the expansion of its Google Cloud strategic partnership to drive enterprise digital transformation, due to growth and customer demand for Google Cloud solutions and technology, while deepening TI's successful 10-year relationship with Google.
- In March 2021, TI announced the final completion of the December 31, 2020 closing of the acquisition of a 100% interest in Lionbridge AI, following the clearance of the acquisition by the Committee on Foreign Investment in the United States (CFIUS). Lionbridge AI is one of only two globally scaled, managed AI training data and data annotation services and platform providers in the world.
- In July 2021, TELUS International Philippines opened its seventh delivery centre in the country in Iloilo City, which is the first location outside Metro Manila. This new centre of excellence is focused on digital customer care, IT and technical support.
- 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. Today, 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 July 2021, TI announced the launch of Intelligent Insights, a vendor-agnostic platform to monitor and manage robotic process automation (RPA) solutions and bots. With Intelligent Insights, companies can track their digital operations on a single platform to monitor effectiveness, cost savings and opportunities for innovation, empowering clients to analyze how much automation and human interaction is best for their business.
- In August 2021, TI opened its third site in the U.S. with a new digital customer experience (CX) delivery centre in North Charleston, South Carolina, providing high-tech and high-touch customer experiences to leading global brands.
- In September 2021, TI successfully completed an upsized underwritten public secondary offering of 14,400,000 subordinate voting shares, at a price of US\$34.00 per share, by certain shareholders, including Baring Private Equity Asia. TELUS Corporation did not participate in the offering. Additionally, driven by strong investor demand, the underwriters fully exercised the option to purchase up to an additional 2,160,000 subordinate voting shares from the selling shareholders. Following the offering, TELUS Corporation and Baring Private Equity Asia hold approximately 70.9% and 25.9%, respectively, of the combined voting power of TI and approximately 55.1% and 20.1%, respectively, of the economic interest.
- TI has furthered its leadership in digital solutions and customer experience with a range of industry recognition. In 2021, TI was:
 - Ranked a Leader in the NelsonHall Social Media CX Services NEAT vendor assessment for content moderation and trust and safety, online reputation management, and customer care and sales.
 - Named as the top Challenger on the customer service business process outsourcing (BPO) Magic Quadrant for the execution and delivery of digital capabilities and extensive domain knowledge to support customer experience by Gartner.
 - For the fifth year in a row, included on the International Association of Outsourcing Professionals' Global Outsourcing 100 list 2021, highlighting, among many other items, TI's programs for innovation and corporate social responsibility.
 - Awarded the 2021 AI Breakthrough Award in the Best Informational Bot Solution category for its Agent Assist Chatbot. These awards recognize the best companies, technologies, products and services in the field of AI.
 - Named a Leader by global research firm Everest Group in its 2021 Customer Experience Management (CXM) – Service Provider Landscape with Services PEAK Matrix Assessment. This is the third consecutive year TI has achieved Leader status.

Scaling our innovative digital capabilities in TELUS International to build an asset of consequence (continued)

- Successful in claiming the number nine spot, climbing 18 positions from its 2020 ranking, on Everest Group's 2021 BPS Top 50 list – the firm's global list of the 50 largest third-party providers, based on revenue and year-on-year growth. In the third year of being included on the list, TI was the top riser, and also claimed the number one position with respect to revenue growth percentage year-over-year, increasing by 55% from fiscal 2019 to fiscal 2020.
- Recognized by Fast Company as one of the Best Workplaces for Innovators.
- Named on the Achievers 50 Most Engaged Workplaces.
- Recognized as one of Mogul's Top 100 Workplaces with The Best D&I initiatives for 2021, a list that celebrates the efforts of companies that have implemented practices, invested in resources, and developed strategies to create a more inclusive and diverse workplace.
- Named a 2021 Excellence in Customer Service Award winner in the Technology of the Year category in recognition of TI's Work Anywhere / Work From Home solution by Business Intelligence Group. This award recognizes brands, executives and products that are helping companies better communicate with their customers to provide a differentiated level of customer service.
- A recipient of a Stevie Award for Great Employers for its innovative work-from-home plan in the COVID-19 response category.
- Named a Leader by global research firm IDC in its 2021-2022 Worldwide Digital Customer Care Services MarketScape. The IDC study presents a worldwide vendor assessment of digital customer care services firms looking specifically at how they are transforming service delivery with AI, automation, cloud transformation and migration initiatives, omnichannel and self-service.
- Ranked third overall and in first place for both strategy and vision and for growth in the 2021 HFS Top 10: Digital Contact Center Services – The Best of the Best Service Providers report. HFS, a leading global research consultancy firm, assessed and rated the world's largest service providers across a series of capabilities, including execution, innovation and voice of the customer.
- The winner of the ICMI Global Contact Center Awards, in both the Best Digital Customer Experience and the Best New Technology Solution categories. These awards recognize leading companies and teams that are making significant impacts on the customer management industry.

Our 2022 corporate priorities are set out in the table below.

2022 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 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; healthcare solutions across Canada; and global agriculture solutions

Our mobile products and services

- Data and voice – Fast internet access (via our 4G and 5G network available to over 99% and 70% of Canadians, respectively) for video, social networking, messaging and mobile applications, such as My TELUS, TELUS SmartHome, Optik TV, Pik 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, including M2M connectivity, to support Canadian businesses locally and internationally, including asset tracking, fleet management, remote monitoring, digital signage, security, smart hospital solutions, intelligent traffic solutions, contact tracing 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 storage. TELUS offers multiple plans, including plans with 2.5 Gbps symmetrical download and upload speeds.
- Television – High-definition entertainment service with Optik TV and Pik TV. 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, YouTube and hayu. Optik TV also delivers innovative features, including a voice assistant that allows customers to control their TV, a wireless digital box, large PVR capacity and the ability to restart live TV in progress or from the past 30 hours. In addition, our Optik TV app allows customers to watch live TV, set recordings and access On Demand content from a smartphone, tablet or computer. Pik TV delivers a streamlined offer for customers through Apple TV or select Android TV devices. It is also accessible through an internet browser or our Android or iOS mobile applications. Pik TV embraces the changing environment, where content is increasingly available from over-the-top (OTT) services.
- 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 via cameras, smoke detectors, lights, door locks, environmental controls, appliances and other systems for enhanced security, comfort, convenience and energy efficiency.
- 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) offerings.
- Cloud and managed information technology (IT) services – Suite of hybrid IT solutions provides traditional and cloud technologies, network connectivity, security, managed IT and cloud advisory services.
- Security consulting and managed services – Cloud 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 by means of phone, video and internet. Recent acquisitions are bolstering our capabilities in the small and mid-market business segments.
- Healthcare – A variety of healthcare solutions and services, including virtual care, virtual pharmacy, electronic medical records (EMR), pharmacy management systems, claims management solutions, personal health records, remote patient monitoring, personal emergency response services, mental health support, comprehensive primary care and employee wellness, and curation of health content for Canadians.
- Agriculture – Farm management, precision agronomy, feedlot health management, herd management software, application programming interface (API) and application integration services, compliance management, food traceability and quality assurance, data management solutions and software solutions for trade promotion management, retail execution, TPx and analytics capabilities.

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; healthcare solutions across Canada; and global agriculture solutions

Our capabilities supporting mobile and fixed products and services

- Licensed gross national mobile spectrum holdings averaging 198 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 97% of Canada's population and 5G covering 70% of Canada's population at December 31, 2021. Coverage includes domestic network sharing agreements.
 - Manufacturer's rated download speeds: 5G, up to 1.9 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 35 international destinations and 5G roaming is available in 47 international destinations.
- IoT technology:
 - LTE-machine (LTE-M) technology across Canada, which supports large numbers of devices that transmit infrequent short bursts of data.
 - Multi-service multi-billing capabilities 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; over 2.7 million households and businesses connected with TELUS PureFibre in B.C., Alberta and Eastern Quebec at December 31, 2021.
- Broadcasting distribution licences allowing us to offer television services in incumbent territories, as well as a licence to offer video-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 bolstered 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.
- 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 generates increased customer loyalty and reduced churn of mobile and fixed services. Having our TI team members assist with performing customer-serving activities strengthens our ability to continue delivering an exceptional customer experience.

Competition overview for mobile products and services

- Facilities-based national competitors Rogers Wireless and Bell Mobility, as well as provincial or regional telecommunications companies Shaw, Quebecor, SaskTel, Eastlink, Tbaytel and Xplornet.
- Fixed wireless services.
- Resellers of competitors' 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 and LTE-M low-power wide-area network capabilities, IoT connectivity tools and 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 Shaw Communications (in B.C. and Alberta) and Cogeco Cable and Videotron (in Eastern Quebec).
- Substitution of mobile services, including our own mobile offerings, for residential local and long distance voice services. The percentage of households with mobile-only telephone services (among all providers, including TELUS) was estimated to be 60% in B.C. and Alberta, and 24% in Eastern Quebec in 2021, compared to 56% and 20%, respectively, in 2020.
- Our national telecommunications competitors Rogers Communications Inc. and BCE Inc. 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 Inc., Rogers Communications Inc., Chubb-Edwards, Stanley Security, Vivint 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 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, as well as internet and data services, or reselling those services.
- OTT and direct-to-consumer voice and/or entertainment services.

¹ Network speeds vary with location, signal and customer device. Compatible device required.

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; healthcare solutions across Canada; and global agriculture solutions

Competition overview for fixed products and services (continued)

- Satellite-based entertainment and internet services offered by BCE Inc., Shaw Communications and Xplornet.
- Competitors for TELUS Health include providers of EMR and pharmacy management products, such as Omnimed, Familiprix, Medfar, Fillware, ARI and Logipharma. Competitors also include systems integrators; health service providers, such as Loblaw, McKesson 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 expanded Canadian footprints. Competitors for virtual care services include Tia Health, CloudMD, MD Connected, AppleTree VC, Cover Health, Dialogue, Maple, LifeWorks and Homewood. Competitors for TELUS Health's corporate and preventative health service offerings include Medcan, Cleveland Clinic, Loblaw and Wellpoint.
- TELUS Agriculture is unique in the agriculture technology (AgTech) space in that we operate across the entire food chain, from farm to fork. Our ability to provide solutions across the chain provides us with the ability to drive insights through connecting data at various stages of production. The AgTech space broadly displays strong competition across a high volume of smaller competitors. TELUS Agriculture does have competitors at each stage along the food chain:
 - In the animal health business, competitors include companies such as Performance Livestock Analytics (a part of Zoetis).
 - In the food, beverage and consumer goods business, competitors include Accenture, Oracle and Kantar's.
 - Competitors for our agribusiness solutions range from local to global companies, such as AgData, Proagrica, Farmers Edge and FoodLogiQ.

DIGITALLY-LED CUSTOMER EXPERIENCES – TELUS INTERNATIONAL (DLCX): We are 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.

We partner with a diverse set of disruptive and established clients across our core industry verticals. For example, within tech and games, we serve some of the leading social networks and search engines, as well as high-growth online games, ride sharing and real estate technology companies. Within eCommerce and fintech we serve both traditional and next-generation payments and point of sale providers, business-to-business and business-to-consumer Software-as-a-Service (SaaS) companies, online marketplaces and large financial services institutions. Our clients are generally multinational and North American and Europe-based, with some Asia-based that are supporting a global customer base.

Our products and services

- Our solutions and services are relevant across multiple markets, including digital transformation of customer experience systems and digital customer experience management.
- Digital transformation (DX) – Companies are increasingly partnering with third-party providers to meet their digital transformation challenges, which include designing solutions that facilitate an omnichannel experience, building digitally scalable infrastructure and delivering new digital channels. To keep systems scalable, an increasing number of companies are opting for cloud-based solutions and seeking to automate processes where possible.
- Digital customer experience management (DCXM) – DCXM represents the next evolution of customer experience management. In recent years, digital customer experience has become increasingly important to companies, as highly engaged users dictate the nature and frequency of interactions. Customers ascribe value to seamless interactions and are willing to reward positive experiences with loyalty and repeat business. As customers have shifted toward digital channels, leveraging next-generation technologies to deliver a unified and satisfying customer experience has become paramount. We believe we are uniquely well-positioned to serve these markets and, as a result, we have a significant market opportunity due to the overall industry growth rate, low penetration to date and strong exposure to the comparatively higher-growth DCXM sector of the market.
- We serve markets that have experienced high growth in recent years, such as content moderation, which includes review and compliance services of user-generated content on social media and other digital platforms. The necessity of moderating content on digital platforms has prompted enterprises to seek specialized services to accommodate changes in the uncertain, highly regulated environment. AI data solutions is another market we serve that is also experiencing high demand. Along with the volume of content continuing to increase, equally important is the need for constant dynamic changes and need for improvement.

DLCX: We are 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 capabilities

We have the right combination of people, capabilities and technology to help companies address the entire spectrum of designing, building and delivering integrated end-to-end customer experience systems. Our service lines of customer experience management (CXM), content moderation, AI data solutions and digital IT services include services and solutions that span the design, build and deliver framework.

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 practices based not only on transforming technology, but also on transforming processes and culture.

- Next-generation digital strategy
- Ideation on innovation
- UX/UI design
- CX process consulting, including customer, employee and system journey mapping

Next-gen tech and IT services – Building digital customer systems using next-gen technologies. Our clients often need to re-engineer their customer experience systems to provide a seamless, contextual, consistent and personalized customer experience across all channels – digital or human. To do this, they need to modernize their core systems and applications, while at the same time build new digital solutions that leverage technologies such as cloud, mobile, AI, automation, IoT, analytics and more. The key services underlying our next-gen tech and IT services solution are:

- Engineering, application development and quality assurance (QA)
- Data annotation, AI/ML and intelligent automation – including RPA and chatbots
 - We assist our clients to improve customer experience with data annotation in domains such as search relevance, image/video labelling for smart cities, audio transcription and facial recognition to our clients who utilize 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 TIAI Data Solutions, we collect, annotate and validate data in text, images, videos and audio in more than 500 languages and dialects, including for computer vision, for technology companies in social media, search, retail and mobile.
 - We use advanced analytics and AI techniques to analyze structured and unstructured consumer datasets to provide a unified data view of end customers' entire transaction history with the client, and derive real-time insights from it to provide a personalized customer experience.
 - Intelligent Insights is a diagnostic platform tool that aligns human and digital workforce to manage the end-to-end lifecycle 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 use our customer experience process expertise as well as our highly skilled, empathetic and engaged teams to provide exceptional, integrated customer experiences. Our global delivery platform enables us to service clients across geographies and customize the delivery strategy according to 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 care, sales and tech support
- Content moderation, 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 boost their social media presence, increase their user base and attract more customers through social and e-commerce channels.
 - Adjacent to content moderation and part of our broader trust and safety program, fraud prevention has become more critical across all industries. Our service offering is focused on promoting ethical conduct, identification verification, and profile validations combating asset misappropriation, managing fraudulent statements and preventing corruption or any other unlawful activity such as account takeovers.
- 360-degree customer analytics

Competition overview

- The sectors in which we compete are global, fragmented and rapidly evolving. We face competition primarily from:
 - In-house technology and customer experience management teams
 - Digital transformation services providers such as Endava, EPAM and Globant
 - Globally diversified IT and BPO service providers such as Accenture, Cognizant, Genpact and WNS
 - Customer experience providers such as 24-7 Intouch, TaskUs, Teleperformance S.A. and Webhelp
 - Single-threaded data annotation providers such as Appen.
- We believe that the main competitive factors in our business 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 compete favourably with respect to each of these factors.

4.2 Operational resources

RESOURCES

Our team

- We had approximately 90,800 employees at December 31, 2021, including 62,100 from TI. Of our 90,800 employees, 28,100 were located in Canada and 62,700 were located internationally. We also use external consultants and contractors, including crowdsourced providers through TELUS International AI Data Solutions (TIAI).
- Approximately 8,070 of our employees are covered by collective agreements. The agreement with the Telecommunications Workers Union (TWU), United Steelworkers Local 1944, which covers approximately 6,515 employees, expired on December 31, 2021. Negotiations to renew this collective bargaining agreement began in October 2021 and are scheduled to continue into 2022. The expired contract remains in effect while the parties are bargaining, until a new agreement is reached.
- The agreement with the Syndicat québécois des employés de TELUS (SQET), which covers approximately 705 employees in Quebec, expires on December 31, 2022. The agreement with the Syndicat des agents de maîtrise de TELUS (SAMT), which covers approximately 555 employees in Quebec, expires on March 31, 2022. Our TELUS Employer Solutions Inc. subsidiary is signatory to a collective agreement with the B.C. Government and Services Employees' Union, which covers fewer than 100 employees and expires on July 31, 2023.
- Approximately 235 employees within the ADT Security Services Canada, Inc. subsidiary (ADT Canada) are unionized. These employees are covered by 10 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 28 countries for both management as well as support. Digital solutions are primarily resourced from North America, India, Philippines, Central America and Europe.
- Our objective is to attract, develop and retain talented employees in Canada and internationally. We 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 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. 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 to assess our team's health and well-being and gather their insights about our work environment, including changes due to the COVID-19 pandemic. Key highlights include team members confirming their belief that their safety is a priority for their leaders; their leader is providing the support they need during this extraordinary time; and their work arrangements allow them to collaborate productively while also allowing them to meet the needs of customers.
- Having engaged teams leads to 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 with our products and services.
- In 2021, 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 leaders engaging their teams through our fair process engagement model, and
 - Utilizing Pulsecheck feedback, including our inclusion index results, to build and create 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 is designed to support our high-performance culture and is both market-driven and performance-based. Where required, 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 10.11 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 a social purpose to connect all Canadians for good.
- 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, launched in 2010. Pik TV, launched in 2017.
- TELUS PureFibre – Our next-generation fibre-optic network, which delivers fast internet and provides 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 – A national provider of electronic medical and personal health records, home health monitoring, benefits and pharmacy management solutions, preventive healthcare services and virtual care solutions for consumers, employers and insurers. We are improving health outcomes for all Canadians, including those in rural and Indigenous communities, through our virtual care offerings including TELUS Health MyCare, TELUS Health Virtual Care and TELUS Health Virtual Pharmacy, as well as through our TELUS Health Care Centres, LivingWell Companion personal emergency response service, the TELUS Healthy Living Network and Health for Good mobile health clinics.

RESOURCES

Our major brands and distribution channels (continued)

- TELUS Agriculture – A global provider of agriculture and food technology and data solutions, serving customers across the food value chain.
- TELUS Ventures – A corporate venture capital fund that has invested in more than 80 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 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 on-site professional smartphone and tablet repair services and sales.
 - Fixed residential services (including automation and security) are supported through TELUS-owned and branded stores, customer care telephone agents, digital home technicians and partners and online and TV-based self-serve applications.
 - Through **telus.com**, we sell mobile products and services (including digital accessories), fixed products and services, automation and security, health and business products and services. We provide online account management tools (e.g. My TELUS), enabling customers to manage their accounts through our website or mobile applications, as well as online chats for customer support. We also provide video calling solutions to enable installations without having technicians enter a customer's premises.
 - Dedicated direct-to-consumer channel across multiple provinces focusing on product intensity; safety protocols are maintained at all times when team members interact with customers.
 - In areas where it was decided not to proceed with field activity due to the pandemic, our teams were mobilized to make proactive outbound calls.
 - Business services, including healthcare and security, across mobile and fixed service offerings are supported through certain 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.
 - TELUS Agriculture's 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 to adopt LTE-A technology, which now covers 97% 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 and helps to sustain our long-term wireless leadership.
 - In 2019, we progressed 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, and by December 31, 2021, our 5G network covered 70% of Canada's population. In 2021, we increased the speeds of our 5G network, capable of up to 1.9 Gbps, through the deployment of incremental 5G spectrum. Our 5G coverage is foundational, as it will enable the advancement of new 5G capabilities such as network slicing, multi-access edge computing (MEC) and low-latency critical communications. A key enhancement to our 5G network in 2021 is the beginning of the deployment of the 3.5 GHz spectrum with MIMO technology.

RESOURCES

Our technology, systems and properties (continued)

- 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 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 (DWDM) transport backbone (packet transport 3.0) colourless, directionless and contentionless (CDC) network overlay that connects from B.C. to Quebec and into the U.S. 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 2021, we continued evolving our PureFibre and HSIA technologies to deliver a superior customer experience, propelling our market leadership in home and business services by launching 2.5 Gbps symmetrical service to 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 2021, we leveraged our national DWDM footprint to launch 1G, 10G and 100G optical wavelength services to our business customers.
 - 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 2021, we enabled the STIR/SHAKEN capabilities across our voice networks as per a CRTC mandate to prevent caller ID spoofing and help combat fraudulent calls.
 - We have continued to innovate for our customers through our Optik TV and Pik TV platforms. In 2018, we introduced high dynamic range (HDR) colour capability to our 4K Optik TV customers, making us the first operator in Canada to deliver 4K HDR video across live TV, video-on-demand and Netflix services. We also launched device applications for Pik TV and Optik TV and gave customers the option to purchase Pik TV using only a web browser. By investing in the cloudification of video infrastructure and innovative applications, we are continuing to advance our priority of enabling “anytime, everywhere” access to content and entertainment, thereby continuing to deliver an exceptional customer experience.
 - In 2021, we launched Wi-Fi 6 capability, following our successful 2018 introduction of TELUS Boost Wi-Fi, a network of boosters that extends the reach of strong and reliable in-home Wi-Fi signals.
 - In 2021, we introduced XGS-PON as the next generation of PureFibre technology to more than quadruple our bandwidth delivery capabilities.
 - We are continually enhancing our customer applications across Pik TV, Optik TV, TELUS SmartHome and TELUS My Wi-Fi, including deploying advanced Cujo-based parental controls.
- We are continuing to monitor traffic requirements and invest in our network to maintain service and support to Canadians:
 - Expanding capacity for Optik TV video-on-demand and new solutions to enable scaling to support a 40% increase in video-on-demand consumption and a 25% increase in broadcast viewing at peak levels.
 - Continuing to migrate voice traffic from legacy 3G with 85% of calls now processed as VoLTE.
 - Doubling virtual private network (VPN) and DefensePro capacities to 12 Gbps to support a 60% growth in VPN daily usage to approximately 19,000 users per day.
 - Doubling virtual desktop infrastructure (VDI) gateway capacity with additional resiliency between data centres; and adding 40% more TELUS Authentication Services (TAS) tokens (10,000) to support 21 times growth in VDI peak connections from home.
 - Augmenting our wireless networks to support a 32% year-over-year increase in mobility traffic and a 21% year-over-year increase in wireless HSIA traffic in 2021.
 - 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 spaces, 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 are on buildings held under leases or licences with varying terms. We currently participate in two real estate joint ventures. (See *Section 7.11*.)
- 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 198 MHz nationally. We have deployed 700 MHz, 2300 MHz, 2500 MHz, 1900 MHz, AWS and 850 MHz spectrum to evolve our wireless infrastructure, and in 2020 we began operationalizing our 600 MHz spectrum acquired in the 2019 auction. Further, we began our work to operationalize our recently acquired 3500 MHz spectrum in the latter part of 2021 and will continue doing so in 2022. 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 to 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. We aim to maximize the value of our intangible assets in the areas of innovation and invention by ensuring that they are appropriately used, protected and valued. 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. Further information on recognized tangible and intangible assets can be found in *Section 8.1 Critical accounting estimates and judgments*.

RESOURCES

Our technology, systems and properties (continued)

- 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 machine-to-machine virtual evolved packet core (M2M vEPC) to support IoT applications, where the ease of onboarding partners is crucial for emerging services such as connected vehicles, fleet management and more.
 - In 2018, we deployed our LTE-M technology across Canada. LTE-M is a low-power wide-area network (LPWAN) technology, which is ideal for IoT because it supports large numbers of devices that transmit infrequent short bursts of data, like IoT sensors. It will enable a plethora of IoT applications through long-range connectivity, extended battery life and carrier-grade security and quality of service.
 - We continue to invest in both technology and talent across TELUS to harness the competitive capabilities, flexibility, and resilience of cloud and digital technology. 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 into one system stack. Manual migrations of Quebec customers to our shared national systems have started in 2021 and we expect to be substantially complete by the end of 2022.
 - Modernizing our enterprise communication platform to be fully cloud-enabled and to improve system redundancy while processing millions of messages, including mobile eBill 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 telemetry capabilities to deliver business outcomes through enhanced customer targeting, visualization and business intelligence tools, while also making significant accuracy and reliability enhancements to 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 North and Central America, Europe and Asia.
- Through TELUS Health's services – such as pharmacy management, EMRs (including mobile EMRs), electronic health records, personal health records, clinical information systems, remote patient monitoring, virtual care offerings and online claims settlement management software solutions, including the online renewal of prescriptions, e-prescribing services and MedDialog – TELUS Health facilitates the integration of electronic health records from the home to the doctor's office to the hospital, making critical health information available to healthcare providers over our broadband network.
 - Through its TELUS Health Care Centres, TELUS Health also provides executive benefits, occupational health, employee health and wellness services and individual preventive health services. With preventive health assessments, 24/7 virtual care support and health specialists, TELUS Health Care Centres provide proactive health services to individuals and their families.
- Our TELUS Agriculture 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 capital is to maintain a flexible capital structure that optimizes the cost and availability of capital at acceptable risk.

In our definition of 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, and Short-term borrowings, including those arising from securitized trade receivables.

We manage our 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 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, and/or increase or decrease the amount of trade receivables sold to an arm's-length securitization trust.

We monitor capital utilizing a number of measures, including our 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 2019, we announced our intention to target ongoing semi-annual dividend increases, with the annual increase in the range of 7 to 10% from 2020 through to the end of 2022, 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 2022. (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 could affect our ability to sustain our dividend growth program through 2022 and any further dividend growth programs and Section 10.14 Financing, debt and dividends.*)
- Dividends declared in 2021 totalled \$1.2710 per share, an increase of \$0.08605 per share or 7.3% compared to the dividends declared in 2020. On February 9, 2022, the Board elected to declare a first quarter dividend of \$0.3274 per share, payable on April 1, 2022, to shareholders of record at the close of business on March 11, 2022. The first quarter dividend for 2022 reflects a cumulative increase of \$0.0162 per share or 5.2% from the \$0.3112 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 2021, our DRISP plan trustee acquired from Treasury approximately 24 million dividend reinvestment Common Shares for \$620 million. For the dividends paid on January 4, 2022, the DRISP participation rate, calculated as the DRISP investment of \$156 million (including the employee share purchase plan) as a percentage of gross dividends, was approximately 35%.
- TELUS International 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

- In June 2021, we received approval from the Toronto Stock Exchange (TSX) for a new 2021 normal course issuer bid (NCIB) to purchase and cancel up to 16 million Common Shares for an aggregate purchase price of up to \$250 million over a 12-month period, from June 4, 2021, to June 3, 2022, through the facilities of the TSX, the New York Stock Exchange and alternative Canadian trading platforms, or as otherwise permitted by applicable securities laws. TELUS will purchase Common Shares only when and if we consider it opportunistic, subject to any purchases that may be made under automatic share purchase plans (ASPP). As of February 10, 2022, we have not completed any transactions pursuant to our 2021 NCIB.
- We may also enter into ASPP with a broker for the purpose of permitting us to purchase our Common Shares under our NCIB at times when we would not be permitted to trade in our shares, including regularly scheduled quarterly blackout periods. Such purchases will be determined by the broker in its sole discretion based on parameters that we have established prior to any blackout period, in accordance with TSX rules and applicable securities laws. The ASPP has been approved by the TSX and may be implemented from time to time in the future.

Use proceeds from securitized trade 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 \$1.9 billion at December 31, 2021, all of which was denominated in U.S. dollars (US\$1.5 billion), compared to \$731 million (US\$574 million) at December 31, 2020.
- Net draws due to a syndicate of financial institutions (excluding TELUS Corporation) on the TI credit facility were US\$854 million at December 31, 2021, compared to US\$1.4 billion at December 31, 2020. The TI credit facility is non-recourse to TELUS Corporation.
- Proceeds from securitized trade receivables were \$100 million at December 31, 2021, unchanged from December 31, 2020.

REPORT ON FINANCING AND CAPITAL STRUCTURE MANAGEMENT PLANS

Maintain compliance with financial objectives

- **Maintain investment grade credit ratings in the range of BBB+ or the equivalent** – On February 10, 2022, investment grade credit ratings from the four 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, 2021, this ratio was 3.17 times, outside of the objective range, primarily due to the acquisition of spectrum licences and the fiscal 2021 impact of the COVID-19 pandemic. The net effect of business dispositions and business acquisitions increased the ratio. Given the cash demands of the 2019 600 MHz, the recent 2021 3500 MHz and upcoming spectrum auctions, as well as the inability to predict impacts of the COVID-19 pandemic, the assessment of the guideline and 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 recent 2021, and upcoming 2023 and 2024, spectrum auctions), 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 ratio¹ we present in this MD&A is a historical measure utilizing the most recent four quarters of dividends declared, net of dividend reinvestment plan effects, and free cash flow, and is disclosed for illustrative purposes in evaluating our target guideline. As at December 31, 2021, the ratio was 140%, outside of the objective range, primarily due to: (i) our planned accelerated capital expenditures program to support our broadband capital investments, the build-out of our TELUS PureFibre infrastructure and the acceleration of our 5G network roll-out; and (ii) the fiscal 2021 impact of the pandemic. Excluding the effects of our accelerated capital expenditures program, as at December 31, 2021, the ratio was 73%. (See *Section 7.5 Liquidity and capital resource measures*.)
- **Generally maintain a minimum of \$1 billion in available liquidity** – As at December 31, 2021, our available liquidity¹ was approximately \$2.1 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*.

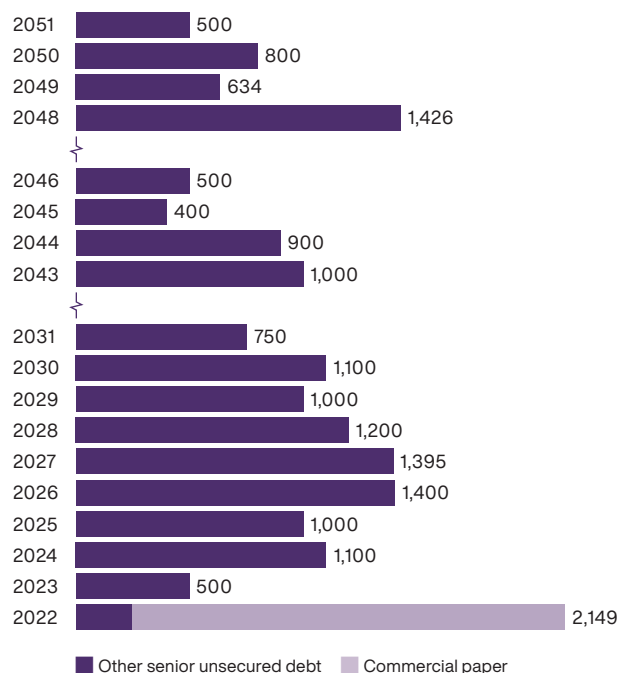
Financing and capital structure management plans for 2022

At the end of 2021, our senior unsecured debt (excluding unamortized discount) was \$17.8 billion. For our long-term debt, the weighted average term to maturity was approximately 12.5 years (excluding commercial paper, the revolving component of the TI credit facility, lease liabilities and other long-term debt). Our weighted average interest rate on long-term debt (excluding commercial paper, the revolving component of the TI credit facility, lease liabilities and other long-term debt) was 3.72% at December 31, 2021, down from 3.80% one year ago. Aside from Short-term borrowings of \$100 million, commercial paper of \$1.9 billion (US\$1.5 billion), the utilized revolving component of the TI credit facility (excluding TELUS Corporation) of \$138 million (US\$109 million) and lease liabilities of \$1.9 billion, all of our debt was on a fixed-rate basis.

During 2022, we may issue notes to accelerate future debt reduction by prepaying certain notes 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 10.14 Financing, debt and dividends*.

Senior unsecured debt principal maturities as at December 31, 2021

(\$ millions)



4.4 Disclosure controls and procedures and changes in internal control over financial reporting

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, 2021, Consolidated financial statements. They have concluded that our disclosure controls and procedures were effective, at a reasonable assurance level, 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, 2021, 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, 2021, 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, 2021.

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 2021.

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, in particular given uncertainty with regard to the COVID-19 pandemic and associated economic impacts. 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 January 1, 2020, we embarked upon the modification of our internal and external reporting processes, systems and internal controls to accommodate the technology convergence-driven cessation of the historical distinction between our wireless and wireline operations at the level of regularly reported discrete performance measures that are provided to our CEO (our chief operating decision-maker). Prior to the World Health Organization characterizing COVID-19 as a pandemic, we had anticipated transitioning to a new segment reporting structure during 2020; commencing with the three-month period ended March 31, 2021, we have now transitioned to our new segment reporting structure and have recast comparative amounts on a comparable basis. Segmented information in *Note 5* of the Consolidated financial statements is regularly reported to our CEO.

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; software, data management and data analytics-driven smart food-chain technologies; and home and business security); certain healthcare software and technology solutions; 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 solutions, provided by TELUS International.

Selected annual information

Years ended December 31 (\$ in millions, except per share amounts)	2021	2020	2019
Operating revenues and other income	17,258	15,463	14,658
Net income	1,698	1,260	1,776
Net income attributable to TELUS Corporation Common Shares (Common Shares)	1,655	1,207	1,746
Net income per Common Share			
Basic earnings per share (EPS)	1.23	0.95	1.45
Diluted EPS	1.22	0.94	1.45
Dividends declared per Common Share	1.2710	1.18495	1.12625
At December 31 (\$ millions)	2021	2020	2019
Total assets	47,994	43,273	37,985
Current maturities of long-term debt	2,927	1,432	1,332
Non-current financial liabilities ¹			
Provisions	51	54	43
Long-term debt	17,925	18,856	17,142
Other long-term financial liabilities	181	236	113
Total non-current financial liabilities	18,157	19,146	17,298
Deferred income taxes	4,056	3,718	3,214
Common equity	15,116	12,040	10,548

¹ In our specific current instance, financial liabilities do not include liabilities that are excluded by definition (e.g. employee benefits and share-based compensation liabilities) 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 \$1,795 million in 2021 and \$805 million in 2020. These increases were largely attributable to increased fixed data services and mobile revenues, as well as 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 \$3,349 million in 2021 and \$2,984 million in 2020. 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 build. See *Section 7.3 Cash used by investing activities*.

Total assets (\$ millions)

2021	47,994
2020	43,273
2019	37,985

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)	2021 Q4	2021 Q3	2021 Q2	2021 Q1	2020 Q4	2020 Q3	2020 Q2	2020 Q1
Operating revenues and other income ¹	4,872	4,251	4,111	4,024	4,060	3,981	3,728	3,694
Operating expenses								
Goods and services purchased ²	1,882	1,660	1,609	1,548	1,766	1,632	1,458	1,412
Employee benefits expense ²	1,108	1,095	1,051	1,015	958	959	911	873
Depreciation and amortization	830	804	793	789	789	773	725	725
Total operating expenses	3,820	3,559	3,453	3,352	3,513	3,364	3,094	3,010
Operating income	1,052	692	658	672	547	617	634	684
Financing costs before long-term debt prepayment premium	192	184	203	207	190	187	184	192
Long-term debt prepayment premium	-	10	-	-	-	-	18	-
Income before income taxes	860	498	455	465	357	430	432	492
Income taxes	197	140	111	132	86	109	117	139
Net income	663	358	344	333	271	321	315	353
Net income attributable to Common Shares	644	345	335	331	260	307	290	350
Net income per Common Share:								
Basic EPS	0.47	0.25	0.25	0.25	0.20	0.24	0.23	0.28
Adjusted basic EPS ³	0.23	0.29	0.26	0.27	0.22	0.28	0.25	0.32
Diluted EPS	0.47	0.25	0.25	0.25	0.20	0.24	0.23	0.28
Dividends declared per Common Share	0.3274	0.3162	0.3162	0.3112	0.3112	0.29125	0.29125	0.29125
Additional information:								
EBITDA	1,882	1,496	1,451	1,461	1,336	1,390	1,359	1,409
Restructuring and other costs	44	63	38	41	71	58	70	60
Other equity losses related to real estate joint ventures	1	-	1	1	2	8	3	6
Gain on disposition of financial solutions business	410	-	-	-	-	-	-	-
Retirement of a provision arising from business acquisition-related written put options within DLCX	-	-	-	-	-	-	71	-
Adjusted EBITDA	1,517	1,559	1,490	1,503	1,409	1,456	1,361	1,475
Cash provided by operating activities	896	1,309	1,244	939	1,033	902	1,462	1,177
Free cash flow	43	203	210	321	218	161	511	545

1 In the fourth quarter of 2021, we recorded a gain on disposition of our financial solutions business of \$410 million.

2 Goods and services purchased and Employee benefits expense amounts include restructuring and other costs.

3 See Section 11.1 Non-GAAP and other specified financial measures.

Trends

COVID-19 was characterized as a pandemic in March 2020 and has had significant impacts on our business. The pandemic prevents us, our customers and our suppliers from operating in traditional manners of business in certain areas. While we expect the pandemic to continue to affect our operations until at least 2023, we have adapted, and continue to adapt, to future modes of operating.

The trend of year-over-year increases in consolidated revenue reflects TTech growth, including: (i) fixed data services growth in internet revenues, TV revenues, home and business security revenues, smart food-chain technology revenues and other advanced application offerings; (ii) mobile network revenue generated from growth in our subscriber base, as well as the acceleration of Internet of Things (IoT)

connections, largely offset by COVID-19 pandemic impacts such as lower roaming revenue related to travel restrictions and customers reducing their general shopping habits in retail outlets commencing from the temporary closure of approximately 90% of our retail outlets beginning in March 2020 through a majority of the second quarter of 2020; and (iii) certain health revenues, including health benefits management, collaborative health records, pharmacy management and virtual pharmacy solutions, as well as TELUS Health Virtual Care. All of these areas have been partly offset by moderating equipment revenue growth that can be attributed to the abovementioned change in customers' general shopping habits in retail outlets, which more recently has seen suppressed handset upgrade volumes throughout 2020 manifest in increased demand in the first half of 2021, as well as other pandemic

impacts, such as the temporary closure of our TELUS Health Care Centres in 2020, which began operating at reduced volume in 2021, and business customers faced with reduced and/or closed operations. Increased internet and data services and TV service revenues are being generated by subscriber growth and higher internet revenue per customer. There has also been increased customer adoption of our home and business security services and smart food-chain technology. For additional information on mobile and fixed revenue and subscriber trends, see *Section 5.4 TELUS technology solutions segment*.

Year-over-year increases in consolidated revenue also reflect growth in DLCX revenue from a combination of business acquisitions, including Competence Call Center (CCC) (since rebranded as TELUS International Northern Europe or TINE and comprised substantially of CCC) on January 31, 2020, and Lionbridge AI on December 31, 2020, which was subsequently rebranded as TELUS International AI Data Solutions (TIAI), and organic external customer growth.

Operating revenues

(arising from contracts with customers)

(\$ millions)



The trend of year-over-year increases in Goods and services purchased reflects increased expenses to support growth in our DLCX business, our subscriber base and business acquisitions; increased fixed data product costs of sales associated with a growing subscriber base; higher mobile equipment expenses associated with higher-value smartphones in the sales mix; and higher operating costs associated with growth related to scaling our health offerings and our digital capabilities. TIAI utilizes contracted labour in servicing its customers as compared to solely utilizing employees, and these contracted services have contributed to year-over-year increases in Goods and services purchased throughout 2021.

The trend of year-over-year increases in net Employee benefits expense reflects increases in the number of employees related to business acquisitions, including those supporting the growth of DLCX revenue, health offerings, smart food-chain technology business and our other complementary businesses. This was partly offset by moderating salaries expense resulting from reductions in the number of full-time equivalent (FTE) domestic employees, excluding business acquisitions, related in part to absorbed vacancies. We experienced year-over-year increases in net Employee benefits expense in 2021 related to merit-based compensation increases, including an April 2021 compensation program increase.

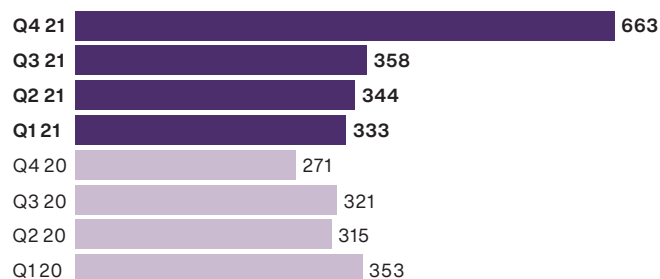
The trend of year-over-year increases in Depreciation and amortization reflects increases related to capital assets acquired in business acquisitions; growth in capital assets, in support of the expansion of our broadband footprint, including our generational investment to connect homes and businesses 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 coverage and capacity, including the ongoing build-out of 5G, as we launched the first wave of our 5G network in June 2020.

The trend of year-over-year increases in Financing costs reflects an increase in long-term debt outstanding, mainly associated with our investments in spectrum, fibre and mobile technology, as well as business acquisitions. Financing costs include a long-term debt prepayment premium of \$10 million in the third quarter of 2021 and \$18 million in the second quarter of 2020. Moreover, 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 and varying amounts of interest income.

The trend in Net income reflects the items noted above, as well as non-cash adjustments arising from substantively enacted changes in income tax and adjustments recognized in the current periods for income taxes of prior periods. Historically, the trend in basic EPS has reflected trends in Net income.

Net income

(\$ millions)



Adjusted EBITDA

(\$ millions)



The general trend of year-over-year decreases in Cash provided by operating activities reflects higher year-over-year income taxes paid, other operating working capital changes and higher interest payments arising from increases in debt outstanding and year-over-year variations in fixed-term interest rates. The general trend of year-over-year decreases in free cash flow reflects the factors affecting Cash provided by operating activities in addition to increased capital expenditure activity, except that accounting policies which do not impact cash (IFRS 15 and IFRS 16) do not affect the determination of free cash flow. For further discussion of trends, see *Section 5.4 TELUS technology solutions segment* and *Section 5.5 Digitally-led customer experiences – TELUS International segment*.

Fourth quarter recap

Results for the fourth quarter of 2021 (three-month period ended December 31, 2021) are discussed in our February 10, 2022 news release and are compared with results from the fourth quarter of 2020 (three-month period ended December 31, 2020).

- Consolidated operating revenues and other income were \$4,872 million in the fourth quarter of 2021, an increase of \$812 million.
 - Service revenues were \$3,805 million in the fourth quarter of 2021, an increase of \$396 million. TTech service revenue growth of \$227 million was driven by (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) higher mobile network revenue from growth in our mobile phone and connected devices subscriber bases and higher ARPU; and (iii) growth in health services revenues. This was partly offset by continued declines in legacy fixed voice and legacy fixed data service revenues. Growth in DLCX operating revenues resulted from business acquisitions, as well as organic growth from both new clients and expanded services for existing customers.
 - Equipment revenues were \$656 million in the fourth quarter of 2021, an increase of \$4 million, driven by higher-value smartphones in the sales mix, despite an increased mix of certified pre-owned device sales. Additionally, industry-wide mobile handset inventory constraints resulted in lower revenues from mobile handset upgrade volumes.
 - Other income was \$411 million in the fourth quarter of 2021, an increase of \$412 million, largely reflecting a \$410 million gain arising from the disposition of our financial solutions business in the fourth quarter of 2021, as described in *Section 1.3*.
- Consolidated operating expenses were \$3,820 million in the fourth quarter of 2021, an increase of \$307 million.
 - Goods and services purchased were \$1,882 million in the fourth quarter of 2021, an increase of \$116 million, due to: (i) higher operating, contracted labour and administrative costs associated with business acquisitions, organic DLCX revenue growth and scaling of our health offerings, including virtual care adoption; (ii) higher product and service costs in supporting growth across our subscriber connections, including TV subscribers; (iii) higher advertising and promotional costs relative to subdued marketing activity in 2020; (iv) higher mobile equipment sales expense, driven by higher-value smartphones in the sales mix, partly offset by lower mobile handset upgrades; and (v) growth in business operations related to scaling of our digital capabilities. These increases were partly offset by lower non-labour-related restructuring costs, lower bad debt expense, and lower commissions expense associated with an increased mix of digital sales and lower contracted volume.
 - Employee benefits expense was \$1,108 million in the fourth quarter of 2021, an increase of \$150 million, largely due to: (i) higher compensation and benefit costs resulting from an increase in the number of employees related to business acquisitions and organic DLCX revenue growth; and (ii) merit-based compensation increases. These employee benefits expense increases were partly offset by higher capitalized labour costs.
 - Depreciation was \$545 million in the fourth quarter of 2021, an increase of \$6 million, primarily due to growth in capital assets over the past 12 months, including our expanded broadband footprint and business acquisitions.
 - Amortization of intangible assets was \$285 million in the fourth quarter of 2021, an increase of \$35 million, arising from business acquisitions and higher expenditures associated with the intangible asset base over the past 12 months.
 - Financing costs were \$192 million in the fourth quarter of 2021, an increase of \$2 million.
 - Income tax expense was \$197 million in the fourth quarter of 2021, an increase of \$111 million. The effective tax rate decreased from 24.1 to 22.9% in the fourth quarter of 2021, primarily due to the non-taxable portion of the gain on the disposition of our financial solutions business partially offset by lower adjustments to prior period income taxes.
 - EBITDA, which includes restructuring and other costs, other equity losses related to real estate joint ventures, and the gain on disposition of our financial solutions business, was \$1,882 million in the fourth quarter of 2021, an increase of \$546 million.
 - Adjusted EBITDA, which excludes restructuring and other costs, other equity losses related to real estate joint ventures, and the gain on disposition of our financial solutions business, was \$1,517 million in the fourth quarter of 2021, an increase of \$108 million or 7.6%.

This is reflective of growth in network revenue from increases in our mobile phone and connected devices subscriber bases; growth in mobile equipment margins; growth in internet and data service margins, as well as other fixed data service margins, resulting from subscriber base growth and expanded services; an increased contribution from our DLCX business; and lower bad debt expense. This was partly offset by higher Employee benefits expense and lower legacy fixed voice and legacy fixed data services. This growth also reflects lower non-labour restructuring and other costs related to the pandemic, partly offset by the dilutive lingering impacts of the pandemic, including reduced roaming margins related to travel restrictions

- Net income attributable to Common Shares was \$644 million in the fourth quarter of 2021, an increase of \$384 million, resulting from the after-tax impacts of higher Operating income and higher 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 the gain on disposition of our financial solutions business. Adjusted Net income in the fourth quarter of 2021 was \$331 million, an increase of \$42 million or 14.5%.
- Basic EPS was \$0.47 in the fourth quarter of 2021, an increase of \$0.27 as a result of the after-tax impacts of higher Operating income and higher 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 the gain on disposition of our financial solutions business. Adjusted basic EPS was \$0.23 in the fourth quarter of 2021, an increase of \$0.01 or 4.5%.
- Cash provided by operating activities was \$896 million in the fourth quarter of 2021, a decrease of \$137 million, largely attributable to other working capital changes and higher income taxes paid related to the disposition of our financial solutions business.
- Cash used by investing activities was \$1,989 million in the fourth quarter of 2021, a decrease of \$218 million, largely attributable to fewer business acquisitions and proceeds received upon the disposition of our financial solutions business, partially offset by cash payments for 3500 MHz spectrum licences as noted in *Section 1.3* and higher cash payments for capital assets. Capital expenditures were \$909 million in the fourth quarter of 2021, an increase of \$296 million, due to accelerated investments in our 5G network, broadband build, enhanced product development, and digitization to increase system capacity and reliability.
- Cash used by financing activities was \$48 million in the fourth quarter of 2021, a change of \$1,449 million compared to Cash provided by financing activities of \$1,401 million in the fourth quarter of 2020, primarily reflecting higher long-term debt issues.
- Free cash flow was \$43 million in the fourth quarter of 2021, a decrease of \$175 million, driven by higher capital expenditures as previously noted and higher income taxes paid, partly offset by higher EBITDA.

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 (arising from contracts with customers) (\$ millions)

2021	16,838
2020	15,341
2019	14,589

Operating revenues

Years ended December 31 (\$ in millions)	2021	2020	Change
Operating revenues			
Service	14,535	13,277	9.5%
Equipment	2,303	2,064	11.6%
Operating revenues (arising from contracts with customers)	16,838	15,341	9.8%
Other income	420	122	n/m
Operating revenues and other income	17,258	15,463	11.6%

Consolidated Operating revenues and other income increased by \$1,795 million in 2021.

- **Service revenues** increased by \$1,258 million in 2021. TTEch service revenue growth of \$685 million was driven by (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 phone and connected devices subscriber bases; and (iii) growth in health services revenues. This was partly offset by continued declines in legacy fixed voice and legacy fixed data service revenues. Growth in DLCX operating revenues resulted from business acquisitions, as well as organic growth from both new clients and expanded services for existing customers.

Compared to the prior year, growth in 2021 also reflects the dilutive lingering impacts of the pandemic, most notably in the first quarter of 2021, including reduced roaming revenues related to travel restrictions.

- **Equipment revenues** increased by \$239 million in 2021, reflecting higher-value smartphones in the sales mix, higher handset upgrade volumes and greater collectability of mobile device balances. These factors have been partly offset by the recent global supply chain challenges related to chipset shortages that became more prominent in the third quarter of 2021, which we have mitigated by leveraging certified pre-owned device inventory, our Bring-it-Back device program, and device repair businesses, including Mobile Klinik.

- **Other income** increased by \$298 million in 2021, largely due to a \$410 million gain arising from the disposition of our financial solutions business in the fourth quarter of 2021, as described in *Section 1.3*, in addition to lower other equity losses related to real estate joint ventures. These were partly offset by the non-recurrence of a decrease and subsequent retirement of the comparative period's gain on a provision arising from business acquisition-related written put options to acquire the remaining non-controlling interest of an acquired subsidiary, Xavient Information Systems (Xavient), which was settled in the second quarter of 2020, in addition to the non-recurrence of the sale of certain assets.

Operating expenses

Years ended December 31 (\$ in millions)	2021	2020	Change
Goods and services purchased	6,699	6,268	6.9%
Employee benefits expense	4,269	3,701	15.3%
Depreciation	2,126	2,107	0.9%
Amortization of intangible assets	1,090	905	20.4%
Operating expenses	14,184	12,981	9.3%

Consolidated operating expenses increased by \$1,203 million in 2021.

- **Goods and services purchased** increased by \$431 million in 2021 mainly due to: (i) higher operating, contracted labour and administrative costs associated with business acquisitions, organic DLCX revenue growth and scaling of our health offerings, including virtual care adoption; (ii) higher mobile equipment sales expense driven by higher-value smartphones in the sales mix and higher mobile handset upgrade volumes; (iii) higher product and service costs in supporting growth across our subscriber connections, including TV subscribers; (iv) higher advertising and promotional costs relative to subdued marketing activity in 2020; and (v) growth in business operations related to scaling of our digital capabilities. These increases were partly offset by lower non-labour-related restructuring costs, lower bad debt expense, lower commissions expense associated with an increased mix of digital sales and lower contracted volume, and lower roaming expense.
- **Employee benefits expense** increased by \$568 million in 2021, largely due to: (i) higher compensation and benefit costs resulting from an increase in the number of employees related to business acquisitions and organic DLCX revenue growth; (ii) merit-based compensation increases; and (iii) higher share-based compensation as a result of the mark-to-market adjustment on liability-accounted awards from an increased TI share price. These employee benefits expense increases were partly offset by higher capitalized labour costs.
- **Depreciation** increased by \$19 million in 2021, primarily due to growth in capital assets over the past 12 months, including our expanded broadband footprint and business acquisitions. This was partly offset by the effect of accelerated depreciation in the comparative period from increased asset retirement activity.

- **Amortization of intangible assets** increased by \$185 million in 2021 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)	2021	2020	Change
TTech EBITDA ¹ (See <i>Section 5.4</i>)	5,735	4,976	15.2%
DLCX EBITDA ¹ (See <i>Section 5.5</i>)	555	518	7.3%
EBITDA	6,290	5,494	14.5%
Depreciation and amortization (discussed above)	(3,216)	(3,012)	6.8%
Operating income (consolidated earnings before interest and income taxes (EBIT))	3,074	2,482	23.9%

¹ See *Section 11.1 Non-GAAP and other specified financial measures*.

Operating income increased by \$592 million in 2021, while EBITDA increased by \$796 million in 2021. In addition to the gain on sale of our financial solutions business, this is reflective of growth in network revenue from increases in our mobile phone and connected devices subscriber bases; growth in mobile equipment margins; growth in internet and data service margins, as well as other fixed data service margins, resulting from subscriber base growth and expanded services; an increased contribution from our DLCX business; and lower bad debt expense. This was partly offset by higher Employee benefits expense and lower legacy fixed voice and legacy fixed data services. This growth also reflects lower non-labour restructuring and other costs related to the pandemic, partly offset by the dilutive lingering impacts of the pandemic, including reduced roaming margins related to travel restrictions.

Adjusted EBITDA

Years ended December 31 (\$ in millions)	2021	2020	Change
TTech Adjusted EBITDA ¹ (See <i>Section 5.4</i>)	5,476	5,177	5.7%
DLCX Adjusted EBITDA ^{1,2} (See <i>Section 5.5</i>)	593	524	13.2%
Adjusted EBITDA	6,069	5,701	6.4%

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 \$368 million or 6.4% in 2021, reflecting the factors mentioned in the Operating income discussion above.

Financing costs

Years ended December 31 (\$ in millions)	2021	2020	Change
Interest on long-term debt, excluding lease liabilities – gross	683	676	1.0%
Interest on long-term debt, excluding lease liabilities – capitalized	(3)	(37)	(91.9)%
Interest on lease liabilities	66	70	(5.7)%
Interest on short-term borrowings and other	15	5	n/m
Interest accretion on provisions	18	16	12.5%
Long-term debt prepayment premium	10	18	(44.4)%
Interest expense	789	748	5.5%
Employee defined benefit plans net interest	26	16	62.5%
Foreign exchange (gains) losses	(3)	14	n/m
Interest income	(16)	(7)	128.6%
Financing costs	796	771	3.2%

Financing costs increased by \$25 million in 2021, mainly due to the following factors:

- **Interest expense** increased by \$41 million in 2021, resulting from:
 - Gross interest on long-term debt, excluding lease liabilities, increased by \$7 million in 2021, driven by an increase in average long-term debt balances outstanding in part attributable to business acquisitions, and an increase in the blended effective interest rate. Our weighted average interest rate on long-term debt (excluding commercial paper, the revolving component of the TI credit facility, lease liabilities and other long-term debt) was 3.72% at December 31, 2021, compared to 3.80% one year earlier. (See *Long-term debt issued and redemptions and repayment of long-term debt* in Section 7.4.)
 - Capitalized long-term debt interest, excluding lease liabilities, in 2021 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). In 2020, capitalized long-term debt interest, excluding lease liabilities, was in respect of debt incurred for the purchase of spectrum licences during the 600 MHz spectrum auction held by ISED in April 2019 for which capitalization ceased in the first quarter of 2021 as we commenced deploying this spectrum into our existing network.
 - In the third quarter of 2021, we recorded a long-term debt prepayment premium of \$10 million before income taxes related to the early redemption of all of our \$1 billion Notes, Series CT. In the second quarter of 2020, we recorded a long-term debt prepayment premium of \$18 million before income taxes related to the early redemption of all of our \$400 million Notes, Series CM, and all of our \$500 million Notes, Series CO.

- **Employee defined benefit plans net interest** increased by \$10 million in 2021, primarily due to the change in the defined benefit plan deficit as at December 31, 2020 to \$913 million (net of the plan asset ceiling limit of \$123 million), compared to the defined benefit plan deficit of \$425 million (net of the plan asset ceiling limit of \$121 million) one year earlier, partly offset by a decrease in the discount rate.
- **Foreign exchange gains** changed by \$17 million in 2021, primarily reflecting changes in the value of the Canadian dollar relative to the U.S. dollar.

Interest expense

(\$ millions)

2021	789
2020	748
2019	736

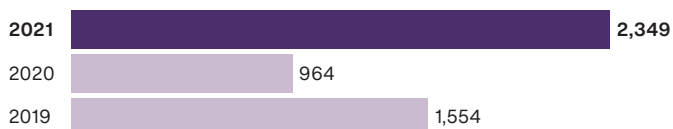
Income taxes

Years ended December 31 (\$ in millions, except tax rates)	2021	2020	Change
Income taxes computed at applicable statutory rates (%)	25.8	26.1	(0.3) pts.
Revaluation of deferred income tax liability to reflect future income tax rates (%)	–	(0.4)	0.4 pts.
Adjustments recognized in the current period for income taxes of prior periods (%)	(0.3)	(1.3)	1.0 pts.
Non-deductible amounts (%)	1.0	1.2	(0.2) pts.
Gain on disposition (%)	(2.0)	–	(2.0) pts.
Other (%)	1.0	0.7	0.3 pts.
Effective tax rate (%)	25.5	26.3	(0.8) pts.
Income tax computed at applicable statutory rates	589	446	32.1%
Revaluation of deferred income tax liability to reflect future income tax rates	–	(6)	(100.0)%
Adjustments recognized in the current period for income taxes of prior periods	(8)	(20)	(60.0)%
Non-deductible amounts	23	20	15.0%
Gain on disposition	(46)	–	n/m
Other	22	11	100.0%
Income taxes	580	451	28.6%

Total income tax expense increased by \$129 million in 2021. The effective tax rate decreased from 26.3 to 25.5% in 2021, primarily due to non-taxable portion of the gain on the disposal of our financial solutions business partially offset by lower adjustments to prior period income taxes.

Comprehensive income

(\$ millions)



Comprehensive income

Years ended December 31 (\$ in millions)	2021	2020	Change
Net income	1,698	1,260	34.8%
Other comprehensive income (net of income taxes):			
Items that may be subsequently reclassified to income	(6)	2	n/m
Items never subsequently reclassified to income	657	(298)	n/m
Comprehensive income	2,349	964	143.7%

Comprehensive income increased by \$1,385 million, primarily attributable to the increase in net income, discussed above, as well as employee defined benefit plans re-measurement amounts and changes in the unrealized fair value of derivatives designated as cash flow hedges and investment financial assets, partly offset by foreign currency translation adjustments arising from translating financial statements of foreign operations. 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

+4.1%

Mobile phone
subscribers

2021: 9,290,000
2020: 8,923,000

+18.8%

Connected device
subscribers

2021: 2,134,000
2020: 1,796,000

+6.2%

Internet subscribers

2021: 2,271,000
2020: 2,138,000

+4.1%

TV subscribers

2021: 1,265,000
2020: 1,215,000

+13.7%

Security subscribers

2021: 804,000
2020: 707,000

+21.9%

Healthcare lives covered

2021: 20,600,000
2020: 16,900,000

TTech trends and seasonality

The nature of the COVID-19 pandemic has had significant impacts on our business. The pandemic prevents us, our customers, and our suppliers from operating in the normal course of business in certain areas and we expect the pandemic to continue to affect our operations until at least 2023. For example, with the uncertainty surrounding COVID-19 variants and government and land border restrictions, consumer and business travel levels are uncertain, which negatively impacts roaming revenues. As well, our business customers who use our services are faced with reduced and/or closed operations. Additionally, our health services offerings are impacted, as TELUS Health Care Centres were unable to provide their full suite of core services in 2020 and operated at reduced volumes in 2021. Impacts directly associated with the pandemic, such as the reduction of roaming revenue, may be temporary in nature and have the potential to return to pre-pandemic levels once the pandemic has subsided or ended.

The historical trend over the past eight quarters in mobile network revenue reflects growth in our mobile phone subscriber base, as well as the acceleration of IoT connections. This is partly offset by declining mobile phone ARPU, primarily due to: (i) the impacts of the COVID-19 pandemic on international travel and international roaming revenues; (ii) carriers offering larger allotments of data, as well as rate plans that include bonus data, unlimited data plans and data sharing; and (iii) consumer behavioural response to more frequent customer data usage notifications and offloading of data traffic to increasingly available Wi-Fi hotspots, including within the home as a result of the pandemic.

This decline in growth has been partly offset by an increased mix of higher-value rate plans and an increased proportion of higher-value customers in the subscriber mix. As a result of changing industry dynamics, customers have been able to gain access to higher network speeds and larger allotments of data included for a given price point, further limiting mobile phone ARPU expansion, as customers are continuing to obtain plans with a lower cost per gigabyte.

Mobile equipment revenue growth has been moderating, largely due to the impacts of various waves of the pandemic on our retail traffic, in terms of both mandated health restrictions and customer behaviour, in addition to global chipset constraints in our supply chain that became more prominent across the industry in the third quarter of 2021. This has been partly offset by our digital and other direct fulfilment channels, suppressed handset upgrade volumes throughout 2020 manifesting in increased demand in the first half of 2021, and our efforts to moderate supply constraints by leveraging certified pre-owned device inventory, our Bring-it-Back device program and device repair businesses, including Mobile Klinik. Over the past eight quarters, an increase of higher-value smartphones in the sales mix and improved collectability of device balances have been offset by a lower volume of new contracts due to: (i) the improving durability and increasing cost of popular devices that result in customers deferring upgrades; (ii) growing adoption of device financing arrangements, which provide transparency of full device costs and result in customers deferring device upgrades; and (iii) most recently, the effects of the pandemic on customers, the industry, global chipset constraints in our supply chain and methods of distribution, and the Canadian economy.

The general trend of year-over-year increases in mobile phone subscriber net additions resulted from: (i) the success of our promotions, including the bundling of our mobility and home services, and the leveraging of our digital sales channels; (ii) the effects of market growth arising from a growing population, changing population demographics and an increasing number of customers with multiple devices; (iii) continuous improvements in the speed and quality of our network; and (iv) our low churn rate, which reflects our customers' first efforts, upgrade volume programs and focus on building, maintaining and enhancing our high-quality network. Additionally, the pandemic has caused customers to change their behaviour, such as reducing travel and making fewer visits to retail outlets, thereby reducing churn and renewal traffic.

Our connected device subscriber base has been growing primarily as a result of our expanded IoT offerings, partly offset by our strategic decision to reduce loading of low or negative-margin tablets. Our spectrum investments and capital expenditures on network improvements increase capacity and coverage, allowing us to grow revenue through net additions of mobile phone and connected devices subscribers.

We expect ongoing internet subscriber base growth as we continue our investments in expanding our fibre-optic infrastructure, supplemented with our low customer churn rate. The total number of TV subscribers has increased (in contrast to market-reported declines in traditional television viewing habits) as a result of healthy net additions in response to our diverse and flexible product offerings, combined with our low customer churn rate. Security subscriber base growth is increasing as a result of organic growth and business acquisitions. Home services growth has also been attributable to the adoption of

the TELUS Whole Home bundle and the bundling of our mobility and home services to meet the demand for multiple services per home. Adoption increases our services per home and positively impacts churn for most products, in addition to the effectiveness of our self install and virtual install models. Residential voice subscriber losses continue to reflect the ongoing trend of substitution to mobile and internet-based services, but were partly mitigated by the success of our bundled service offerings and lower-priced offerings.

The trend of growing fixed data services revenues (excluding smart food-chain technology, which is described separately below) is due to the continued appetite for faster internet speeds and larger bandwidth, as well as our diverse suite of TV, home and business security, and other advanced application offerings, which are enabled by investments in our fibre-optic footprint. The trend of declining legacy fixed voice revenues is due to technological substitution and intensification of competition in the small and medium-sized business market; however, our rate of decline has been moderating with our utilization of bundled product offerings and successful retention efforts. The migration of business product and service offerings to IP services and the introduction 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 innovative suite of business offerings, including our Software as a Service (SaaS)-based solutions.

The trend of digitization has propelled the adoption of our health offerings, including virtual care solutions, collaborative health records, health benefits management and personal health monitoring solutions. In health, we are well positioned to improve the lives and outcomes for Canadians. Our competencies and assets in health, combined with the trend in digitization and automation, position us well to bolster the Canadian healthcare system in a complementary fashion. With our technology heritage, we see the trend moving the healthcare system to improved efficiency and improved outcomes through better insights. We also believe Canadians will have greater control of their healthcare outcomes through the integration of disparate data (better flow of information across the system) and consent-based management. While the pandemic has disrupted the operations of our TELUS Health Care Centres since March 2020, 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 our growing virtual care members. Our health benefits management solution is influenced by the number of lives covered and the number of benefit claims, which were disrupted by the pandemic. We expect the demand for these services to resume in correspondence with the effectiveness of COVID-19 vaccinations and higher employment rates.

The trend of greater use of digital solutions within the agriculture industry is due to increased demand for data and analytical insights to drive more effective and agile decision-making to address changing consumer demands and improve profitability. We are committed to providing solutions to create a better flow of information across the value chain, improving the safety and sustainability of our food system. Within the verticals of agri-business; food, beverage, and consumer goods; and animal agriculture, we are expanding our solutions and customer base worldwide through acquisitions and organic growth.

TTech operating indicators

At December 31	2021	2020	Change
Subscriber connections (000s):			
Mobile phone ¹	9,290	8,923	4.1%
Connected device	2,134	1,796	18.8%
Internet ²	2,271	2,138	6.2%
TV	1,265	1,215	4.1%
Residential voice	1,123	1,164	(3.5)%
Security	804	707	13.7%
Total TTech subscriber connections	16,887	15,943	5.9%
LTE population coverage ³ (millions)	37.0	37.0	– %
5G population coverage ³ (millions)	26.2	10.5	n/m
Virtual care members (millions)	2.8	1.7	64.7%
Healthcare lives covered (millions)	20.6	16.9	21.9%
Years ended December 31	2021	2020	Change
Mobile phone gross additions (000s):	1,353	1,277	6.0%
Subscriber connection net additions (losses) (000s):			
Mobile phone	367	280	31.1%
Connected device	338	257	31.5%
Internet	149	157	(5.1)%
TV	50	55	(9.1)%
Residential voice	(41)	(40)	(2.5)%
Security	97	68	42.6%
Total TTech subscriber connection net additions	960	777	23.6%
Mobile phone ARPU, per month ^{1,4} (\$)	57.07	57.41	(0.6)%
Mobile phone ABPU, per month ^{1,4} (\$)	69.83	70.49	(0.9)%
Mobile phone churn, per month ^{1,5} (%)	0.91	0.96	(0.05) pts.
Digital health transactions (millions)	551.1	534.9	3.0%

1 Effective January 1, 2021, with retrospective application to January 1, 2020, in alignment with our segment reporting changes, we made a retroactive adjustment to remove internal network service revenue and approximately 29,000 subscribers from our mobile phone subscriber base and associated operating statistics (ARPU, ABPU, and churn). Internal network service revenue consists of earned revenue from both our internal mobile phone and connected devices subscribers, neither of which contribute to our restated subscriber base.

2 Effective January 1, 2021, on a prospective basis, following an in-depth review of customer accounts within a legacy subscriber provisioning system to be decommissioned, we adjusted our internet subscriber base to remove 16,000 subscribers.

3 Including network access agreements with other Canadian carriers.

4 These are non-GAAP and other specified financial measures. See *Section 11.1 Non-GAAP and other specified financial measures*. These are industry measures useful in assessing operating performance of a mobile products and services company, but are not measures defined under IFRS-IASB.

5 See *Section 11.2 Operating indicators*.

- Mobile phone gross additions were 1,353,000 in 2021, an increase of 76,000, driven by growth in high-value customer additions, improvements in retail traffic as pandemic-related restrictions had lessened when compared to the prior year, successful promotions, including the bundling of our mobility and home services, expanded channels, and the enhanced capabilities of our digital footprint, inclusive of increased self-serve functions. Industry-wide inventory shortages due to global supply chain challenges had an impact on competitive activity in the second half of 2021. However, we mitigated these challenges by leveraging certified pre-owned device inventory, our Bring-it-Back device program and device repair businesses, including Mobile Klinik, in addition to our compelling rate plan offers.
- Our mobile phone churn rate was 0.91% in 2021, compared to 0.96% in 2020, reflecting the impacts of industry-wide inventory shortages arising from global supply chain challenges that became more prominent in the third quarter of 2021, which had an impact on customer switching activity. These relatively low churn rates in the current and comparative period reflect the impacts of the pandemic, with customers reducing their general shopping habits in retail outlets since the start of the pandemic, along with mandated capacity restrictions. Churn continues to benefit from our successful bundling of mobility and home services, our focus on executing customers first initiatives and upgrade volume programs, and our leading network quality.
- Mobile phone net additions were 367,000 in 2021, an increase of 87,000, demonstrating improvements in retail traffic compared to the prior year, albeit still below our pre-pandemic baseline, our strong execution in digital sales and expanded channels, and our successful efforts to drive high-value customer net additions, inclusive of our consistently low customer churn, as discussed above.
- Mobile phone ARPU was \$57.07 in 2021, a decrease of \$0.34 or 0.6%, largely due to lower chargeable usage revenues as customers continue to adopt larger data allotments in their rate plans, the impact of the competitive environment putting pressure on base rate plan prices in the current and prior periods, and lower roaming revenues as declines in the first quarter of 2021 compared to a pre-pandemic baseline exceeded the sequential, modest roaming recoveries experienced in the final nine months of 2021, as reflected in ARPU growth in the fourth quarter. These factors were partly offset by higher monthly recurring charges caused by a greater mix of high-value customer additions.
- Mobile phone ABPU was \$69.83 in 2021, a decrease of \$0.66 or 0.9%, largely reflecting the same items noted above for mobile phone ARPU in addition to a greater mix of bring-your-own device customer additions.
- Connected device net additions were 338,000 in 2021, an increase of 81,000, largely due to increased demand for IoT net additions and a lower churn rate for tablets.

- **Internet net additions** were 149,000 in 2021, a decrease of 8,000, due to pandemic-related demand decline, higher churn and lower market demand relative to the subdued switching activity and record loading in 2020. This offset our success in driving strong net additions through bundled product offerings, including the TELUS Whole Home bundle and our bundling of mobility and home services.
- **TV net additions** were 50,000 in 2021, a decrease of 5,000, mainly due to lower market demand, primarily in the business market, offsetting a lower customer churn rate from strong retention efforts and the success of our bundled product offerings.
- **Residential voice net losses** were 41,000 in 2021 compared to residential voice net losses of 40,000 in 2020. The residential voice subscriber losses continue to reflect the trend of substitution to mobile and internet-based services, mostly mitigated by our expanding fibre footprint and bundled product offerings, as well as our strong retention efforts, including lower-priced offerings.
- **Security net additions** were 97,000 in 2021, an increase of 29,000, driven by strong growth in new connections through demand for our bundled product offerings and diverse suite of products and services. Our continued focus on connecting more homes and businesses directly to fibre, expanding and enhancing our addressable high-speed internet and Optik TV footprint, and bundling these services together, contributed to combined internet, TV and security subscriber growth of 280,000 over the past 12 months.
- **Virtual care members** were 2.8 million as of the end of 2021, an increase of 1.1 million over the past 12 months, due to the continued adoption of virtual solutions to keep Canadians safely connected to health and wellness care during the pandemic.
- **Healthcare lives covered** were 20.6 million as of the end of 2021, an increase of 3.7 million over the past 12 months, mainly due to the continued demand for virtual solutions, an increase in value-added services including vaccination solutions, and an increase in coverage related to elective health services. See *TTech trends and seasonality* for further details.
- **Digital health transactions** were 551.1 million in 2021, an increase of 16.2 million, largely driven by a higher number of adjudication, eClaims, transport, and collaborative health transactions from a business acquisition as plan members resume the utilization of elective health services with pandemic restrictions easing.

Operating revenues and other income – TTech segment

Years ended December 31 (\$ in millions)	2021	2020	Change
Mobile network revenue	6,208	6,030	3.0%
Mobile equipment and other service revenues	2,124	1,867	13.8%
Fixed data services	4,421	3,939	12.2%
Fixed voice services	843	912	(7.6)%
Fixed equipment and other service revenues	411	408	0.7%
Health services	521	448	16.3%
Operating revenues (arising from contracts with customers)	14,528	13,604	6.8%
Other income	420	19	n/m
External Operating revenues and other income	14,948	13,623	9.7%
Intersegment revenues	18	13	38.5%
TTech Operating revenues and other income	14,966	13,636	9.8%

TTech Operating revenues and other income increased by \$1,330 million in 2021.

TTech Operating revenues (arising from contracts with customers)

(\$ millions)

2021	14,528
2020	13,604

Mobile network revenue increased by \$178 million or 3.0% in 2021, due to growth of 6.3% in the mobile phones and connected devices subscriber base over the past 12 months, partly offset by lower mobile phone ARPU, as described above.

Mobile equipment and other service revenues increased by \$257 million in 2021, reflecting higher-value smartphones in the sales mix, higher handset upgrade volumes and greater collectability of mobile device balances. Handset upgrades were significantly impacted by the pandemic in 2020, including the temporary closure of approximately 90% of our retail outlets from March 2020 through most of the second quarter, and customers reducing their general shopping habits in retail outlets since the start of the pandemic, which resulted in lower contracted volume and accessory sales. In 2021, handset upgrade volumes increased as a result of the successful execution of our customers first initiatives, including the enhanced capabilities of our digital footprint, suppressed handset upgrade volumes throughout 2020 manifesting in increased demand in the first half of 2021 and fewer retail locations due to the pandemic.

These factors have been partly offset by the recent global supply chain challenges mentioned above, which we have moderated by leveraging our certified pre-owned device inventory, Bring-it-Back device program and device repair businesses, including Mobile Klinik.

Fixed data services revenues increased by \$482 million 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 subscribers over the past 12 months; (ii) increased revenues from smart food-chain technology, driven by business acquisitions; (iii) higher TV revenues, reflecting subscriber growth of 4.1% over the past 12 months; and (iv) increased revenues from home and business security driven by expanded services and customer growth of 13.7% over the past 12 months. This growth was partly offset by the ongoing decline in legacy data service revenues.

Fixed voice services revenues decreased by \$69 million in 2021, reflecting the ongoing decline in legacy voice revenues resulting from technological substitution and price plan changes. Declines were mitigated by the success of our bundled product offerings and retention efforts and the migration from legacy to IP services offerings. The decline in residential voice subscribers over the past 12 months was 3.5%,

compared to a 3.3% decline in residential voice subscribers for the 12-month period ended December 31, 2020.

Fixed equipment and other service revenues increased by \$3 million in 2021, reflecting a higher volume of home and business security equipment sales and data equipment sales.

Health services revenues increased by \$73 million 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.

Other income increased by \$401 million in 2021, largely related to the \$410 million gain on disposition of our financial solutions business as described in *Section 1.3* and lower equity losses related to real estate joint ventures, partly offset by the non-recurrence of 2020 gains on sale of certain assets.

Intersegment revenues represent services provided to the DLCX segment that are eliminated upon consolidation, together with the associated DLCX expenses.

Direct contribution – TTech segment

Years ended December 31 (\$ in millions)	Mobile products and services ¹			Fixed products and services ¹			Total TTech		
	2021	2020	Change	2021	2020	Change	2021	2020	Change
Revenues									
Service	6,297	6,096	3.3%	5,928	5,444	8.9%	12,225	11,540	5.9%
Equipment	2,042	1,809	12.9%	261	255	2.4%	2,303	2,064	11.6%
Operating revenues (arising from contracts with customers)	8,339	7,905	5.5%	6,189	5,699	8.6%	14,528	13,604	6.8%
Expenses									
Direct expenses	2,802	2,652	5.6%	1,771	1,555	13.8%	4,572	4,208	8.7%
Direct contribution	5,537	5,253	5.4%	4,418	4,144	6.6%	9,956	9,396	6.0%

¹ Includes health services.

The direct expenses included in the direct contribution calculations in the preceding table represent a component 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 \$560 million or 6.0% in 2021.

TTech mobile products and services direct contribution increased by \$285 million or 5.4% in 2021 due to higher network revenues, higher equipment margins and lower commissions expense, as we continue to drive customer transactions to digital channels, in addition to lower

contracted volumes in the current and prior periods. These factors were partly offset by the lingering effects of the pandemic on our business, such as lower roaming margins, which were not as prevalent in the first quarter of 2020.

TTech fixed products and services direct contribution increased by \$275 million or 6.6% in 2021 due to growth in margins for internet and data services, smart food-chain technology and health services. This was partly offset by declining legacy data and legacy voice margins and the lingering effects of the pandemic on our business, which were not as prevalent in the first quarter of 2020.

TTech direct contribution (\$ millions)

2021	9,956
2020	9,396

Operating expenses – TTech segment

Years ended December 31 (\$ in millions)	2021	2020	Change
Goods and services purchased ¹	6,593	6,282	5.0%
Employee benefits expense ¹	2,638	2,378	10.9%
TTech operating expenses	9,231	8,660	6.6%

¹ Includes restructuring and other costs.

TTech operating expenses increased by \$571 million in 2021.

Goods and services purchased increased by \$311 million in 2021, reflecting: (i) higher mobile equipment sales expense largely from higher-value mobile devices in the sales mix, in addition to higher hand-set upgrades; (ii) higher costs related to business acquisitions, as well as costs associated with scaling our health offerings, including virtual care adoption; (iii) higher product and service costs in support of our growing subscriber connections, including TV subscribers; (iv) higher advertising and promotional costs relative to subdued marketing activity in 2020; and (v) higher costs related to the scaling of our digital capabilities. These factors were partly offset by: (i) lower non-labour-related restructuring costs; (ii) lower bad debt expenses; (iii) lower commissions expense associated with an increased mix of digital sales and lower contracted volume; and (iv) lower roaming expenses.

Employee benefits expense increased by \$260 million in 2021, primarily due to an increase in compensation and benefits costs resulting from an increase in the number of employees related to business acquisitions in our health and smart food-chain technology businesses, as well as merit-based compensation increases. The increases were partly offset by higher capitalized labour costs.

EBITDA – TTech segment

Years ended December 31 (\$ in millions, except margins)	2021	2020	Change
EBITDA	5,735	4,976	15.2%
Add restructuring and other costs included in EBITDA	148	182	n/m
Add other equity losses related to real estate joint ventures	3	19	n/m
Deduct gain on disposition of financial solutions business	(410)	–	n/m
Adjusted EBITDA	5,476	5,177	5.7%
EBITDA margin ¹ (%)	38.3	36.5	1.8 pts.
Adjusted EBITDA margin ¹ (%)	37.6	37.9	(0.3) 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 \$759 million or 15.2% in 2021. TTech Adjusted EBITDA increased by \$299 million or 5.7% in 2021, reflecting an increase in direct contribution, as mentioned above, and lower bad debt expense. These impacts were partially offset by higher employee benefits expense, operating and administrative costs related to business acquisitions and growth in business operations, in addition to higher advertising and promotional costs relative to subdued marketing activity in 2020.

TTech Adjusted EBITDA (\$ millions)

2021	5,476
2020	5,177

EBIT – TTech segment

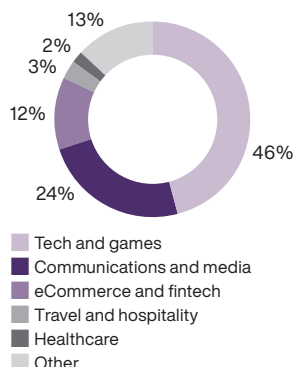
Years ended December 31 (\$ in millions)	2021	2020	Change
EBITDA	5,735	4,976	15.2%
Depreciation	(1,982)	(1,973)	0.5%
Amortization	(912)	(795)	14.7%
EBIT ¹	2,841	2,208	28.7%

¹ See Section 11.1 Non-GAAP and other specified financial measures.

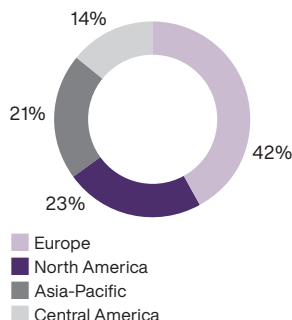
TTech EBIT increased by \$633 million in 2021. Depreciation and amortization increased in 2021 due to business acquisitions and growth in capital assets over the past 12 months, including our expanded fibre footprint and 5G network roll-out, partially offset by lower depreciation on right-of-use lease assets. The depreciation increase in 2021 was partially offset by the effect of accelerated depreciation in the first quarter of 2020 from asset retirement activity.

5.5 Digitally-led customer experiences – TELUS International segment

2021 DLCX Operating revenues and other income by industry vertical



2021 DLCX Operating revenues and other income by geographic region



DLCX trends

Over the past eight quarters, the COVID-19 pandemic has impacted our business and we are not able to estimate its ultimate duration or the extent of its impact. As our service delivery centres are located in multiple geographic regions, the varying degrees of severity and recovery efforts from the pandemic in the countries we operate has required us to evolve our business operations. As of the date of this report, the majority of our team members continue to work remotely, as they have since the onset of the pandemic, and in some cases we have thoughtfully and strategically returned team members to delivery locations. Over the past few quarters in 2021, we were able to largely mitigate the negative impact on our financial condition, financial performance and operating cash flows by taking steps to strategically grow our client base and contain costs. The pandemic prevents us and our clients from operating in the normal course of business in certain areas, and we are unable to quantify with precision the impact that the pandemic has had or will have on our revenue. We expect the pandemic to continue to affect our operations into at least the first half of 2022.

The trend over the past eight quarters of increases in DLCX revenue reflects both the growth in our organic customer base, as well as the scale-up of new service programs provided to existing external customers. The higher revenue also includes revenue from internal services provided to the TTech segment and revenue growth from business acquisitions, including our acquisitions of CCC (since rebranded as TELUS International Northern Europe or TINE and comprised substantially of CCC) on January 31, 2020, and Lionbridge AI on December 31, 2020, which was subsequently rebranded as TELUS International AI Data Solutions (TIAI).

Goods and services purchased and Employee benefits expense have increased in correspondence with increases in our team member base as a result of business acquisitions and to service growing volumes from both our existing and new customers (including the expansion of our service offerings), increases in external labour to support the growth in our digital business, increases in our software licensing costs associated with our growing team member base, and increases in administrative expenses to support growth in the overall business and business acquisitions.

Depreciation and amortization have increased due to growth in capital assets, which is supporting the expansion of our sites required to service customer demand and growth in intangible assets recognized in connection with our business acquisitions.

DLCX operating indicators

Years ended December 31 (\$ in millions)	2021	2020	Change
Operating revenues			
by industry vertical			
Tech and games	1,256	840	49.5%
Communications and media	674	656	2.7%
eCommerce and fintech	324	233	39.1%
Travel and hospitality	78	73	6.8%
Healthcare	59	49	20.4%
Other ¹	363	302	20.2%
	2,754	2,153	27.9%
Operating revenues			
by geographic region			
Europe	1,153	864	33.4%
North America	629	472	33.3%
Asia-Pacific	575	460	25.0%
Central America	397	357	11.2%
	2,754	2,153	27.9%

¹ Includes, among others, retail and other financial services. No individual vertical included in this category exceeds 3% of revenue.

Revenue from our tech and games industry vertical increased by \$416 million to \$1,256 million in 2021. This represented 46% of Operating revenues for 2021, compared to 39% in 2020. This growth is partly attributable to the acquisition of Lionbridge AI and continued growth within our existing clients and the addition of new clients, partially offset by the effect of foreign exchange rates. Revenue generated from the eCommerce and fintech industry vertical grew by \$91 million to \$324 million in 2021, which was primarily attributable to new clients and growth within our existing client base, partly offset by the effect of foreign exchange rates.

We serve our clients, who are primarily domiciled in North America, from multiple delivery locations across four geographic regions. In addition, our TIAI clients are largely supported by crowdsourced contractors that are globally dispersed and not limited to the physical locations of our delivery centres. 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)	2021	2020	Change
Operating revenues (arising from contracts with customers)	2,310	1,737	33.0%
Other income	-	103	n/m
External Operating revenues and other income	2,310	1,840	25.5%
Intersegment revenues	444	416	6.7%
DLCX Operating revenues and other income	2,754	2,256	22.1%

DLCX Operating revenues and other income increased by \$498 million in 2021.

Our digital and customer experience solutions revenues increased by \$573 million in 2021, attributable in part to growth generated from our acquisitions, particularly within our tech and games clients as noted earlier. 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. This growth was offset, in part, by foreign exchange impacts in 2021 driven by the strengthening of the Canadian dollar compared to the U.S. dollar, the primary operating currency of DLCX.

Other income decreased by \$103 million in 2021, related to the non-recurrence of the comparative period's decrease and subsequent retirement of a provision arising from business acquisition-related written put options to acquire the remaining non-controlling interest of an acquired subsidiary, Xavient, which was settled in the second quarter of 2020.

**DLCX Operating revenues
(arising from contracts with customers)** (\$ millions)

2021	2,310
2020	1,737

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.

Operating expenses – DLCX segment

Years ended December 31 (\$ in millions)	2021	2020	Change
Goods and services purchased ¹	568	415	36.9%
Employee benefits expense ¹	1,631	1,323	23.3%
DLCX operating expenses	2,199	1,738	26.5%

¹ Includes restructuring and other costs.

DLCX operating expenses increased by \$461 million in 2021.

Goods and services purchased increased by \$153 million in 2021, largely due to our acquisitions, in particular TIAI's crowdsourced contractors, for which the contracted labour costs are recognized in Goods and services purchased.

Employee benefits expense increased by \$308 million in 2021 as a result of business growth, which has resulted in a higher team member count coupled with higher salaries and wages. The increases were also driven, in part, by greater share-based compensation expense associated with an increase in the share price of TELUS International, and the vesting of new awards granted in 2021 (see Note 14(a) of the Consolidated financial statements for further details).

EBITDA – DLCX segment

Years ended December 31 (\$ in millions, except margins)	2021	2020	Change
EBITDA	555	518	7.3%
Add restructuring and other costs included in EBITDA	38	77	n/m
Deduct retirement of a provision arising from business acquisition-related written put options within DLCX	-	(71)	n/m
Adjusted EBITDA ¹	593	524	13.2%
EBITDA margin ² (%)	20.2	22.9	(2.7) pts.
Adjusted EBITDA margin ² (%)	21.6	24.0	(2.4) 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 increased by \$37 million or 7.3% and DLCX Adjusted EBITDA increased by \$69 million or 13.2% in 2021. While Adjusted EBITDA increased in 2021, Adjusted EBITDA margin decreased by 2.4 percentage points. The decline in Adjusted EBITDA margin in 2021 was due to the impact of the mark-to-market adjustment on the liability-accounted share-based compensation units associated with an increase in the share price of TELUS International and the expense recognition on new equity-accounted awards granted in 2021, and foreign exchange impacts on revenues as a result of the strengthening of the Canadian dollar compared to the U.S. dollar.

DLCX Adjusted EBITDA (\$ millions)

2021	593
2020	524

EBIT – DLCX segment

Years ended December 31 (\$ in millions)	2021	2020	Change
EBITDA	555	518	7.3%
Depreciation	(144)	(134)	7.5%
Amortization	(178)	(110)	61.8%
EBIT ¹	233	274	(15.0)%

¹ See Section 11.1 Non-GAAP and other specified financial measures.

DLCX EBIT decreased by \$41 million in 2021. Depreciation and amortization increased in 2021, driven primarily by the acquisitions of CCC and Lionbridge AI and corresponding intangible assets acquired in fiscal 2020.

6 Changes in financial position

Financial position at December 31 (\$ millions)	2021	2020	Change	Change includes:
Current assets				
Cash and temporary investments, net	723	848	(125)	See <i>Section 7 Liquidity and capital resources</i>
Accounts receivable	2,671	2,355	316	Increase primarily driven by digitally-led customer experiences – TELUS International (DLCX) receivable, as well as an increase in unbilled customer finance receivables from our Bring-It-Back device program and TELUS Easy Payment device financing program, partly offset by a decrease in dealer and retail channel handset volumes and customer receivables
Income and other taxes receivable	206	148	58	Instalments to date are greater than the expense
Inventories	448	407	41	Increases in average handset costs and volume of handsets
Contract assets	443	439	4	Refer to description in non-current contract assets
Prepaid expenses	528	478	50	An increase driven by maintenance contracts from business acquisitions and DLCX
Current derivative assets	13	2	11	An increase in the notional amount of U.S. currency hedging items.
Current liabilities				
Short-term borrowings	114	100	14	See <i>Section 7.7 Sale of trade receivables</i>
Accounts payable and accrued liabilities	3,705	2,971	734	An increase in accounts payable associated with higher capital expenditures, as well as an increase in payroll and other employee-related liabilities. See <i>Note 23</i> of the Consolidated financial statements
Income and other taxes payable	104	122	(18)	Instalments to date being greater than the expense
Dividends payable	449	403	46	Effects of increases in the number of shares outstanding and dividend rate
Advance billings and customer deposits	854	772	82	An increase in advance billings reflecting increased mobile subscriber growth during the period. See <i>Note 24</i> of the Consolidated financial statements
Provisions	96	73	23	An increase in new restructuring provisions in excess of restructuring disbursements
Current maturities of long-term debt	2,927	1,432	1,495	An increase in outstanding commercial paper, and increases from reclassification of long-term debt relating to upcoming 2022 maturities of the TELUS International credit facility term loan of \$301 million (US\$238 million) and TELUS Communications Inc. debenture of \$249 million
Current derivative liabilities	24	32	(8)	A decrease in the notional amount of U.S. currency hedging items.
Working capital (Current assets subtracting Current liabilities)	(3,241)	(1,228)	(2,013)	TELUS normally has a negative working capital position. See <i>Financing and capital structure management plans</i> in <i>Section 4.3</i> and <i>Note 4(c)</i> of the Consolidated financial statements.

Financial position at December 31 (\$ millions)	2021	2020	Change	Change includes:
Non-current assets				
Property, plant and equipment, net	15,926	15,014	912	See <i>Capital expenditures</i> in Section 7.3 <i>Cash used by investing activities</i> and <i>Depreciation</i> in Section 5.3 <i>Consolidated operations</i>
Intangible assets, net	17,485	15,048	2,437	See <i>Capital expenditures</i> in Section 7.3 <i>Cash used by investing activities</i> and <i>Amortization of intangible assets</i> in Section 5.3 <i>Consolidated operations</i>
Goodwill, net	7,281	7,160	121	An increase primarily due to the acquisition of Blacksmith Applications Holdings Inc., as well as from individually immaterial business acquisitions, offset by the effect of translating TI financial statements into Canadian currency and the disposition of our financial solutions business. See <i>Note 18</i> of the Consolidated financial statements
Contract assets	266	268	(2)	A decrease driven by lower subsidized devices from the introduction of our TELUS Easy Payment device financing program
Other long-term assets	2,004	1,106	898	An increase in pension assets resulting from gains arising from financial and demographic assumptions re-measurement and the effects of pension plan returns greater than the discount rate, as well as increases in unbilled customer finance receivables, portfolio investments, and the asset fair value of derivatives used to manage currency risk from U.S. dollar-denominated debt. See <i>Note 20</i> of the Consolidated financial statements.
Non-current liabilities				
Provisions	774	961	(187)	A decrease in asset retirement obligations arising from an increase in discount rate
Long-term debt	17,925	18,856	(931)	See Section 7.4 <i>Cash provided by financing activities</i>
Other long-term liabilities	907	1,265	(358)	A decrease in pension liabilities resulting from gains arising from financial and demographic assumptions re-measurement and the effects of pension plan returns greater than the discount rate, as well as a decrease in the liability fair value of derivatives used to manage currency risk from U.S. dollar-denominated debt and European euro functional currency operations purchased with U.S. dollar-denominated long-term debt. See <i>Note 27</i> of the Consolidated financial statements
Deferred income taxes	4,056	3,718	338	An overall increase in temporary differences between the accounting and tax basis of assets and liabilities, including employee benefit plan re-measurements recorded in Other comprehensive income.
Owners' equity				
Common equity	15,116	12,040	3,076	See <i>Consolidated statements of changes in owners' equity</i> in the Consolidated financial statements
Non-controlling interests	943	528	415	See <i>Consolidated statements of changes in owners' equity</i> in the Consolidated financial statements.

7 Liquidity and capital resources

This section contains forward-looking statements, including those with respect to 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)	2021	2020	Change
Cash provided by operating activities	4,388	4,574	(186)
Cash used by investing activities	(5,466)	(6,165)	(699)
Cash provided by financing activities	953	1,904	(951)
Increase (decrease) in Cash and temporary investments, net	(125)	313	(438)
Cash and temporary investments, net, beginning of period	848	535	313
Cash and temporary investments, net, end of period	723	848	(125)

7.2 Cash provided by operating activities

Analysis of changes in cash provided by operating activities

Years ended December 31 (\$ millions)	2021	2020	Change
Operating revenues and other income (see <i>Section 5.3</i>)	17,258	15,463	1,795
Goods and services purchased (see <i>Section 5.3</i>)	(6,699)	(6,268)	(431)
Employee benefits expense (see <i>Section 5.3</i>)	(4,269)	(3,701)	(568)
Restructuring and other costs, net of disbursements	10	35	(25)
Net employee defined benefit plans expense	113	102	11
Employer contributions to employee defined benefit plans	(53)	(51)	(2)
Share-based compensation expense, net of payments	139	27	112
Interest paid	(744)	(740)	(4)
Interest received	17	13	4
Income taxes paid, net of recoveries received	(601)	(430)	(171)
Gain on disposition of financial solutions business	(410)	-	(410)
Other operating working capital changes	(373)	124	(497)
Cash provided by operating activities	4,388	4,574	(186)

Cash provided by operating activities decreased by \$186 million in 2021.

- Restructuring and other costs, net of disbursements, represented a net change of \$25 million in 2021. We incurred lower restructuring and other costs disbursements net of expense, related to improving our overall cost structure and operational effectiveness.
- Share-based compensation expense, net of payments, represented a net change of \$112 million in 2021 due to a shift to granting equity-settled restricted share units that started in fiscal 2019 and have now first vested during the year.
- Income taxes paid, net of recoveries received, increased by \$171 million, largely due to taxes paid on the disposition of our financial solutions business, as well as higher income taxes paid related to our foreign operations.
- For additional details on the Gain on disposition of financial solutions business, see *Other income* in *Section 5.3*.
- 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.

Cash provided by operating activities (\$ millions)



Cash used by investing activities (\$ millions)



7.3 Cash used by investing activities

Analysis of changes in cash used by investing activities

Years ended December 31 (\$ millions)	2021	2020	Change
Cash payments for capital assets, excluding spectrum licences	(3,097)	(2,822)	(275)
Cash payments for spectrum licences	(2,219)	-	(2,219)
Cash payments for acquisitions, net	(468)	(3,205)	2,737
Advances to, and investment in, real estate joint ventures and associates	(46)	(100)	54
Real estate joint venture receipts	4	5	(1)
Proceeds on disposition	508	86	422
Investment in portfolio investments and other	(148)	(129)	(19)
Cash used by investing activities	(5,466)	(6,165)	699

Cash used by investing activities decreased by \$699 million in 2021.

- The increase in Cash payments for capital assets, excluding spectrum licences in 2021 was primarily composed of:
 - An increase in capital expenditures of \$723 million (see *Capital expenditure measures* table and discussion below).
 - Lower capital expenditure payments of \$451 million in 2021 with respect to payment timing differences.
- Cash payments for spectrum licences are primarily related to the \$1.95 billion for the 3500 MHz spectrum acquired in the 2021 spectrum auction further described in *Section 1.3*. Additionally, in the first quarter of 2021, we acquired 3500 MHz spectrum licences in the urban cores of Edmonton, Guelph/Kitchener, London, Ottawa and Winnipeg, as well as in East Kootenay and Whistler. In the second quarter of 2021, we acquired a 2500 MHz licence in the urban core of Calgary.
- In 2021, we made cash payments for Blacksmith Applications Holdings Inc. as noted in *Section 1.3*, as well as other individually immaterial business acquisitions that are complementary to our existing lines of business. This is compared to a higher number of business acquisitions in 2020 that included Competence Call Center (CCC) (since rebranded as TELUS International Northern Europe or TINE and comprised substantially of CCC), Mobile Klinik, AFS, EQ Care and Lionbridge AI, in addition to other individually immaterial business acquisitions complementary to our existing lines of business.
- Advances to, and investment in, real estate joint ventures and associates represented a net change of \$54 million, predominantly related to higher investments in the first quarter of 2020.
- Proceeds on disposition increased by \$422 million in 2021 primarily due to the disposition of our financial solutions business described in *Section 1.3*, partly offset by the non-recurrence on the sale of certain assets in the third quarter of 2020.

Capital expenditures (excluding spectrum licences)

(\$ millions)

2021	3,498
2020	2,775
2019	2,906

Capital expenditure measures

Years ended December 31 (\$ millions, except capital intensity)	2021	2020	Change
Capital expenditures¹			
TELUS technology solutions (TTech) segment	3,372	2,675	26.1%
Digitally-led customer experiences – TELUS International (DLCX) segment	126	100	26.0%
Consolidated	3,498	2,775	26.1%
TTech segment capital expenditure intensity ² (%)	23	20	3 pts.
DLCX segment capital expenditure intensity ² (%)	5	4	1 pt.
Consolidated capital expenditure intensity ² (%)	20	18	2 pts.

1 Capital expenditures include assets purchased, excluding right-of-use lease assets, but not yet paid for, and therefore 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 increased by \$723 million in 2021.

TTech drove \$697 million of the increase in 2021, primarily due to accelerated investments in our 5G network, broadband build, enhanced product development, and digitization to increase system capacity and reliability as announced on March 25, 2021. In addition, we saw strong security subscriber growth, and advanced the purchase of customer equipment to mitigate supply chain risks and support subscriber growth. This was partly offset by reduced spend resulting from efficiencies in our 4G network. With our investments, we are advancing the mobile speeds and coverage of our expanding 5G network, continuing to connect additional homes and businesses directly to our fibre-optic technology, enhancing products, and supporting system reliability and operational efficiency and effectiveness efforts. These investments also support our internet, TV and security subscriber growth, address our customers' demand for faster internet speeds, and extend the reach and functionality of our business, as well as our healthcare and agriculture solutions. By December 31, 2021, our 5G network covered over 26.2 million Canadians, representing 70% of the population.

On March 25, 2021, we announced that we intended to accelerate up to \$750 million of capital spending in 2021. \$708 million of accelerated capital had been invested throughout 2021, to advance our fibre build and 5G coverage. This spend has enabled: (i) additional premises to be connected to our fibre network; (ii) acceleration of our copper to fibre migration program; (iii) expansion of the number of communities we are bringing fibre to, including many rural and Indigenous communities; (iv) advancement of our 5G network build, which covered 70% of the Canadian population at December 31, 2021; and (v) progress in the implementation of our digital strategy and enhancing products that will bolster both top-line revenue growth and operating expense efficiency.

7.4 Cash provided by financing activities

Analysis of changes in cash provided by financing activities

Years ended December 31 (\$ millions)	2021	2020	Change
Common Shares issued	1,300	1,495	(195)
Dividends paid to holders of Common Shares	(1,045)	(930)	(115)
Issue (repayment) of short-term borrowings, net	10	(8)	18
Long-term debt issued	4,891	4,882	9
Redemptions and repayment of long-term debt	(4,972)	(3,863)	(1,109)
Shares of subsidiary issued and sold to non-controlling interests, net	827	400	427
Other	(58)	(72)	14
Cash provided by financing activities	953	1,904	(951)

Cash provided by financing activities decreased by \$951 million in 2021.

Dividends paid to holders of Common Shares (\$ millions)

2021	1,045
2020	930
2019	1,149

Common Shares issued

Common Shares issued reflect 51 million Common Shares issued at a price of \$25.35 per Common Share in the first quarter of 2021 as described in *Section 1.3 Equity offering*. This is compared to 58 million Common Shares issued at a price of \$26.00 in the first quarter of 2020.

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 \$115 million in 2021, 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 2021, our DRISP plan trustee acquired Common Shares for \$620 million.

In January 2022, we paid dividends of \$293 million to the holders of Common Shares and the trustee acquired dividend reinvestment Common Shares from Treasury for \$156 million, totalling \$449 million.

Issue (repayment) of short-term borrowings, net

There were no material draws or repayments in the current or previous year, with the exception of the first quarter of 2020, when we drew down and repaid \$200 million advanced to us from an arm's-length securitization trust.

Long-term debt issued and redemptions and repayment of long-term debt

In 2021, long-term debt issued increased by \$9 million, while redemptions and repayment of long-term debt increased by \$1,109 million.

These changes were primarily composed of:

- A net increase in commercial paper outstanding, including foreign exchange effects, of \$372 million to a balance of \$1.9 billion (US\$1.5 billion) at December 31, 2021, from a balance of \$731 million (US\$574 million) at December 31, 2020. Our commercial paper program, when utilized, provides low-cost funds and is fully backstopped by the revolving credit facility (see *Section 7.6 Credit facilities*).
- A decrease in net draws on the TELUS International (TI) credit facility, including foreign exchange effects, of \$742 million. As at December 31, 2021, net draws due to a syndicate of financial institutions (excluding TELUS Corporation) were US\$854 million, whereas as at December 30, 2020, net draws were US\$1,428 million. The reduction in TI credit facility indebtedness was facilitated by the net proceeds of the TI initial public offering (IPO) (see *Note 28(c)* of the Consolidated financial statements). The TI credit facility is non-recourse to TELUS Corporation.
- The April 5, 2021 issue of \$500 million of senior unsecured 4.10% Notes, Series CAE, due April 5, 2051. The net proceeds from this offering were used to fund the repayment upon maturity of the Series 3, 10.65% debentures of TELUS Communications Inc. (TCI) due June 2021, the repayment of commercial paper and for general corporate purposes.
- The June 28, 2021 issue of \$750 million of our inaugural senior unsecured 2.85% Sustainability-Linked Notes, Series CAF, due November 13, 2031. The net proceeds were used for the repayment of outstanding indebtedness, including the repayment of commercial paper, and for other general corporate purposes.
- The repayment upon maturity of Series 3, 10.65% debentures of TCI due June 2021.
- The early full redemption of \$1 billion of 2.35% Notes, Series CT, due March 28, 2022. The long-term debt prepayment premium recorded in the three-month period ended September 30, 2021 was \$10 million before income taxes.

In comparison, in 2020, long-term debt issued decreased by \$2,823 million while redemptions and repayment of long-term debt decreased by \$1,398 million. These changes were primarily composed of:

- A net decrease in commercial paper outstanding, including foreign exchange effects, of \$284 million from a balance of \$1,015 million (US\$781 million) at December 31, 2019.
- An increase in net draws on the TI credit facility, including foreign exchange effects, of \$1,373 million. As at December 31, 2019, net draws were US\$336 million.
- The May 29, 2020 issues of \$600 million of senior unsecured 2.35% Notes, Series CAC, due January 27, 2028, and \$400 million through the re-opening of the 3.95% Notes, Series CAB, due February 16, 2050. The net proceeds of this offering were used for the early full redemptions of the \$400 million 3.60% Notes, Series CM, due January 26, 2021 and the \$500 million 3.20% Notes, Series CO, due April 5, 2021, as well as for general corporate purposes. The total long-term debt prepayment premium for the \$400 million Series CM and \$500 million Series CO notes redemptions was \$18 million before income taxes.

- The October 5, 2020 issue of \$500 million of senior unsecured 2.05% Notes, Series CAD, due October 7, 2030.
- In connection with our acquisitions of CCC and AFS, we repaid other long-term debt acquired of \$185 million and \$118 million, respectively.

The average term to maturity of our long-term debt (excluding commercial paper, the revolving component of the TI credit facility, lease liabilities and other long-term debt) was 12.5 years at December 31, 2021, an increase from 12.2 years at December 31, 2020. Additionally, the weighted average cost of our long-term debt (excluding commercial paper, the revolving component of the TI credit facility, lease liabilities and other long-term debt) was 3.72% at December 31, 2021, a decrease from 3.80% at December 31, 2020.

Weighted average interest rate on long-term debt (%)



Average term to maturity of long-term debt (years)



Shares of subsidiary issued and sold to non-controlling interests, net

In connection with the TI IPO described in *Section 1.3*, we received net cash proceeds of \$827 million in the first quarter of 2021 (see *Note 28(c)* of the Consolidated financial statements). Also in 2020, TI issued shares to non-controlling interests related to its acquisitions of CCC and Lionbridge AI.

Other

In the second quarter of 2021, we incurred debt issuance costs in connection with the issuance of 4.10% Notes, Series CAE and 2.85% Sustainability-Linked Notes, Series CAF. In connection with our issuance of 51 million Common Shares in the first quarter of 2021, we incurred certain equity issuance costs. In the first quarter of 2020, we also incurred certain equity issuance costs in connection with our issue of 58 million Common Shares.

7.5 Liquidity and capital resource measures

Net debt was \$20.5 billion at December 31, 2021, an increase of \$709 million compared to one year earlier, resulting mainly from an increase in commercial paper outstanding, and the second quarter 2021 issuances of \$500 million of Series CAE notes and \$750 million of Series CAF Sustainability-Linked Notes as described in *Section 7.4* as well as lower Cash and temporary investments. These factors were partially offset by the early redemption of Series CT notes described in *Section 7.4*, and the repayment upon maturity of Series 3, 10.65% debentures of TCI.

Fixed-rate debt as a proportion of total indebtedness, which excludes lease liabilities and other long-term debt, was 87% as at December 31, 2021, down from 89% one year earlier. This was mainly due to: (i) an increase in commercial paper outstanding, which is classified as floating-rate debt in this calculation; (ii) the early redemption of Series CT notes; and (iii) the repayment upon maturity of Series 3, 10.65% debentures of TCI. These factors were partially offset by: (i) a decrease 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 (ii) the second quarter 2021 issuances of \$500 million of Series CAE notes and \$750 million of Series CAF Sustainability-Linked Notes.

Net debt to EBITDA – excluding restructuring and other costs ratio was 3.17 times, as measured at December 31, 2021, down from 3.45 times one year earlier. Our long-term objective for this measure is within a range of 2.20 to 2.70 times, which we believe is consistent with maintaining investment grade credit ratings in the range of BBB+, or the equivalent, and providing reasonable access to capital. As at December 31, 2021, this ratio remains outside of the long-term objective range resulting from prior issuances of incremental debt, primarily due to business acquisitions and the acquisition of spectrum licences, partially offset by growth in EBITDA – excluding restructuring and other costs. Fiscal 2021 EBITDA growth was reduced by impacts from the COVID-19 pandemic. As at December 31, 2021, the acquisition of spectrum licences increased the ratio by approximately 0.49 and business acquisitions over the past 12 months increased the ratio by approximately 0.05, while business dispositions decreased the ratio by approximately 0.26. Our recent acquisitions of spectrum licences have increased our national spectrum holdings and represent an investment to extend our network capacity to support continuing data consumption growth, as well as growth in our mobile subscriber base. Given the cash demands of the 2019 600 MHz, the recent 2021 3500 MHz and upcoming spectrum auctions, as well as the inability to predict impacts of the COVID-19 pandemic, the assessment of the guideline and 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 recent 2021, and upcoming 2023 and 2024, spectrum auctions), 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 September 30, 2021 (see *Section 7.6 Credit facilities*).

Earnings coverage (times)



EBITDA – excluding restructuring and other costs interest coverage (times)



Liquidity and capital resource measures

As at, or for the 12-month periods ended, December 31

	2021	2020	Change
Components of debt and coverage ratios¹ (\$ millions)			
Net debt	20,535	19,826	709
EBITDA – excluding restructuring and other costs	6,476	5,753	723
Net interest cost	773	792	(19)
Debt ratios			
Fixed-rate debt as a proportion of total indebtedness (excluding lease liabilities and other long-term debt) (%)	87	89	(2) pts.
Average term to maturity of long-term debt (excluding commercial paper, the revolving component of the TI credit facility, lease liabilities and other long-term debt) (years)	12.5	12.2	0.3
Weighted average interest rate on long-term debt (excluding commercial paper, the revolving component of the TI credit facility, lease liabilities and other long-term debt) (%)	3.72	3.80	(0.08) pts.
Net debt to EBITDA – excluding restructuring and other costs ¹ (times)	3.17	3.45	(0.28)
Coverage ratios¹ (times)			
Earnings coverage	3.9	3.2	0.7
EBITDA – excluding restructuring and other costs interest coverage	8.4	7.3	1.1
Other measures¹ (%)			
Determined using most comparable IFRS-IASB measures			
Ratio of Common Share dividends declared to cash provided by operating activities less capital expenditures (excluding spectrum licences)	192	84	108 pts.
Determined using management measures			
Common Share dividend payout ratio – net of dividend reinvestment plan effects	140	67	73 pts.

¹ See Section 11.1 Non-GAAP and other specified financial measures.

Earnings coverage ratio for the 12-month period ended December 31, 2021 was 3.9 times, up from 3.2 times one year earlier. An increase in income before borrowing costs and income taxes increased the ratio by 0.7; the gain on the disposition of our financial solutions business in the fourth quarter of 2021 contributed to EBITDA growth.

EBITDA – excluding restructuring and other costs interest coverage ratio for the 12-month period ended December 31, 2021 was 8.4 times, up from 7.3 times one year earlier. Growth in EBITDA – excluding restructuring and other costs increased the ratio by 0.9 and a decrease in net interest costs increased the ratio by 0.2.

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 most recent four quarters' dividends declared 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, 2021 is presented for illustrative purposes in evaluating our target guideline. As at December 31, 2021, the ratio was outside of the objective range, primarily due to: (i) our planned accelerated capital expenditures program to support our broadband capital investments, the build-out of our TELUS PureFibre infrastructure and the acceleration of our 5G network roll-out; and (ii) the fiscal 2021 impact of the pandemic. Excluding the effects of our accelerated capital expenditures program, as at December 31, 2021, the ratio was 73%.

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, 2021, we had \$850 million of liquidity available from the TELUS revolving credit facility and \$833 million of liquidity available from the TI credit facility with a syndicate of financial institutions (excluding TELUS Corporation). In addition, we had \$500 million available under our trade receivables securitization program (see *Section 7.7 Sale of trade receivables*). We are well within our objective of generally maintaining at least \$1.0 billion of available liquidity.

TELUS revolving credit facility

We have a \$2.75 billion (or U.S. dollar equivalent) unsecured revolving credit facility with a syndicate of financial institutions, expiring April 6, 2026. The revolving credit facility is used for general corporate purposes, including the backstop of commercial paper, as required.

TELUS revolving credit facility at December 31, 2021

(\$ millions)	Expiry	Size	Drawn	Outstanding undrawn letters of credit	Backstop for commercial paper program	Available liquidity
Revolving credit facility ¹	April 6, 2026	2,750	–	–	(1,900)	850

¹ Canadian dollars or U.S. dollar equivalent.

Our revolving credit facility contains 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, 2021, our consolidated leverage ratio was 3.17 to 1.00 and our consolidated coverage ratio was 8.38 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 have not been materially different. 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 amount at any one time of \$1.9 billion equivalent (US\$1.5 billion maximum) as at December 31, 2021. 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, 2021, TELUS International (Cda) Inc. had a credit facility, secured by its assets, expiring on January 28, 2025, with a syndicate of financial institutions and, joined in 2020, by TELUS Corporation. The TI credit facility is comprised of US\$620 million (TELUS Corporation as an approximately 7.5% lender) and US\$230 million (TELUS Corporation as a 12.5% lender) revolving components and amortizing US\$600 million (TELUS Corporation as 12.5% lender) and US\$250 million term loan components. 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 1.88% as at December 31, 2021.

The term loan components are subject to an amortization schedule which requires that 5% of the principal advanced be repaid each year of the term of the agreement, with the balance due at maturity and December 22, 2022, for the US\$250 million component, respectively.

Other letter of credit facilities

At December 31, 2021, we had \$193 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 bank credit facility. Available liquidity under various uncommitted letters of credit facilities was \$117 million at December 31, 2021. Further, we had arranged \$359 million of incremental letters of credit to allow us to participate in Innovation, Science and Economic Development Canada's 3500 MHz band spectrum auction that was held in June–July 2021, as further described in *Note 18(a)* of the Consolidated financial statements. Concurrent with funding the purchase of the spectrum licences, these incremental letters of credit were extinguished.

Other long-term debt

Other liabilities bear interest at 3.19%, are secured by the AWS-4 spectrum licences associated with these other liabilities and a real estate holding, 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 for an amount 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, 2021. (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 by DBRS Ltd. or the securitization trust may require the sale program to be wound down prior to the end of the term. The minimum credit rating was exceeded as of February 10, 2022.

7.8 Credit ratings

There were no changes to our investment grade credit ratings during 2021 or as of February 10, 2022. 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, continue to provide reasonable access to capital markets. (See discussion of risks in *Section 10.14 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 subject to 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.

Financial instrument	Accounting classification	Risks				
		Credit	Liquidity	Market risks		
				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		

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 commercial paper program; maintaining an in-effect shelf prospectus; continuously monitoring forecast and actual cash flows; and managing maturity profiles of financial assets and financial liabilities.

As at December 31, 2021, TELUS Corporation could offer \$2.75 billion of debt or equity securities pursuant to a shelf prospectus that is in effect until June 2023.

As at December 31, 2021, we had \$850 million of liquidity available from the TELUS revolving credit facility and \$833 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 \$723 million, we had available liquidity of approximately \$2.1 billion at December 31, 2021 (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, 2021*

(\$ millions)	2022	2023	2024	2025	2026	2027-2031	Thereafter	Total
Short-term borrowings								
Interest obligations	1	1	1	-	-	-	-	3
Principal obligations ¹	14	-	100	-	-	-	-	114
	15	1	101	-	-	-	-	117
Long-term debt								
Interest obligations	630	601	572	526	481	1,793	4,251	8,854
Principal maturities	2,500	566	1,152	1,691	1,420	5,558	6,248	19,135
	3,130	1,167	1,724	2,217	1,901	7,351	10,499	27,989
Leases								
Interest obligations	67	53	44	36	29	86	65	380
Principal maturities	437	311	261	140	115	312	279	1,855
	504	364	305	176	144	398	344	2,235
Occupancy costs ²	117	111	95	75	61	124	61	645
Purchase obligations ³								
Operating expenditures	943	210	221	237	233	820	7	2,671
Property, plant and equipment, and Intangible assets	597	3	-	-	-	-	-	600
	1,540	213	221	237	233	820	7	3,271
Non-interest bearing financial liabilities	3,395	62	13	14	2	7	-	3,493
Other obligations	23	(1)	(1)	18	2	68	72	181
Total	8,724	1,917	2,458	2,737	2,343	8,768	10,983	37,931

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, 2021. 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 10.17 *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, 2021, we had no liability recorded in respect of our indemnification obligations.

7.10 Outstanding share information

	December 31, 2021	January 31, 2022
Outstanding shares (millions)		
Common Shares	1,370	1,376
Common Share options	3	3
Restricted 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 \$99 million in 2021, compared to \$62 million in 2020. The increase in compensation expense for key management personnel was primarily due to greater share-based compensation, which was largely related to liability-accounted awards that increased in value in the first quarter of 2021 and decreased in value in the comparative 2020 period and pension plan past service costs recorded in 2021. See *Note 30(a)* of the Consolidated financial statements for additional details.

Transactions with defined benefit pension plans

We provided management and administrative services to our defined benefit pension plans. Charges for these services were on a cost recovery basis and were immaterial.

Transactions with real estate joint venture and associates

In 2021, we had transactions with the TELUS Sky real estate joint venture, which is a related party to us, as set out in *Note 21* of the Consolidated financial statements. The new-build tower was completed in 2020.

For the TELUS Sky real estate joint venture, commitments and contingent liabilities include construction financing (\$342 million, with Canadian financial institutions as 66⅔% lender and TELUS as 33⅓% lender) under a credit agreement maturing August 31, 2023. We have entered into lease agreements with the TELUS Sky real estate joint venture; for lease accounting purposes, the first lease commenced during the three-month period ended June 30, 2019.

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, 2021. 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 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 financial position	Consolidated statements of income and other comprehensive income					
	Operating revenues and other income	Operating expenses			Financing costs	Employee defined benefit plans re-measurements ¹
		Goods and services purchased	Employee benefits expense	Depreciation	Amortization of intangible assets	
Intangible assets, net, and Goodwill, net					X ²	
Employee defined benefit pension plans			X	X ³	X ³	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 an estimate is 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 represents approximately 36% of Total assets as at December 31, 2021 (35% as at December 31, 2020). Included in Intangible assets are spectrum licences, which represent approximately 25% of Total assets as at December 31, 2021 (23% as at December 31, 2020).
- The Goodwill, net, line item represents approximately 15% of Total assets as at December 31, 2021 and approximately 17% of Total assets as at December 31, 2020.
- The Property, plant and equipment, net, line item on our Consolidated statements of financial position represents approximately 33% of Total assets as at December 31, 2021 and approximately 35% of Total assets as at December 31, 2020.
- 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 estimate of 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; and the future weighted average cost of capital.

- 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 and future infrastructure utilization plans.

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 taxation 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 taxation authorities, net of periodic instalment payments. Deferred income tax liabilities are composed of the tax effect of temporary differences between the carrying amount and 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, 2021 and 2020, and approximately 9% of Total liabilities and owners' equity as at December 31, 2021 and 2020. 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, 2021 (2% as at December 31, 2020). 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, 2021 and 2020. 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 would result in a cash outflow proximate to the time that the written put option is exercised.

Investments

The recoverability of long-term investments

- We assess the recoverability of our long-term investments on a regular, recurring basis. The recoverability of investments is assessed on a specific-identification basis, taking into consideration expectations about future performance of the investments and comparison of historical results to past expectations.
- The most significant assumptions underlying the recoverability of long-term investments are related to the achievement of future cash flow and operating expectations. Our estimate of the recoverability of long-term investments could change from period to period due to the recurring nature of the recoverability assessment and due to the nature of long-term investments (we do not control the investees).
- 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, 2021 (2020 – 3%). If the allowance for recoverability of long-term 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 investments does not result in a cash outflow.

Accounts receivable

General

- When determining our allowance for doubtful accounts, we consider the business area 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 7% of Total assets as at December 31, 2021 (6% as at December 31, 2020). 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, 2021 and 2020. 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, 2021 and 2020. 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 2021

We estimate that Canadian telecommunications industry revenues (including TV revenue and excluding equipment and media revenue) grew by approximately 3%. Mobile and data services continue to drive ongoing industry growth. Additionally, consumer communications and data consumption behaviours continue to demonstrate a strong preference for data-rich applications and data-intensive devices, including smartphones and tablets. However, this year and similar to 2020, revenue growth across the telecommunications industry was limited by the impacts of the global pandemic and in particular roaming revenue due to travel restrictions and changing consumer behaviour related to travelling.

TELUS reported Operating revenues arising from contracts with customers of \$16.8 billion, with TELUS technology solutions (TTech) representing 86% of our total Operating revenues arising from contracts with customers, while our digitally-led customer experiences – TELUS International (DLCX) operating segment represented the remaining 14%. Within TTech, mobile products and services represented 57% of total TTech external Operating revenues arising from contracts with customers. With respect to our fixed products and services, growth in internet and data services, health and agriculture services, home and business security, and TV, all inclusive of acquisitions, more than offset the decline in demand for legacy voice and legacy data services. Within DLCX, we saw strong growth across industry verticals driven by acquisitions, as well as robust organic growth from services provided to existing customers, as well as new clients added since the prior year. Revenue from our largest tech and games vertical increased by 50% from 2020 and represented 46% of DLCX Operating revenues and other income.

Mobile products and services

We estimate that in 2021, the Canadian mobile industry experienced mobile network revenue growth of approximately 2.7%, which we believe was attributable to ongoing growth and a general recovery after the first year of the pandemic. We estimate that the Canadian mobile industry added approximately 0.9 million net new subscribers in 2021 (inclusive of TELUS' mobile phone additions), compared to approximately 1.1 million in 2020 for the industry (inclusive of TELUS' mobile phone additions). This was supported by immigration and population growth; the trend toward multiple devices, including tablets; the expanding functionality of data and related applications; and the ongoing adoption of mobile devices and services, including connected devices. Various forms of public health measures during the global health crisis in 2020, including the temporary closure of retail stores, led to pent-up demand in 2021. We estimate that the mobile phone penetration rate increased to approximately 99% in Canada in 2021, with further increases in penetration expected in 2022. By comparison, the mobile phone penetration rate in the U.S. is well over 100%, while in Europe and Asia it is even

higher, suggesting an opportunity for continued growth in Canada.

TELUS' mobile network revenue increased by 3.0%, and TELUS mobile products and services direct contribution increased by 5.4%.

The 2021 mobile market in Canada continued to face challenges from the pandemic. Growth in blended average revenue per subscriber unit per month (ARPU) had been moderating as carriers migrated their customer bases to unlimited data plans. However, ARPU moderation was exacerbated by the pandemic, as mobile industry roaming revenue significantly declined from customers' reduced travel activity, which has not yet returned to pre-pandemic levels. Additionally, with large numbers of the workforce working from home during the pandemic, there were associated declines in chargeable data usage from workers offloading their mobile device traffic onto Wi-Fi. The Canadian mobile market continued to experience increased levels of competition nationally. This high level of competition has led to continued declines in chargeable data usage and larger allotments of data, in addition to other factors, such as: the popularity of data sharing plans; more frequent customer-friendly data usage notifications; and an evolving shift in the customer mix towards non-traditional mobile devices and tools such as video chats. These factors, combined with increases in overall data usage, which is expected to increase dramatically with the ongoing commercialization of 5G, led to widespread adoption and promotion of unlimited data plans and device financing plans by all national carriers. The build-out of 5G network infrastructure accelerated in 2021, with 5G covering approximately 70% of the Canadian population by the national carriers at the end of 2021. For TELUS, our accelerated 5G investments are underpinned by our accelerated broadband build program, which was pre-funded by our equity offering in March 2021 and will continue into 2022. Our long-standing commitment to network excellence is reflected in multiple independent third-party awards and recognition received in 2021, including from U.K.-based Opensignal and U.S.-based Ookla, each for five consecutive years, and from Canadian-based Tutela, for three years in a row.

We continue to work diligently to better monetize robust growth in data services, while simultaneously delivering a strong value-for-money proposition and leading customer service to our customers. To this end, we are focusing intensely on profitable customer growth and strong ARPU performance through our consistent strategic execution of premium smartphone loading, which includes driving higher-value data and share plan adoption, as well as flexible product offerings, including bundling our mobility and home services. Moreover, we are also 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 our TTech EBITDA growth objectives, including:

- Evolving our approach to mobile plans and device sales, through the simultaneous launch of our Peace of Mind endless data rate plans, TELUS Easy Payment device financing and TELUS Family Discount offerings, which have resulted in simplification for both customers and team members, while supporting growth in digital transactions and improved recovery of handset costs
- Continuing to drive volume growth through high-quality loading on the back of strong ongoing industry growth
- Seeking new sources of wireless revenue, such as Internet of Things (IoT) or Internet of Everything, machine-to-machine (M2M) and

security applications in the B2B market, including health, agriculture and smart cities

- Exploring and securing new channel strategies associated with attractive economic characteristics
- Pursuing smart bundling opportunities across mobile and fixed products and services to achieve better economies of scope and enhance lifetime revenue per customer
- Working persistently to enhance the efficiency of the flow from revenue to EBITDA, or the flow from ARPU to average margin per subscriber unit per month (AMPU), in order to buttress and enhance our operating margins, including ongoing efficiency and effectiveness initiatives.

The Canadian mobile industry continues to be highly competitive and capital-intensive, with carriers continuing to expand and enhance their broadband mobile networks, including the ongoing build-out of 5G, as well as material investments in spectrum.

Fixed products and services

Similar to the Canadian mobile industry, fixed markets and operations were significantly affected by the pandemic. Physical distancing requirements impacted traditional fixed installations, as installers were not entering customers' premises. Conversely, with large numbers of workers and students working and learning from home, demand for fixed products and services surged, with traffic levels reaching historic levels during the pandemic. Although the consumer high-speed internet market is maturing, with a penetration rate of approximately 89% in Western Canada and 90% across Canada at the end of 2021, subscriber growth is expected to continue over the coming years. The four major cable-TV companies had an estimated 7.37 million internet subscribers at the end of 2021 (49% market share), up 2.9% from approximately 7.17 million at the end of 2020. Meanwhile, telecommunications companies had approximately 7.56 million internet subscribers (50% market share), up 4% from approximately 7.25 million at the end of 2020. 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 (Optik TV and PiK TV), including bundling of our 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) has allowed us to connect 2.7 million households and businesses in B.C., Alberta and Eastern Quebec as of December 31, 2021 to our TELUS PureFibre technology. Similar to our accelerated 5G investments, our investments to expand our fibre footprint are supported by our accelerated broadband build program, which commenced in 2021 and will continue into 2022 before capital expenditures on a consolidated basis are expected to decline significantly in 2023. Additionally, we received recognition from PCMag as the fastest internet service provider (ISP) in Canada among major ISPs for the second consecutive year.

While Canadians still watch conventional TV, digital platforms are playing an increasingly important role in the broadcasting industry and in respect of content. Popular online video services are providing Canadians with more choice about where, when and how to access video content. In 2021, Canadian IP TV providers increased their subscriber base by an estimated 4% to 3.2 million, or 32% of market share, up from 30% at the end of 2020, as a result of expanded network coverage, enhanced differentiated service and bundled offerings, and marketing and promotions focused on IP TV. Despite this IP TV growth, the combined cable-TV and satellite-TV subscriber penetration rate was unchanged. We estimate that the four major cable-TV companies

had approximately 4.7 million TV subscribers or a 48% market share at the end of 2021, flat compared to 48% at the end of 2020.

In recent years, three of the largest Canadian cable-TV companies have launched new TV services based on the Comcast X1 TV platform, including Shaw, Rogers and Quebecor's Videotron brand. Our IP-based Optik TV platform continues to offer numerous service advantages over this cable platform, including: flexible pricing plans and packaging available to all customers; picture clarity and quality; content depth and breadth; and 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 achieve the highest ratings for each month from August 2020 to December 2021 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 multicultural content leader in Western Canada.

The national Canadian telecom providers continue to acquire and develop capabilities in home security and automation. Through various acquisitions, including ADT Security Services Canada, Inc., in 2019 and smaller tuck-ins in 2020, we have furthered our commitment to leverage the power of technology to bring state-of-the-art convenience, control and safety into the lives, homes and businesses of more Canadians to become Canada's leading security and home automation provider. Security also provides 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 and TELUS Secure Business service offerings complement our industry-leading customer service and build on our strategy and commitment to leverage our world-leading wireless and PureFibre network, enabling us to enhance connected home, business, security, IoT, cybersecurity, smart buildings, smart cities and health services for customers in Canada.

Canada's four major cable-TV companies had an estimated base of approximately 3.2 million telephony subscribers at the end of 2021. This represents a national consumer market share of approximately 43%, relatively flat compared to 2020. Telecommunications companies had an estimated 3.6 million telephony subscribers at the end of 2021, representing approximately 48% of market share, relatively flat compared to 2020. Technological substitution by mobile services is continuing to erode the number of residential voice subscribers and associated local and long distance revenues, as expected.

TELUS Health

In 2021, we continued to drive strong growth within our industry-leading health business, driven by the ongoing adoption of our unique and innovative portfolio of health offerings across the healthcare ecosystem. Health services revenue increased by 16.3% to \$521 million. The Canadian healthcare industry is expected to continue to realize strong growth in future years, based on an aging population in Canada, an increasing emphasis on chronic disease management, and the potential benefits that technology can deliver in terms of efficiency and effectiveness within the sector. Prior to the pandemic, the healthcare industry saw an

emerging trend for physicians and other healthcare professionals to use smartphones and connected devices to access patient records from remote locations. Since the COVID-19 lockdown measures were first put into place in 2020, adoption of healthcare technology has accelerated, as clinicians have adapted to primarily virtual and tele-medicine-based practices, resulting in the overall Canadian healthcare technology market growing at a double-digit pace and beyond what was initially predicted at the beginning of 2020. The digitization of everyday functions within the healthcare ecosystem, combined with increased and pervasive broadband network connectivity, provides a unique opportunity to support the development and delivery of even more advanced health applications to benefit Canadians and improve health outcomes.

TELUS Agriculture

The global agriculture industry and global food industry are estimated to be valued at approximately \$2.5 trillion and \$8 trillion, respectively (World Economic Forum). It is estimated that global food supplies will need to increase by as much as 70% over the next 30 years, simply to keep pace with the world's growing population. Subsequently, farmers are managing more acres, equipment and suppliers than ever before; and streamlined digital access to data insights and features can translate into significant time and cost savings. Increasingly, farmers and producers across the globe are leveraging digital technologies to efficiently manage their operations and harness valuable data insights to optimize production and output to take advantage of the growing industry and demand. TELUS continues to grow its position to transform the agriculture industry by targeting the pressing needs across the entirety of the agriculture value chain through our TELUS Agriculture business. Our unique and differentiated seed-to-table approach encompasses strong capabilities from agri-business, to food and beverage, to herd management and animal health.

DLCX

In 2021, TI continued to win business with both new and existing clients, driving solid organic growth, supported by strategic acquisitions (see *Section 3 Scaling our innovative digital capabilities in TELUS International to build an asset of consequence* for further details). TI partners with major global and disruptive brands, fuelling all stages of company growth. TI is also exposed to verticals that are experiencing high growth themselves, such as tech and games, enhancing TI's position for continued success. TI's solutions and services are relevant across multiple markets, including information technology services for digital transformation of customer experience systems (DX), digital customer experience management (DCXM) and adjacent new economy services. With its end-to-end digital capabilities, TI is uniquely well-positioned to serve these growing markets, including fast-growing areas such as content moderation and artificial intelligence (AI) data services. The necessity of moderating content on digital platforms has prompted enterprises to seek specialized services to accommodate changes in the dynamic, uncertain, and often highly regulated environment. The demand for AI data services historically has been driven by large technology companies; however, demand is growing from other enterprises as AI adoption increases.

9.2 Telecommunications industry general outlook and trends

Mobile products and services

Mobile growth continues to be driven by increasing data usage and adoption, including: higher-value smartphones, unlimited data offerings, shared family data plans and tablets, and growth in IoT and M2M devices. In addition, consumers continue to replace fixed access with mobile access and related data services. These trends are expected to continue to drive a growing demand for mobile data services for the foreseeable future. Industry ARPU is expected to continue growing at a more moderate rate as compared to periods prior to the COVID-19 pandemic.

While LTE and LTE advanced (LTE-A) technologies increase download speeds, encourage data usage and improve 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 evolution to 5G. Innovation, Science and Economic Development Canada (ISED) held its 3500 MHz spectrum auction in June to July 2021. We expect the 3800 MHz and millimetre wave (mmWave) spectrum auctions to commence in 2023 and 2024, respectively, which will be important to the expansion of 5G networks.

M2M and IoT technologies connect communications-enabled remote 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 industries, including smart cities, vehicle insurance, retail, food services, consumer utilities, and connected and autonomous vehicles. These and other industries are looking to IoT, combined with other applications, to generate value from their connections. IoT represents a meaningful opportunity for growth in mobility products and services, with secure connectivity, customer value, productivity and efficiency. While M2M applications generally have lower ARPU when sold as a stand-alone product, they tend to generate high service volumes with low or no subsidy costs, thereby supporting both revenue growth and margins. In 2021, we added 338,000 connected devices, bringing our connected device subscriber base to more than 2.1 million, up 18.8% from 2020.

5G has begun to play a mainstream role in technology evolution and innovation globally, and is an important component of meeting Canada's and TELUS' social impact-oriented efforts to further bridge the digital divide and connect rural Canadians. Investing in 5G will drive capital expenditure savings by allowing us to provide high-speed internet services over wireless in less urban areas, as well as improved cost savings and innovative services in industrial automation, transportation and telehealth. Driven by significantly faster speeds, lower latencies, improved reliability and attractive economics, 5G will enable a host of new applications: for businesses, 5G will create opportunities for enhanced productivity, virtual work and profitability; for industries, 5G will enable remote operations, industrial control and manufacturing automation; for consumers, home automation, autonomous vehicles, and wireless-to-the-home connectivity with speeds comparable to fixed access technologies; and for healthcare, converged solutions for hospitals, clinics and remote patient monitoring and even medical procedures. 5G is essential to the future of a global digital economy, including that of Canada's, and is expected to generate significant innovation, growth and productivity. 5G wireless technology is up to 100 times faster than

4G LTE technology. As 5G evolves, it will move from a non-stand-alone core, based on the existing 4G LTE infrastructure, to a stand-alone core, which makes use of cloud-based technology, enabling new functionality through the capacity to support more connected devices and ultra-low latency.

Enabling a robust and reliable 5G experience for Canadians will require complementary spectrum bands to support the needs of a diverse subscriber base and consist of a portfolio of low, mid and high-band spectrum. Low-band spectrum, such as 600 MHz, covers wide areas and penetrates well into buildings, 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 in rural areas. High-band spectrum, such as mmWave, can enable speeds up to 100 times faster than 600 MHz spectrum; however, it does not have the same coverage characteristics to penetrate well into buildings or cover wide areas. This high-bandwidth spectrum and the associated faster connection speeds will help unlock new technologies such as virtual and augmented reality and provide a fibre-like experience for fixed wireless access. Mid-band spectrum, such as the 3500 MHz auctioned and acquired by carriers in 2021, 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. Trials have shown 3500 MHz to be key for broader 5G coverage and is increasingly being used globally for 5G coverage. The 3500 MHz and 3800 MHz spectrum bands are globally recognized as key for 5G networks. All of the national carriers in Canada commenced rolling out their initial 5G services in 2020 and accelerated the roll-out in 2021, and are expected to continue in the years ahead as spectrum is auctioned and deployed, along with the roll-out of new 5G technologies. See *Section 9.4 Communications industry regulatory developments and proceedings* for further details on upcoming spectrum auctions.

Fixed products and services

The fixed telecommunications market is expected to remain very competitive in 2022, as technology substitution – such as the broad deployment of higher-speed internet; the use of email, messaging and social media as alternatives to voice services; and the growth of mobile and VoIP services – continues to replace higher-margin legacy voice revenues. In our incumbent operating areas of B.C. and Alberta, it is estimated that, in 2021, 60% of households no longer had a fixed line and 37% of households no longer had a broadcast TV service. We are a key provider of these substitution services and the decline in this legacy business is continuing as expected, although residential voice losses continued to slow in 2021, 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 there were more than 25 million paid OTT video service subscriptions in Canada at the end of 2021, up 9.0% from 2020. The launch of streaming TV services is expected to continue in Canada.

Conventional TV content providers are monitoring OTT developments and evolving their content and market strategy to compete with these

non-traditional offerings. Bell Media offers a content streaming service through its expanded Crave offering. 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 encourage greater customer use of TELUS high-speed internet and wireless services and to limit customer frustration by needing to have a multitude of subscriptions, and continue to partner with and offer services from a wide range of OTT providers.

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 enhanced 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 this platform increases speed in the near term and is cost-efficient, it does not offer the same advanced capabilities as FTTP over the longer term, such as fast symmetrical upload and download speeds. At the end of 2021, our fibre-optic infrastructure was available to more than 2.7 million homes and businesses. Advances in LTE mobile technology and our extensive LTE infrastructure also allow us to target otherwise underserved areas with a fixed mobile solution, and 5G is expected to enhance these capabilities.

Our broadband investments, including the build-out of our FTTP broadband network and our premium differentiated IP-based Optik TV service, as well as lower-cost Pik TV service, home security and automation and integrated bundled service offerings, which also encompass mobility, consumer healthcare and cybersecurity, continue to enhance our competitive position relative to our competitors. Our bundled offerings drive higher product intensity with our customers and lead to improved customer loyalty results.

In the business market (enterprise 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 service offerings. While our business-to-business (B2B) line of business was dilutive to our EBITDA growth in 2020, we aggressively pursued opportunities in 2021 to stabilize this business; however, the pandemic continued to negatively impact our SMB customer base.

The development of IP-based platforms providing combined IP voice, data and video solutions creates 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 traditional telecommunications services. Data security represents both a challenge and an opportunity for TELUS to provide customers with our data security solutions. Increasingly, businesses are looking to partner with their communications service provider to address their business goals 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. TELUS offers 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. 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 evolves to 5G mobile 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 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 in the coming years, we expect to benefit from the flexibility of being able to select the most efficient way to deliver services across our footprint. We do not expect to have to build fibre to every home; instead, we believe that there will be opportunities to deliver services to some areas within our broadband footprint wirelessly with 5G.

TELUS Health

Through TELUS Health, we are leveraging our position as the leading end-to-end provider of digital healthcare in Canada and our expanding broadband network technologies such as fibre and 5G to increase access, integration and effectiveness of innovative healthcare tools and applications across the primary care ecosystem in order to continue positioning ourselves for anticipated strong continued growth. These solutions include virtual care applications, personal health records to empower 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 allow patients 24/7 bilingual and unlimited access to healthcare practitioners for the mental and physical care they need, from anywhere in the country. In 2021, we enhanced our TELUS Health Virtual Care offering with the launch LifeJourney, a modernized employee assistance program designed to address various personal and employment-related issues that can compromise an employee's ability to perform at work, including mental health support. Our TELUS Health MyCare application revolutionized consumer access to healthcare. With innovative AI-powered preventative health app features (available in English and French) such as the Symptom Checker, Monitor and Health Check, users can get information about their health and, if required, speak directly with a licensed physician from the convenience of a smartphone, in multiple languages across B.C., Alberta, Saskatchewan and Ontario. In 2020, TELUS Health MyCare also launched two physical clinics in B.C. to augment our digital first approach. Together, these virtual care solutions and capabilities are empowering Canadians to better manage their health and get the care and information they need when it's convenient for them – a huge step forward in the evolution of Canada's healthcare system and the current status quo. In 2020, TELUS Health enabled Canadian practitioners to conduct virtual visits with their patients by integrating patient videoconferencing into its electronic medical records (EMR) across Canada, and by the end of December 2021, more than 557,000 consultations had been conducted through the TELUS EMR Virtual Visit solution. This capability has been augmented by the acquisition of InputHealth Systems Inc. and its Collaborative Health Record (CHR) – a cloud-based solution that strengthens the physician-patient relationship with a full suite of tools for collaboration, patient

engagement, automation and data optimization. Since the onset of the pandemic, these virtual care solutions experienced accelerated adoption, easing pressure on the healthcare system, and strong growth in virtual care is expected to continue. Market activities and trends throughout the year have validated TELUS Health's long-standing presence in the healthcare market and assumptions about the business' main growth areas and path forward, reinforcing our focus on employee health and virtual care. 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, and in January 2022, we launched TELUS Health Virtual Pharmacy. In 2022 and beyond, aligned with our passionate commitment to social capitalism, TELUS Health will leverage these and other digital health tools to continue to expand access to care and improve health outcomes for Canadians across the country, with the ongoing commercialization of 5G expected to significantly bolster our capabilities with innovative new health care applications taking advantage of higher speeds and lower latency.

TELUS Agriculture

With the official launch of TELUS Agriculture in 2020, a business initially built on eight acquisitions throughout 2019 and 2020, we positioned ourselves to become a major global player in the promising and rapidly growing agriculture technology market. With the addition of two companies in 2021, Conservis and Blacksmith Applications, as well as acquiring the assets of Herdtrax, we continued our ongoing growth strategy. TELUS Agriculture is dedicated to creating the best producer-to-consumer outcomes. We deliver digital insights that empower and connect customers, from producers to consumers, around the world, improving the quality, safety, distribution and sustainability of food and consumer goods – both today and for the future. We also provide digitizing activities across a complex and fragmented supply chain to create actionable, integrated solutions. It is estimated that global food supplies will need to increase by as much as 70% over the next 30 years, simply to keep pace with the world's growing population. Increasingly, farmers and producers across the agriculture, food and consumer goods supply chains are leveraging digital technologies to efficiently manage their operations and harness valuable data insights to optimize production and output. With an ever-expanding world population, and increased demand for food and consumer goods, streamlined digital access to data insights and features can translate into significant resource, time and cost savings.

TELUS has established meaningful digital technology and data insight positions in three key segments of the agriculture, food and consumer goods value chain: (i) agri-business, which enables the flow of business data between manufacturers such as farm machinery, seed and chemical suppliers, distributors, retailers and farms; as well as farm solutions, which enable precision agriculture and farm management; (ii) food, beverage and consumer goods, which enables food and consumer goods traceability from producer to consumer and aids efficient promotional activity across industry stakeholders such as food manufacturers, grocers, restaurants and consumers; and (iii) animal health, which supports the safe and efficient development of protein sources through technology and consultative expertise. We offer leading software solutions across the value chain and address complex data management challenges and data silos to digitally transform, protect and improve the global food system by improving the efficient production, transportation, quality and safety of our food and consumer goods.

DLCX

Since its inception 17 years ago, TI has grown exponentially in size, scope and geographic diversity to deliver digital customer experience solutions for clients from delivery centres in North and Central America, Europe and Asia. In recent years, TI added significant scale and diversity through the January 2020 acquisition of Competence Call Center (since rebranded as TELUS International Northern Europe or TINE and comprised substantially of CCC), a leading provider of higher-value-added business services with a focus on customer relationship management and content moderation. In December 2020, TI further advanced its digital transformation strategy with the acquisition of Lionbridge AI, a market-leading global provider of crowd-based training data and annotation platform solutions used in the development of AI algorithms to power machine learning. Lionbridge AI's advanced technology innovation, combined with human ingenuity, improves data functionality to deliver significantly enhanced, customized and high-quality outcomes for customers. In July 2021, TI acquired Playment, a leader in data annotation and computer vision tools and services specialized in 2D and 3D image, video and light detection and ranging (LiDAR). Lionbridge AI and Playment now operate as TELUS International AI Data Solutions (TIAI), helping companies test and improve machine learning models through a global AI community of over one million data annotators and linguists. These acquisitions added substantial scale and diversity to TI, as its size, scope and reach grew to encompass over 62,000 highly engaged team members globally at the end of 2021. Armed with deeper end-to-end digital capabilities, TI now provides integrated solutions and services that span digital strategy, innovation, consulting and design, digital transformation and IT lifecycle solutions, data annotation and intelligent automation, and omnichannel CX solutions, including content moderation, trust and safety solutions and other managed solutions, with back-office support in almost 50 languages from 53 delivery locations across over 25 countries. Looking ahead, TI is extremely well-positioned to continue growing with and adding to its over 600 global clients. These clients span a number of high-growth target verticals, including tech and games, e-Commerce and fintech, communications and media, healthcare, and travel and hospitality. The clients TI serves are a diverse group that includes digital native technology companies that need help continuing to grow and scale their businesses, and also well-established companies that require help with their digital transformation strategy and execution. TI's continued focus on providing premium, complex, technology-centric solutions, thoughtfully executed by highly skilled, empathetic engaged team members, positions TI favourably for ongoing success in the growing market.

In February 2021, TI successfully completed its initial public offering (see *Section 1.3* for additional details). In September 2021, TI successfully completed a public secondary offering (see *Section 10.2* and *Section 3 Scaling our innovative digital capabilities in TELUS International to build an asset of consequence* for additional details), further positioning the organization for continued growth in the years to come.

As technology continues to change our industry rapidly, customer demand continues to evolve and grow, and Canada shifts to a more digital economy, we are committed to evolving our business and offering innovative and reliable services and thought leadership in core future growth areas that are complementary to our current operations. This, along with the constant focus of our highly engaged team on leadership in delivering an enhanced customer experience, over world-leading networks, positions us for continued differentiation and growth in the years ahead.

9.3 TELUS assumptions for 2022

In 2022, we expect the COVID-19 pandemic to continue to have impacts on our business, primarily in the first half of the year, attributable to economic factors such as continued travel advisories and border restrictions, business and consumer travel not yet at pre-pandemic levels, which continue to impact our roaming revenues, global supply chain challenges, subsequent business lockdowns and disruptions, including staffing shortages, and/or reduced scope of operations impacting our retail and health operations. We expect the pandemic impacts in 2022 to be smaller in scale than in 2021, primarily due to the uptake of COVID-19 vaccinations in the general population, allowing for the re-opening of the global economy in areas where we conduct business. We expect growth in EBITDA, driven by continued demand for data in our mobile and fixed products and services and contributions from new business acquisitions; roaming revenue improvement corresponding with a reduction in pandemic restrictions; continued 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 areas of our operations, with the objective of simplifying our customers' interaction with us while reducing our overall cost structure.

Our assumptions in support of our 2022 outlook are generally based on industry analysis, including our estimates regarding economic and telecom industry growth, as well as our 2021 results and trends discussed in *Section 5*.

Our key assumptions include the following:

- Estimated economic growth rates in Canada, B.C., Alberta, Ontario and Quebec of 4.3%, 4.2%, 4.4%, 4.5% and 3.7%, respectively.
- Estimated annual unemployment rates in Canada, B.C., Alberta, Ontario and Quebec of 6.1%, 5.2%, 7.1%, 6.1% and 5.3%, respectively.
- Estimated annual rates of housing starts on an unadjusted basis in Canada, B.C., Alberta, Ontario and Quebec of 224,000 units, 39,000 units, 30,000 units, 83,000 units and 55,000 units, respectively.
- 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 of 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. Roaming revenue from business and consumer travel will improve from levels seen in 2021, with the easing of travel advisories and border restrictions, including those in Canada and the U.S. A full recovery is estimated closer to the end of 2022 at the earliest.
- Continued pressure on mobile products and services acquisition and retention expenses, arising from gross loading and customer renewal volumes, including potential impacts related to deferred device upgrades during the global health pandemic, competitive intensity and 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 endless data usage, and expansion of our broadband infrastructure, healthcare solutions, agriculture solutions and home and business security offerings.
- Continued erosion of residential voice revenue resulting from technological substitution and greater use of inclusive long distance.
- Continued growth of DLCX revenue and EBITDA generated by expanded services for existing and new clients and strategic business acquisitions.
- Continued focus on our customers first initiatives and maintaining our customers' likelihood-to-recommend.
- Employee defined benefit pension plans: current service costs of approximately \$98 million recorded in Employee benefits expense and interest expense of approximately \$8 million recorded in Financing costs; a rate of 2.95% for discounting the obligation and a rate of 3.10% for current service costs for employee defined benefit pension plan accounting purposes; and defined benefit pension plan funding of approximately \$52 million.
- Restructuring and other costs of approximately \$150 million for continuing operational effectiveness initiatives, with margin enhancement initiatives to mitigate pressures related to intense competition, technological substitution, repricing of our services, increasing subscriber growth and retention costs, and integration costs associated with business acquisitions.
- Net cash Interest paid of approximately \$700 million to \$750 million.
- Depreciation and Amortization of intangible assets of approximately \$3.45 billion to \$3.55 billion.
- Income taxes: Income taxes computed at an applicable statutory rate of 25.2 to 25.8% and cash income tax payments of approximately \$500 million to \$580 million (2021 – \$563 million).
- Continued stabilization in the average Canadian dollar: U.S. dollar exchange rate (\$1.25 in 2021).
- Continued deployment of access-agnostic technology in our network.
- SMB will continue to be negatively impacted by lockdown measures primarily during the first quarter of the year, and will continue to feel the effects through the rest of the year, with access to continued government support easing in mid-2022.
- Government funding programs to support consumers' ability to pay bills will ease in the first half of 2022.
- We expect that we will be able to operate our retail stores as effectively as we did in 2021, reflecting the additional safety measures in place but still allowing us to serve our customers in person, in addition to the digital capabilities that have enabled us to continue serving our customers through the pandemic.
- Continued impacts on our TELUS Health Care Centres as a result of ongoing restrictive measures resulting in cancellations of appointments, reduced capacity or closure of clinics. We expect a slow recovery throughout the year, with a focus on effective deployment of value-added services, building capabilities on our virtual platform and optimizing efficiency.
- Our international operations will be impacted by the recoveries in other global economies based on vaccine availability, distribution and effectiveness on their respective populations and regional lockdown measures.
- Our smart food-chain technology business will continue to expand through business acquisitions and organic growth.

- We expect to continue our digitization efforts to simplify how our customers do business with us, introduce new products and services, respond to customer and market needs, and provide highly reliable service.

Our 2022 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 following is a summary of certain significant regulatory developments and proceedings relevant to our 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 to 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.

3500 MHz spectrum auction to support 5G

On July 29, 2021, ISED released the provisional results of its auction of spectrum in the 3500 MHz band. We acquired 142 licences equating to 16.4 MHz of spectrum at a price of approximately \$1.95 billion. Combined with the spectrum we acquired privately in advance of the auction, we now hold an average of 25 MHz of spectrum in the 3500 MHz band nationally. The auction framework included a 50 MHz set-aside in all markets where 50 MHz or more spectrum was available. This was on top of the competitive imbalance that was already introduced by ISED's 2019 transition decision for the band. That decision left nearly 90 MHz of the 200 MHz band in the hands of band incumbents.

On August 26, 2021, we brought an application in Federal Court for judicial review of the decision of the Minister of Innovation, Science and Industry to permit Videotron to bid on set-aside blocks of spectrum in B.C., Alberta and Manitoba in the 3500 MHz auction. In the application, we argue that Videotron did not meet the eligibility test set out by ISED in the auction framework, and thus should not have been permitted to bid on a portion of the set-aside spectrum that it eventually won. Bell has also brought a similar application. Additionally, on September 21, 2021,

we brought a motion for an interim order enjoining the Minister from releasing the impugned spectrum to Videotron until our application for judicial review is decided. Our motion for an injunction was dismissed on October 22, 2021. Our application for judicial review is scheduled to be heard in February 2022.

We continue to review the results of the auction, including the amounts acquired by our competitors, to determine the impact of the auction on us.

Consultation on amendments to SRSP-520, Technical requirements for fixed and/or mobile systems, including flexible use broadband systems, in the band 3450-3650 MHz

In August 2021, ISED issued a consultation on Standard Radio System Plan (SRSP) 520 to examine technical specifications on the use of 3500 MHz spectrum. In the consultation, ISED identified a concern that 5G equipment operating on 3500 MHz spectrum may have the potential to cause interference with altimeters on aircraft. ISED proposed new restrictions on 3500 MHz spectrum, including a ban on its use in large areas around major airports. Though the consultation closed in August 2021, on September 22, 2021, ISED announced that it was re-opening its consultation to give additional time for parties to comment and made public technical studies that it relied upon to formulate its proposals. ISED also notified prospective 3500 MHz licensees that their final auction payments and issuance of licences, originally scheduled for October 4, 2021, would be delayed until December 17, 2021. On November 18, 2021, ISED issued its decision on amendments to the 3500 MHz technical requirements, which remain effectively as proposed; limiting use in areas around major airports and restricting the transmission of energy above the horizon. ISED projected next steps including a future consultation, should Canadian or global developments and studies merit further changes to the technical rules as it relates to the radio altimeter protection issue. There is a risk that this decision could have a material impact on TELUS depending on how long they remain in application.

mmWave and 3800 MHz spectrum auctions 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. ISED will consult on a licensing framework (i.e., auction rules and conditions of licence) for these mmWave bands in the future. ISED formerly projected that the mmWave auction would commence in 2021, but has now revised its forecast to the first quarter of 2024. There is a risk that the auction rules may favour certain carriers over us and impact our ability to acquire an adequate quantity of mmWave spectrum.

The 3800 MHz spectrum band is seen as an extension to the 3500 MHz band. ISED released the first of two consultations on August 27, 2020. This first consultation featured proposals from ISED and from Telesat, the Canadian satellite spectrum licensee of 3700 to 4200 MHz spectrum, on how to repurpose existing spectrum. On May 21, 2021, ISED released its *Decision on the Technical and Policy Framework for the 3650-4200 MHz Band and Changes to the Frequency Allocation of the 3500-3650 MHz Band*, which will make 250 MHz of spectrum available for auction in the first quarter of 2023. ISED's decision rejects Telesat's proposal for private auction and early clearing of the band. The 3800 MHz spectrum will only be cleared and available by March 2025 in urban areas and March 2027 in many rural areas. Certain rural areas (in the territories and northern parts of B.C., Alberta, Saskatchewan, Manitoba, Ontario, Quebec and Newfoundland and Labrador) are still

deemed satellite-dependent areas and this spectrum will not be available for mobile use in these areas. Many important issues (such as auction format or competitive measures) are subject to the second consultation on an auction framework for the 3800 MHz band. There is a risk that the auction rules will favour certain carriers over us and impact our ability to acquire an adequate quantity of 3800 MHz band spectrum.

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.

Proposed acquisition of Shaw by Rogers

In March 2021, Rogers Communications Inc. and Shaw Communications Inc. announced their agreement for Rogers Communications Inc. to acquire Shaw Communications Inc. In addition to approval by shareholders of Shaw Communications Inc., the acquisition will require approvals by the Competition Bureau, the CRTC and ISED. It is possible that the parties to the transaction will agree to merger remedies that could negatively affect us, or that the CRTC, ISED or other governmental authorities could make (or decline to make) other regulatory changes, or impose behavioural remedies, that could materially affect us directly or affect the industry as a whole. It is also possible that this acquisition could trigger further consolidation in the industry. Until the governmental authorities complete their reviews and make a determination on whether to allow the acquisition and, if so, under what conditions, it is too early to determine the impact of these reviews 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 Bell, Rogers, TELUS 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. In addition, the CRTC has requested that Bell, Rogers, TELUS and SaskTel provide certain low-cost and occasional-use plans, which we have now implemented. We are working to implement the new MVNO and other requirements. The impact of this decision on us will be dependent on the commercial rates that are negotiated for MVNO access.

On May 4, 2021, Data on Tap Inc. brought a petition to the Governor in Council to vary the CRTC's decision in the *Wireless Regulatory Framework* so as to mandate and set rates for full MVNO access. On September 22, 2021, we filed our response opposing this petition. The impact of this petition will not be known unless and until the Governor in Council issues a decision. The Governor in Council has until April 14, 2022, to do so.

We have also been granted leave to appeal 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. If we are successful on appeal, we anticipate it will be easier for us to deploy our 5G infrastructure, in particular on municipal property.

Wireline wholesale services follow-up

On July 22, 2015, the CRTC released *Review of wholesale wireline services and associated policies*, Telecom Regulatory Policy CRTC 2015-326 (TRP 2015-326). The major component of this decision was that the CRTC ordered the introduction of a disaggregated wholesale high-speed access (HSA) service for ISP competitors. This includes access to FTTP facilities.

On June 11, 2020, the CRTC released *Call for comments – Appropriate network configuration for disaggregated wholesale high-speed access services*, Telecom Notice of Consultation CRTC 2020-187 (TNC 2020-187), where it is examining the appropriate network and service configurations for the disaggregated wholesale HSA service regime for all wholesale HSA service providers across the country. This process, which took the place of the previous follow-up proceedings, is now closed. Until the CRTC issues its decision, it is too early to determine the impact of this proceeding on us.

Final rates for aggregated wholesale internet access services

On August 15, 2019, the CRTC released Telecom Order CRTC 2019-288, which finalized rates for the aggregated wholesale internet services of the ILEC and incumbent cable companies. The final rates were considerably lower than the interim rates, and the CRTC ordered the rates to apply retroactively to October 6, 2016. The financial impact of this decision was not material to us.

On September 13, 2019, Bell Canada and affiliated companies and a group of cable companies filed separate applications with the Federal Court of Appeal to seek leave to appeal Telecom Order CRTC 2019-288. Bell Canada and the cable companies also sought a stay of the order. On November 22, 2019, the Federal Court of Appeal allowed both leave applications and granted a stay pending the disposition of the appeal. On September 10, 2020, the Federal Court of Appeal dismissed the appeals on their merits, thereby upholding the CRTC's decision. On February 25, 2021, the Supreme Court of Canada dismissed applications for leave to appeal the Federal Court of Appeal decision brought by Bell Canada and the group of cable companies.

Separately, on November 13, 2019, we filed a petition to the Governor in Council seeking to refer back to Telecom Order CRTC 2019-288 for redetermination of the rates and seeking to vary Telecom Order CRTC 2019-288 on the basis that the rates and retroactive component of the order will threaten future investment. Bell Canada and a group of cable companies filed similar petitions on the same day. On August 15, 2020, the Governor in Council issued an Order in Council dismissing the petitions. However, the Order in Council, as well as an accompanying statement from the Minister of Innovation, Science and Industry, recognized that the rates set out in Telecom Order CRTC 2019-288 would, in some instances, undermine investment in high-quality networks.

On May 27, 2021, following separate applications requesting the CRTC to review and vary Telecom Order 2019-288 filed by each of TELUS, Bell Canada and a group of cable carriers, the CRTC issued Telecom Decision CRTC 2021-181. In this decision, the CRTC largely reversed Telecom Order 2019-288, meaning that we do not have to implement the rates ordered in Telecom Order CRTC 2019-288 or issue significant retroactive refunds to wholesale customers. Given that Telecom Decision 2021-181 essentially maintains the rates that have been in place since 2016, the decision does not have a material effect on us.

On May 28, 2021, TekSavvy Solutions Inc. brought a petition to the Governor in Council to vary the decision. On July 15, 2021, the

Competitive Network Operators of Canada brought a similar petition. On August 25, 2021, National Capital Freenet Inc. also filed a petition to the Governor in Council. On June 28, 2021, TekSavvy Solutions Inc. sought leave to appeal Telecom Decision CRTC 2021-181 to the Federal Court of Appeal. The Federal Court of Appeal granted leave to appeal on September 15, 2021. We are not filing responding submissions in the petitions or the appeal.

5G security review – Public Safety Canada

In September 2018, the federal government announced a review of national cybersecurity requirements for Canada's 5G networks. The stated objective of the reviews was to provide policy clarity on what security controls or restrictions the government intends to impose on 5G networks in Canada and to which foreign vendors such controls and restrictions would apply. The timelines for the conclusion of this review were never released by the federal government, which has also not announced its intentions regarding 5G cybersecurity requirements. Following the September 20, 2021 federal election, on September 28, 2021, Prime Minister Justin Trudeau stated: "We will look forward to sharing a decision on many different issues, including telecommunications and Huawei, in the coming weeks," indicating that the government is still weighing some decisions, but is nearing a final decision. Given the range of potential government or regulatory action that may result from this review, the impact on us, and on Canadian mobile service providers in general, cannot be reliably predicted.

International security developments

On May 16, 2019, an executive order entered into force permitting the U.S. Secretary of Commerce to block certain technology transactions deemed to constitute national security risks. The U.S. Department of Commerce subsequently established a list of entities, including Huawei Technologies Co., Ltd. and its global affiliates, to whom the export, re-export or transfer (in-country) of certain restricted technologies was prohibited unless specifically authorized under licence.

In a unanimous vote on July 13, 2021, the U.S. Federal Communications Commission authorized a US\$1.9 billion subsidy program to enable telecommunications companies with fewer than 10 million subscribers to replace Huawei and ZTE equipment.

Given the range of potential government or regulatory actions by foreign governments with respect to Huawei, the impact on us, and on Canadian mobile service providers generally, cannot currently be predicted.

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 in early 2022. It is too early to determine the impact of the proceeding on us.

CRTC proceeding regarding access to poles owned by Canadian carriers

On October 30, 2020, the CRTC issued *Call for comments regarding potential regulatory measures to make access to poles owned by Canadian carriers more efficient*, Telecom Notice of Consultation CRTC 2020-366. The CRTC commenced the proceeding further to comments in the proceeding initiated by Telecom Notice of Consultation CRTC 2019-406 that untimely and costly access to poles owned by Canadian carriers has negative impacts on broadband deployment, particularly in areas with limited or no access to broadband-capable networks. In the most recent proceeding, the CRTC is considering, among other issues, authorization delays, make-ready costs, spare capacity reservations, joint use agreements and the potential for improved dispute resolution. We are participating fully in the proceeding. It is too early to determine the impact of the proceeding on us.

Government mobile wireless pricing election commitment

Ahead of the 2019 federal election, the Liberal Party of Canada made a commitment to reduce wireless prices by 25%. On March 5, 2020, the Liberal government clarified its expectation that we, Bell, and Rogers (including flanker brands) lower mobile prices for postpaid, bring-your-own-device plans in the 2 to 6 GB range by 25% over a two-year period. To track progress, the government is reporting quarterly on wireless pricing. Although the required price reductions were reported as met in the latest quarterly report which covered the period from October to December 2021, the two-year period to reduce wireless prices is due to end in March 2022, following the initial announcement made in March 2020 to track wireless prices. In light of the fact that the two-year reporting period continues and the government's statement that wireless services are still too expensive, we are unable to determine the full impact of this commitment at this time. The announcement or implementation of specific regulations or other actions intended to reduce cell phone plan prices could precipitate a material reduction in operating expenditures and capital expenditures to ameliorate this impact.

CRTC review of rate setting for wholesale telecommunications services

On April 24, 2020, the CRTC issued *Call for comments – Review of the approach to rate setting for wholesale telecommunications services*, Telecom Notice of Consultation CRTC 2020-131. In this proceeding, the CRTC is seeking comment on whether to change its methodology of setting wholesale rates and, if so, how. The CRTC has stated its intent to use the proceeding to establish a more transparent and efficient rate-setting process. We are participating fully in all stages of the proceeding. It is too early to determine the impact of the proceeding on us.

CRTC review of deadlines for transition to 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. The CRTC directed NG9-1-1 network providers, including us, to establish their NG9-1-1 networks, complete all NG9-1-1 production onboarding activities, and be ready to provide NG9-1-1 voice service by transiting live NG9-1-1 traffic, wherever public safety answering points have been established in a particular region, by March 1, 2022. We will work to comply with the directives from this decision, including our recent application proposing to introduce NG9-1-1 and the associated service agreements filed on November 1, 2021. The impact of this proceeding is not expected to be material.

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. The full impact of the Act is not yet known because some key provisions, such as those relating to AI, have to be further elaborated through government regulations and interpretive guidance from the regulator. The materiality of the change cannot be fully assessed at this time.

Proposed subsidy increases for Northwestel

On November 2, 2020, the CRTC initiated 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 the North. The proceeding is ongoing. The impact of this proceeding is not expected to be material.

Broadcasting-related issues

Review of the Telecommunications Act, the Radiocommunication Act and the Broadcasting Act

On January 29, 2020, the Broadcasting and Telecommunications Legislative Review Panel released its final report entitled *Canada's Communications Future: Time to Act*. The report contains 97 recommendations to update legislation governing broadcasting, telecommunications and radiocommunication for the Government of Canada to consider. Further to the report, on November 3, 2020, the government introduced legislation to amend the *Broadcasting Act*. Bill C-10 would have: brought streaming services that operate over the internet expressly within the scope of the *Broadcasting Act*; provided the CRTC with new and expanded regulatory powers to implement a modernized regulatory framework that addresses declining levels of support for Canadian content over the past several years; and provided a more sustainable source of support going forward. On June 21, 2021, Bill C-10 passed third reading at the House of Commons, but its debate in the Senate was cut short upon the proroguing of parliament and the calling of the federal election. On September 20, 2021, the Liberals were re-elected with a minority government, and may either attempt to reinstate Bill C-10 to the progress it had reached under the previous session, or alternatively, introduce a new bill to reform the *Broadcasting Act* and the entire legislative review process would start anew. It is too early to determine if proposed amendments, as well as any other potential legislative changes arising as a result of the report, will have a material impact on us.

Review of the Copyright Act and Copyright Board reforms

The *Copyright Act*'s statutorily mandated five-year review was due in 2017, and a process for conducting the review via parliamentary committee was announced in December 2017. The House of Commons Standing Committee on Industry, Science and Technology, with the assistance of the House of Commons Standing Committee on Canadian Heritage, completed the review early in 2019, and both committees presented reports to the House of Commons in May and June of 2019.

To date, no legislation has been proposed as a result of the parliamentary review, although it has led to further government consultations 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 government officials have signaled that copyright reform legislation may be tabled in early 2022. The policy approach for copyright has traditionally been based on a balance of interests of creators and consumers, 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 has 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.

Legal challenge to the CRTC's ability to regulate affiliation agreements

The CRTC's ability to regulate affiliation agreements between broadcasting distributors and programming services was challenged by a vertically integrated broadcasting entity before the Federal Court of Appeal. The Federal Court of Appeal heard the case on May 18, 2021, and released its decision on July 28, 2021. We were granted leave to intervene in the case and appeared at the hearing, where we defended the CRTC's jurisdiction. The Federal Court of Appeal's decision confirmed that the CRTC has jurisdiction to govern economic aspects of disputes between programming services and distributors, and generally supported our competitive position by reinforcing the validity of competitive safeguards put in place by the CRTC to protect non-vertically integrated companies in the broadcasting sector. On September 29, 2021, the vertically integrated company filed an application for leave to appeal the Federal Court of Appeal's decision to the Supreme Court of Canada. On November 25, 2021, we filed a response opposing the application for leave to appeal. It is too early to determine the impact this application for leave to appeal might have on our broadcasting distribution activities.

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. The impact of this proceeding is not expected to be material.

10 Risks and risk management

10.1 Overview

Risk arises from the 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 create positive opportunities. Risk oversight and management processes are integral elements of our risk governance and strategic planning practices.

Risk governance, oversight and culture

We maintain strong 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 the management of risks and reporting of risk information 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.

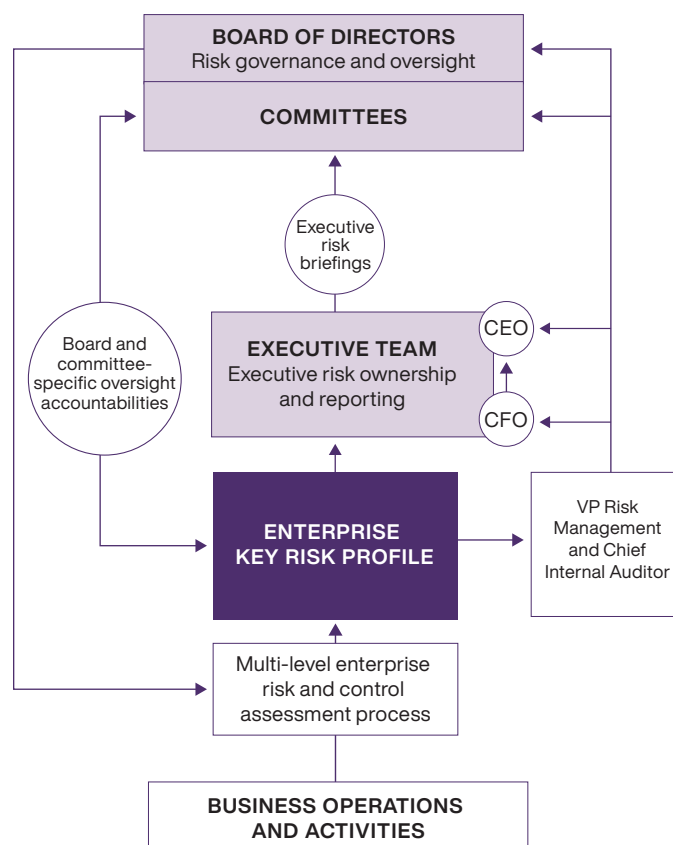
Responsibilities for risk management

We take a multi-step 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 business operational 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 us with 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, consider the impacts of our decisions on our multiple 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.

TELUS enterprise risk governance and management



We have in place multi-level enterprise risk and control assessment processes that solicit and incorporate insights from leaders across all areas of TELUS and enable us to track multi-year trends in key risks and the control environment. A comprehensive annual risk and control assessment is conducted with leaders and an annual assessment is completed by Board members to provide perspective on key enterprise risks. Results of the assessments are shared with senior management, our Board of Directors 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 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 uncertainties

This section describes our principal risks and uncertainties. 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 or valuing TELUS as an investment. These risks and the associated risk mitigation activities are addressed further in the following sections.

On March 11, 2020, the World Health Organization declared the spread of the novel coronavirus associated with COVID-19 to be a global pandemic. Due to the wide range of possible COVID-19 pandemic outcomes and the uncertainty with regard to the duration and impact of the pandemic, government policies implemented to limit its spread and the ongoing development and distribution of effective vaccines and treatments, we cannot accurately forecast the impact of the COVID-19 pandemic on our future operations, financial performance, financial position or cash flows. Throughout 2021, successive waves of the pandemic continued to have a material impact on our customers and on our business. Restrictions on travel continued to reduce our revenue from mobile roaming and lockdowns have led to decreased foot traffic which has impacted loading across in-person channels. Our global operations have also been impacted depending on the geographical regions where we and our customers operate, and other international, regional and local government responses to the COVID-19 pandemic, for example, temporary site closures enforced across our delivery sites. In response, we have made significant investments to adapt to these challenges, ensuring that our workforce is equipped to be flexible when restrictions are imposed. While high vaccination rates have enabled the reopening of many areas of the economy, successive waves of COVID-19 cases have resulted in restrictions being introduced and continue to affect customer behaviour, for example by driving a demand for online shopping.

The COVID-19 pandemic has impacted our customers, suppliers and vendors, our team members and our communities, and this has led to changes in our business and operations, including the levels of demand for, and supply of, the products and services that we offer and the channels through which we offer them. Risks and uncertainties that could affect our business results and the market prices of our debt and equity securities, including those of our TELUS International (Cda) Inc. subsidiary, and that could also be heightened by the COVID-19 pandemic or by any future pandemic or similar event include, but are not limited to, the risks described in *Section 10*.

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 risks 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 measures and controls 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 uncertainties

These strategic risks arise from uncertainties that may shape the nature and focus of our strategic direction as an organization 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 impacts (including revenue and free cash flow).	<ul style="list-style-type: none"> • Advocacy • Spectrum acquisition strategies • Non-regulated, diversified revenue streams • Prudent investment and cost efficiency planning decisions that consider our regulatory environment
Competitive environment (see 10.4)	Competitor expansion, activity and intensity (pricing, bundling), as well as non-traditional competitors, 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).	<ul style="list-style-type: none"> • Customers first strategy • Bundling of services • Diversified investment • Monitoring of competitors • Product portfolio innovation and acquisition • Product life cycle management
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.	<ul style="list-style-type: none"> • Technology road map • Fibre deployment • Spectrum acquisition strategies • 5G roll-out
Suppliers (see 10.6)	We may be impacted by supply chain disruptions and lack of resiliency in relation to global or localized 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 our quality of service.	<ul style="list-style-type: none"> • Supplier risk profiling and multi-vendor strategy • Vendor partnerships, contracts and agreements • Supplier code of conduct • Business continuity management plans <p>Information on supply chain sustainability can be found in our sustainability report¹ at telus.com/sustainability.</p>
Organizational change (see 10.7)	Investment and acquisition activities present opportunities to expand our 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.	<ul style="list-style-type: none"> • Investment and acquisition strategy • Pre- and post-acquisition due diligence • TELUS Ventures investments • Innovation partnerships

¹ Not incorporated by reference.

Operational risks and uncertainties

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 operations are supported by policies, procedures and internal controls.

Risk	Potential impact	Mitigations
Customer service (see 10.8)	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.	<ul style="list-style-type: none"> • Process simplification and digitization • Customer experience management
Our systems and processes (see 10.9)	Systems and technology innovation, maintenance and management may impact our IT systems and network reliability, as well as our operating costs.	<ul style="list-style-type: none"> • Life cycle management and adoption of emerging solutions • Project management • Change management • Continuous monitoring and response programs • Disaster recovery program and plans
Security and data protection (see 10.10)	Our awareness of security issues and the effectiveness of our security controls influence our ability to identify potential threats and vulnerabilities, protect our environment, detect breaches, respond to attacks and restore normal operations. A successful disruption may impact the operations of our network or allow the unauthorized interception, destruction, use or dissemination of customer, team member or business information.	<ul style="list-style-type: none"> • Security policies, standards and methodologies • Privacy and security impact assessments • Vulnerability assessments • Continuous monitoring and response programs
Our team (see 10.11)	<p>The rapidly evolving and highly competitive nature of our business and changing workforce demographics, as well as the relative effectiveness of internal training, development and succession 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.</p> <p>Increased mental health challenges faced by team members (and their families) due to ongoing pandemic pressures may result in the loss of key team members through short-term and long-term disability. An organic shift in personal values/expectations may also lead to elevated voluntary turnover.</p>	<ul style="list-style-type: none"> • Performance development program • Health and well-being strategy: <ul style="list-style-type: none"> • Mental health training for leaders and all team members • Ongoing awareness-building with managers • Early intervention strategies for those facing significant challenges • Compensation and benefits program • Retention and succession planning • Work Styles program • Integration of team members joining from acquisitions <p>Additional information on our team member programs can be found in our sustainability report at telus.com/sustainability.</p>
Our environment (see 10.12)	Natural disasters, pandemics, climate change impacts and disruptive events may impact our operations, customer satisfaction and team member experience.	<ul style="list-style-type: none"> • Business continuity and disaster recovery program and plans • Emergency Management Operating Committee (EMOC) • Medical Advisory Council (MAC) to ensure our response and mitigation measures related to the COVID-19 pandemic are informed and supported by qualified medical advice • Commitments to sustainable and responsible business practices, with targets that balance economic growth with positive social and environmental outcomes <p>See <i>Section 5.2</i> of our 2021 Annual Information Form for a description of our alignment with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Additionally, a detailed report of our environmental risk mitigation activities can be found in our sustainability report at telus.com/sustainability.</p>

Risk	Potential impact	Mitigations
Real estate matters (see 10.13)	Real estate investments are subject to possible financing risks and uncertainty of future demand, occupancy and rental rates, especially during the pandemic. Future real estate developments may not be completed on budget or on time and may not obtain lease commitments as planned.	<ul style="list-style-type: none"> • Rationalization of locations • Fixed-price supply contracts and expert project management oversight • Costs for the real estate projects are monitored through capital gating and approval processes • Arrange pre-lease agreements with prospective tenants prior to construction completion to fill vacant space • Work from home initiatives

Financial risks and uncertainties

Financial risks arise from uncertainties involved in maintaining appropriate levels of liquidity, financing and debt to sustain operations and support future growth.

Risk	Potential impact	Mitigations
Financing, debt and dividends (see 10.14)	Our access to capital markets at optimal pricing may be impacted by general market conditions and investors' assessments of our cash generation capability. Our current intention to return capital to shareholders could constrain our ability to invest in our operations to support future growth.	<ul style="list-style-type: none"> • Shelf prospectus in effect until June 2023 • Investment grade credit ratings • Credit facilities, trade receivables securitization and commercial paper program • Foreign currency forward contracts
Tax matters (see 10.15)	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 increase our exposure to multiple forms of taxation.	<ul style="list-style-type: none"> • Tax strategy • Internal taxation professionals • External advisors
The economy (see 10.16)	Changing global economic conditions including changing 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.	<ul style="list-style-type: none"> • Pension investment governance and monitoring • Foreign currency forward contracts • Diverse product sets • Efficient business operations

Compliance risks and uncertainties

Compliance risks arise from uncertainties related to compliance with laws and regulations across the many jurisdictions in which we operate globally. We have policies, controls, processes and contractual arrangements in place, as well as insurance coverage, that are designed to support compliance and limit our exposure to compliance risks.

Risk	Potential impact	Mitigations
Litigation and legal matters (see 10.17)	Complexity of, and compliance with, laws, regulations and commitments may have a financial and reputational impact.	<ul style="list-style-type: none"> • Customer contracts and agreements • Supplier contracts and agreements • Insurance policies • Compliance programs

TELUS International subordinate voting shares

The market price of the TI subordinate voting shares may be volatile and is likely to fluctuate due to a number of factors, including actual or anticipated changes in profitability; general economic, social or political developments; changes in industry conditions; changes in governance regulation; inflation; the general state of the securities

markets; and other material events. TI may not achieve its publicly announced targets, which could result in a reduction in the market price of the TI subordinate voting shares. A reduction in the market price of the TI subordinate voting shares due to these or other factors could result in a reduction in the fair value of TI multiple voting shares held by TELUS.

10.3 Regulatory matters

Risk category: Strategic

The regulatory regime under which we operate, 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 forth, 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 Innovation, Science and Economic Development Canada (ISED), which establishes spectrum policies, determines spectrum auction frameworks, issues licences 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).

With our Internet of Things (IoT), business, health, agriculture and international footprint, our operations must also comply with the laws, regulations and decisions in effect in all of the jurisdictions in which we operate. These jurisdictions, as well as the contracts that we enter into (particularly those of our TI and TELUS Agriculture subsidiaries), require us to comply with, or facilitate our customers' and clients' compliance with, numerous complex and sometimes conflicting legal regimes, both domestically and internationally. These laws and regulations relate to a number of aspects of our business, including anti-corruption, internal financial control and disclosure obligations, data privacy and protection, wages-and-hours-of-work standards, employment and labour relations, trade protections and restrictions, import and export control, tariffs, taxation, sanctions, data and transaction processing security, payment card industry data security standards, records management, user-generated content hosted on websites we operate, privacy practices, data residency, corporate governance, anti-trust and competition, team member and third-party complaints, telemarketing regulations, telephone consumer 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 include, among others, U.S. federal laws and regulations; state laws on third-party administration services, utilization review services, data privacy and protection telemarketing services; and state laws on 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 international 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 international subsidiaries' clients. The application of these laws and regulations to our international subsidiaries' clients is often unclear, and laws and regulations of different jurisdictions may at times conflict. The global nature of our operations increases the difficulty of compliance. For example, in many foreign countries, particularly in

those with developing economies, it is common to engage in business practices that are prohibited by regulations applicable to us or our international subsidiaries' clients, including Canada's *Corruption of Foreign Public Officials Act* and the U.S. *Foreign Corrupt Practices Act*. We cannot provide assurance that our international subsidiaries' clients or their customers will not take actions in violation of our internal policies or Canadian or U.S. laws. Compliance with these laws and regulations may be further challenged by the shift to remote working arrangements that was initiated in response to the COVID-19 pandemic and is expected to continue in the near term. For example, payment card industry and *Health Insurance and Portability and Accountability Act* guidance is evolving in light of these remote working arrangements globally, and thus there is uncertainty over additional costs and our ability to comply with these evolving standards.

We have acquired a number of businesses and entered into new areas in the health sector, including virtual care and digital pharmacy services, that are highly regulated and that also involve risk related to the quality of care. The operations of our health business 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 the 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, in addition to the laws and regulations applicable to the provision of "insured" services (including temporary billing codes adopted by each provincial government in response to the COVID-19 pandemic, which are determined by each province and are not uniform across Canada), the related laws, regulations, policies, guidelines and directives are still evolving and thus are subject to being interpreted and applied in different ways.

In Canada, federal and provincial privacy laws are changing, with a trend toward more stringent requirements and greater enforcement powers. The province of Quebec recently passed amendments to the *Act Respecting the Protection of Personal Information in the Private Sector*. Over three years, the amendments will phase in major changes and new regulatory requirements in areas such as notice, consent, data breach notification and the use of automated decision systems. In September 2023, the amendments will implement a new enforcement regime, which includes substantial fines, administrative monetary penalties and a private right of action with minimum statutory damages. The federal government may also re-introduce privacy reform legislation that will increase the regulatory burden, as described in *Section 9.4 Communications industry regulatory developments and proceedings*. Similarly, provinces such as British Columbia and Ontario are considering privacy reforms that risk fragmenting the regulatory landscape in Canada.

Potential impact

Changes to the regulatory regime under which we operate, 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 investment 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 achieve

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 may not 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 and our 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.

Changes to the regulatory regime under which we operate our health business, including enactment of laws, regulations and policies, guidelines or directives by regulatory and administrative bodies, such as medical associations, provincial colleges of physicians and other associations governing health professionals, could adversely affect the reputation, brand, financial results and operations of our health business. As it relates to our virtual care business, uncertainty regarding the regulatory regime, including the temporary measures adopted in response to the COVID-19 pandemic, combined with the anticipated regulatory changes that may be enacted by provincial governments, could have adverse effects on our business if they result in the revocation of, or significant limitations on, our ability to provide and charge for the provision of virtual care services to our customers.

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 result in reduced 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 satisfied our contractual obligations, or other unintended 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 jurisdictions in which we have operations and, in some cases, where our customers receive our services, including the United States, Canada, 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 have to cease operations in the relevant jurisdictions 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, financial performance, financial condition and cash flows.

Changes over the past 12 months

Significant regulatory developments and proceedings by the Government of Canada, and its various agencies, continued through 2021. Certain significant regulatory developments and proceedings relevant to our business and industry are highlighted in *Section 9.4*. These include, but are not limited to, the following:

- The issuance of the CRTC's decision in its review of the regulatory framework for mobile wireless services

- Continued cybersecurity review of international suppliers of 5G network equipment and technologies to evaluate potential risks involved in the development of 5G networks in Canada
- The CRTC's revisions to its 2019 decision, in which it had significantly reduced wholesale internet service rates charged by incumbent local exchange carriers for wholesale digital subscriber services and cable companies' third-party internet access services to competitor internet service providers
- The expectation set out by the federal government that we, BCE Inc. and Rogers (including respective flanker brands) lower mobile prices for postpaid, bring-your-own-device plans in the 2, 4 and 6 GB range by 25% by March 2022
- The award of spectrum licenses in the 3500 MHz band, including the award of set-aside licenses in B.C., Alberta and Manitoba to Videotron, and our application for judicial review of that decision
- The agreement under which Rogers would acquire Shaw Communications Inc. (Shaw) requires approvals from the Competition Bureau, the CRTC and ISED. The governmental reviews of this transaction are underway and will continue into 2022.

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 will continue to monitor regulatory developments and may need to reconsider our investment decisions with a view to generating a necessary return on capital. Our risk mitigation strategies for investment decisions may include, but are not limited to, reducing capital and operational expenditures and reducing employment.

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 available for sale from competitors. We also continue to strongly advocate that preferential treatment is not required and is not in the best interests of Canadians, especially rural Canadians, for regional carriers, including for 5G services, most notably carriers that are currently part of established, sophisticated and well-financed cable companies.

As it relates to our health business, we monitor new and amended regulations, policies, guidelines and directives to stay ahead and plan for new and changing 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 to ensure quality of care. We also advocate with the federal and provincial governments for reasonable regulations, in part by participating in market studies and other consultations.

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*.

10.4 Competitive environment

Risk category: Strategic

As the telecommunications industry continues to evolve, we have expanded our offerings beyond the delivery of traditional voice and data services for consumer and business customers. We offer services in security and home automation, next-generation digitally-led customer experiences, healthcare and agriculture, both inside and outside Canada (see *Competition overview* in *Section 4.1*). We face intense competition in our traditional voice and data services, as well as in all sectors of our business operations and in all geographic markets.

Mobile markets are characterized by aggressive competition from established players and regional carriers, with competitors using aggressive promotional offers to attract and retain customers.

In the consumer market, cable companies and other competitors continue to offer a mix of residential local voice over IP (VoIP), long distance, internet access and, in some cases, mobile services under one bundled and/or discounted monthly rate, along with their existing broadcast or satellite-based TV services. Some of our competitors own and continue to acquire broadcast content assets, and we continue to source content from them for our broadcasting services.

In the business market, traditional 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 market segments.

TI is a leading digital customer experience innovator with a focus on customer experience and transformation innovation that designs, builds and delivers next-generation digital solutions, including artificial intelligence (AI) and content moderation. TI competes with professional services companies that offer consulting services, information technology companies with digital capabilities, AI and data labelling providers, and traditional 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 expansion of the digital services offered by TI and the markets in which it operates will also introduce it to new and different competitors, many of which may have significantly greater market recognition than TI in the markets it is entering, as well as increased competition from existing competitors that are also expanding their services to include digital capabilities. From time to time, TI's clients that are currently using services may determine that they can provision these services in-house. As a result, TI faces competitive pressure to continually 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 other providers of virtual and clinical care, electronic medical records (EMR) and pharmacy management products, claims adjudicators, systems integrators and health service providers, including those that own a vertically integrated mix of health services delivery, IT solutions and related services, as well as global providers. With consumer-facing health products, we compete in the provision of virtual healthcare services (with access to general practitioners, nurse practitioners, mental health therapists and dietitians through virtual consultations), preventative health services, and personal emergency response services.

TELUS Agriculture is a global data science and digital technology business leveraging technology innovation, ingenuity and AI to optimize agricultural production and the global and local food and consumer goods supply chain. While we maintain a broad solution set as compared to other agriculture technology providers, we compete with focused software and IoT competitors.

Potential impact

Our customers' loyalty and their likelihood to recommend TELUS both depend on our ability to provide a service 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, traditional 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, places pressures on average revenue per subscriber per month (ARPU), average billing per subscriber per month (ABPU), churn rates and costs of acquisition and retention. In addition, technological substitution and technological advances across all key business lines and market segments have blurred the boundaries between broadcasting, internet service and telecommunications sectors (see *Section 10.5 Technology*).

If TI is unable to compete successfully against companies that offer similar services and offer its clients a compelling alternative to the in-house provision of services, the results could include higher client churn rates, revenue loss, pressures on recruitment and retention of team members, service price reductions, and increased marketing and promotional expenses, as well as reduced operating margins, which could have a material adverse effect on the business, financial performance, financial condition and cash flows.

We also face intense competition in agriculture, health and digital technologies from companies that offer similar services. If we are unable to effectively differentiate our offerings in these sectors, our business, financial performance, financial condition and cash flows could be materially adversely impacted, and we may not achieve the benefits of the significant investments that we have made in acquiring, integrating and growing these businesses.

Changes over the past 12 months

On March 15, 2021, Shaw and Rogers announced an agreement under which Rogers would purchase all of Shaw's issued and outstanding Class A and Class B shares for \$40.50 per share, representing a transaction value of approximately \$26 billion (including approximately \$6 billion in Shaw debt). While this transaction is subject to regulatory review by the CRTC, ISED and the Competition Bureau (including if approved, potential requirements for remediation), regardless of outcome, a business combination of this size has significant competitive implications across the telecommunications landscape in Canada. As of February 10, 2022, those reviews have yet to be concluded.

In October 2021, the flanker market (all carriers) aligned to meet the ISED recommended 25% price reduction on 2, 4 and 6GB rate plans. These plans are available across all flanker brands for 4G service with bring-your-own-phone only, effectively increasing the financed entry point to \$50 across all regions in the flanker market.

In October 2020, the CRTC approved the application from Space Exploration Technologies Corp. (SpaceX Starlink) to provide low-earth orbit satellite internet to rural Canadians. Starlink did not complete its beta testing as expected in 2021, although the size of the beta test continues to grow with reports that Starlink now has over 140,000 customers

across 20 countries. However, customers have reported long lead times on equipment delivery. Additionally, in August 2021, the Government of Canada announced a \$1.44 billion investment in Telesat's low-earth orbit satellite constellation. Other competitors in the market include Amazon (Kuiper), Boeing, OneWeb and the Europe-based Thales Alenia. However, as of February 10, 2022, these companies do not yet have approval to provide services in Canada.

Canadian cable competitors are licensing next-generation TV platforms while continuing to increase the speed of their internet offerings and their roll-out of Wi-Fi services in metropolitan areas. Over-the-top (OTT) services, such as Amazon Prime Video, Apple TV, Disney+, Netflix and YouTube, are also competing for share of viewership, which may accelerate the disconnection of traditional paid TV services or affect subscriber and revenue growth in our TV and entertainment services.

Erosion of our residential voice service and the decline of higher-margin legacy voice revenues are expected to continue, due to ongoing technological substitution by mobile and VoIP and competition. This decline has been partially offset by growth in demand and/or migration of customers to IP-based platforms.

The COVID-19 pandemic has driven an accelerated adoption of cloud-based solutions (IP voice, collaboration and network-as-a-service (NaaS) offerings) and expedited the shift from legacy business 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 and are able to leverage their global scale to offer low-cost data storage and cloud computing services. In addition, rapidly evolving technologies, such as software-defined networks (SDNs) and virtualized network functions (VNFs), enable the layering of new services in cloud-centric solutions.

Digital health adoption, including virtual care, is accelerating, prompting rapid expansion of competitor offerings and the emergence of new players in the market, capitalizing on increased demand and available government funding. Early in the COVID-19 pandemic, non-traditional healthcare companies, such as Google, Amazon Web Services and Apple, also entered the healthcare space.

Within the Canadian digital health market specifically, several of TELUS Health's long-standing competitors announced significant investments or acquisitions that mirror the activities of U.S.-based or international companies. The overall trend sees competitors quickly expand product offerings through partnerships or acquisitions. In several cases, some of our competitors are now working together, such as Loblaw Companies Ltd. and Maple Corporation, or Sun Life Financial and Dialogue Technologies Inc. However, we believe no other digital health provider spans the Canadian healthcare ecosystem with breadth or depth comparable to TELUS Health.

In the markets TI competes in, competitors are actively building scale through consolidation (e.g. Sitel Group acquisition of Sykes Enterprises, Inc.) and enhancing digital capabilities through niche acquisitions. There was also a steep rise in employee attrition and labour rates in 2021, in particular at global IT companies, with demand for skilled talent generally driving higher wages worldwide.

Mitigation

Our top corporate priority is putting customers first and earning industry leadership in likelihood to recommend. In fact, 60% of our 2021 internal corporate scorecard is weighted to team member engagement and customer experience. To enhance customer experience, we continue

to invest in our products and services, system and network reliability, team members, and system and process improvements. Additionally, with our product life cycle management processes, we endeavour to introduce innovative products and services through both research and development and acquisition, enhance our current services with integrated bundled offers, and invest in customer-focused initiatives to bring greater transparency and simplicity to our customers, all in order to differentiate ourselves from our competition.

Our 4G technology covers approximately 99% of Canada's population, which has enabled us to establish and maintain a strong position in smart-phone and data device selection and expand roaming capability to more than 225 global destinations. To compete effectively across customer segments, 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*). TELUS' 5G network has been deployed across most major tier 1 and tier 2 areas in Canada, and covered 70% of Canada's population as at December 31, 2021. As we expand our 5G coverage, we will continue to offer a network that is reliable, fast and built in full compliance with all of the Health Canada safety guidelines in order to provide our customers with faster speeds, increased capacity and near-instantaneous responsiveness, while also enabling applications such as remote surgery and autonomous cars and the creation of truly smart cities (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. At December 31, 2021, more than 2.7 million households and businesses in B.C., Alberta and Eastern Quebec were connected with fibre-optic cable, which provides these premises with immediate access to our fibre-optic infrastructure. This is up from approximately 2.5 million households and businesses at December 31, 2020. Our broadband investments extend the reach and functionality of our IP TV services and business and healthcare solutions, and are also enabling a more efficient and timely evolution to a converged 5G network (see *Our technology, systems and properties in Section 4.2*).

Our IP TV and OTT multimedia initiatives 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, Disney+, Netflix and YouTube, while also strengthening 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 services and offer higher-resolution video over the internet, we continue to make investments in our network. As of January 2022, TELUS PureFibre is still the leader in Canada in the Netflix Internet Service Provider (ISP) Speed Index, a measure of prime-time Netflix performance delivered by a specific group of ISPs around the world, as well as being ranked as the fastest ISP in Canada among major ISPs by U.S.-based PCMag. In 2021, we were ranked first in network coverage, speed, reliability or experience by Opensignal, Ookla and Tutela.

Our SmartHome Security and Secure Business solutions offerings further leverage our infrastructure investments and our proven customer experience capabilities to enhance our suite of services with video surveillance and analytics, home and business automation and related safety and security monitoring. These services leverage smartphone applications and our leading PureFibre and wireless networks, while also generating multi-service bundling and retention profiles.

We continue to add to our capabilities in the business market through product development, acquisitions and partnerships and investments in SDN, unified communications and IoT. By acquiring and combining six companies (bluArc, BroadConnect Canada, Infra-Solutions, Netrium, Radiant and Ubity), TELUS created GoCo, a fully integrated organization that quickly became one of Canada's leading providers of some of the market's fastest-growing solutions, such as SD-WAN and unified communication.

To meet our customer 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, we have team members with expertise in advanced analytics, AI, machine learning and data analysis, together with leading digital technologies. We have also built an agile delivery model with global scale with substantially all of our delivery locations connected through a carrier-grade infrastructure backed by cloud-based technologies, enabling globally distributed and virtualized teams. However, our primary competitive differentiator is our unique workplace culture, which makes people and a shared set of values a priority in everything we do. We continue to build on this culture of care, ensuring the full engagement of the individuals we choose to join our team, the clients we choose to work with and the manner in which we build and run our business. TI is focused on organic growth, accelerating digital adoption for all solutions offered, with an emphasis on collaborative innovation. We also continue to consider inorganic mergers and acquisitions in executing our growth strategy, adding scale and digital capabilities. In the current evolving labour market, the ability to attract and retain talent is key to TI's business. We continue to adapt our models and practices by assessing the regional conditions of the markets we operate in, and by offering proactive compensation and talent programs.

Through TELUS Health, we have leveraged our systems, proprietary solutions and third-party solutions to extend our footprint in healthcare and benefit from the investments in eHealth being made by governments and employers. With the introduction of healthcare products and services for Canadians, we are seeing evidence of a positive shift in perception, driving overall interest and sales of our services, and differentiating us from our competitors.

Over the course of two and a half years, we completed a number of key acquisitions in order to assemble a suite of agriculture industry assets. In November 2020, TELUS Agriculture was launched to help companies improve the reliability of their supply chain, protect their brands, and drive efficiency and profitability. As one of the few service providers with a perspective that spans the full value chain, we expect to be able to differentiate ourselves from more narrowly focused competitors.

We are continuing 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 product portfolio; 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 facilitate service

development and the expansion of our subscriber base, as well as to address the accelerating growth in demand for data usage.

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 use 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).

An accentuation of a paradigm shift involving customer adoption of alternative technologies, such as video and voice OTT offerings (e.g. Netflix and FaceTime), IP voice and collaboration services, NaaS, and increasingly available Wi-Fi networks, could negatively affect our revenue streams. For example, Wi-Fi networks are being used to deliver entertainment services to customers outside the home, while OTT content providers are competing for a share of entertainment viewership. OTT technology may also impact the business 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. In addition, we are constantly focused on advances in cybersecurity, in order to identify any opportunities they may offer.

Through TI, we are a digital customer experience innovator that designs, builds and delivers high-tech, high-touch next-generation solutions, including artificial intelligence and content moderation.

Through TELUS Health's services – such as pharmacy management, EMRs (including mobile EMRs), electronic health records, personal health records, clinical information systems, remote patient monitoring, virtual care offerings and online claims settlement management software solutions, including the online renewal of prescriptions, e-prescribing services and MedDialog – TELUS Health facilitates the integration of electronic health records from the home to the doctor's office to the hospital, making critical health information available to healthcare providers over our broadband network.

Our TELUS Agriculture 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.

Potential impact

Our mobile business depends on deploying technology and maintaining sufficient access to spectrum to deliver services. Rising data traffic levels and the fast pace of data device innovation present challenges to providing adequate capacity and maintaining high service levels at competitive cost structures.

Our growth and profitability and the diversity of our revenue sources will depend on our ability to develop and adopt new technologies that help us expand our existing offerings, proactively identify new revenue streams and improve cost efficiencies in our operations, all while meeting rapidly evolving customer expectations. We may not always 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. Our 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.

Changes over the past 12 months

The demand for mobile data services continues to grow rapidly. According to the 2021 Communications Market Report, the average data usage per subscriber increased by 27.6% in 2020 over the 2019 average, while mobile data revenue grew by less than 1% over the same period.

In July 2021, ISED completed its auction of 3500 MHz spectrum, which has become the primary band for 5G mobile coverage globally. TELUS secured 16.4 MHz of 3500 MHz spectrum at the auction, and together with the spectrum acquired privately in January 2021, this brings our national 3500 MHz spectrum holdings to 25 MHz, averaging 40 MHz in our key markets. The limited amount of spectrum available at auction creates a risk that we may not be able to compete equally in the provision of higher network speeds and 5G capacity in all of the markets we serve.

Mitigation

As at December 31, 2021, our 4G LTE access technology covered 99% of Canada's population, and our LTE-A access technology covered 97%, while our 5G access technology covered 70%. Our ongoing investments in 4G LTE technology, including LTE-A technology and new 5G capabilities, allow us to manage data capacity demands by more effectively utilizing our spectrum holdings. The evolution to 5G technologies is supported by our investments in our core network, IP network, 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 new innovative applications for consumers and businesses.

Mobile network infrastructure investments will increasingly be directed to systems based on Network Function Virtualization (NFV), which offers 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 NFV and SDN technologies. This will allow us to virtualize much of our infrastructure and will also facilitate a common control plane for coordination of our virtualized and non-virtualized network assets. The architecture of our intelligence and content capabilities is located at the edge of our network, close to our customers. The distributed smaller-scale computing power and storage deliver services faster while managing the ongoing need to continually scale the IP/fibre core network infrastructure.

Rapid growth of data volumes requires efficient utilization of all our spectrum. We have extensively deployed our 4G spectrum holdings, and we began operationalizing our 5G spectrum in 2020, including spectrum in the 600 MHz band. Further, we expect to continue operationalizing our recently acquired 3500 MHz spectrum through early 2022. The spectrum licences previously used for our CDMA access technology have been repurposed for use with LTE and 5G technologies. Our deployment of small-cell technology is helping us achieve a more efficient utilization of our spectrum holdings and mitigate any potential speed and capacity disadvantages created by 3500 MHz availability.

Since early 2014, we have also worked with numerous businesses and many major sports and entertainment venues as we continue to expand our public Wi-Fi infrastructure. This public Wi-Fi service is a part of our network strategy of deploying small cells that integrate seamlessly with our 4G and 5G wireless access technology, automatically shifting our smartphone customers to Wi-Fi and offloading data traffic from our wireless spectrum. Integrated public Wi-Fi infrastructure build-out activity also extends service and channel opportunities with small and medium-sized businesses and improves customers' likelihood to recommend. Integration of home Wi-Fi increases the propensity for higher data usage on smartphones within and outside the home, helping to drive the uptake of our internet service. In addition to the availability of our Wi-Fi service, our IoT portfolio is also growing, with the addition of services such as GEOTrac and TELUS Alert and Assist, as well as a wide variety of IoT solutions, combined with seamless global IoT connectivity across more than 200 countries and networks. 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. In addition, we are maintaining a constant focus on cybersecurity solutions, recognizing that cybersecurity, as an ecosystem of technologies and processes working together, may provide greater visibility of risks and guide better security decisions for organizations across Canada.

Ongoing investments in fibre-to-the-premises, along with our copper-to-fibre migration program and copper decommissioning within our fibre footprint, should support the further evolution of IP-based telephony, and as those services evolve, we will continue to assess opportunities to further 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 new and advanced 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 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 a new IP infrastructure strategy that leverages standards-based functionality, which could allow us to further simplify our network.

10.6 Suppliers

Risk category: Strategic

We rely on, and have relationships with, multiple vendors, including large suppliers such as Amazon, Apple, Cisco, Google, Microsoft, Ericsson, 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 global 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.

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 increase their market power and adversely affect our ability to purchase certain products at an affordable cost. Consequently, the success of upgrades and the evolution of technology that we offer our customers, including our IP TV solutions and the roll-out and evolution of our broadband technologies and systems, may be impacted, as well as the cost of acquisition or the time required to deploy certain technologies and systems.

There is no guarantee that our vendor strategies and agreements will not be impacted by vendor operational difficulties or government/regulatory pressures, or that we will not incur additional costs or delays in continuing to provide services or in deploying our technologies and systems.

Changes over the past 12 months

While the COVID-19 pandemic has had a significant impact on many of our suppliers, the pandemic-related challenges affecting manufacturing operations have largely been managed effectively. The continued pandemic-related reduction in commercial air traffic has eliminated the accompanying air cargo capacity, resulting in a rising demand for ocean freight. This has put pressure on the availability of both shipping vessels and ports, as well as domestic road and rail transportation capacities. The widely reported global supply chain shortages have had a particular impact on technology products, beginning with a shortage of silicon wafers and extending to the chipsets and circuit boards that are embedded in almost all of the products TELUS purchases. These shortages have resulted in both longer lead times and higher costs. These combined logistics and supply chain challenges are expected to continue until the end of 2022.

Following the restrictions placed on its access to U.S.-based technologies, Huawei has exited the mobile phone business. As part of our 5G network upgrade, we have also chosen to replace many of the Huawei products in other layers of our network with enhanced equipment from the suppliers of our 5G network (either Ericsson, Samsung or Nokia). During the transition phase, components removed from the network will be used as replacements, as required on the remaining network, thus ensuring a supply of necessary materials.

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 will be met regardless of changing conditions. We strive to award 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.

In response to the impact of the pandemic and global supply chain challenges, our supply operations, in collaboration with our product development and marketing teams, have extended future forecasts and increased purchase order quantities to help maintain our fulfilment 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 equipment in the form of certified pre-owned devices, including smartphones from our Bring-it-Back program and our Mobile Klinik business, 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 business operations. We consider possible vendor strategies and/or restructuring outcomes when planning for our future growth, as well as the maintenance and support of existing equipment and services. We have reasonable contingency plans for different scenarios, including working with multiple vendors, maintaining ongoing strong 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 continued international focus on telecom suppliers, 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 have announced partnerships with Ericsson, Nokia and Samsung, consistent with our multi-vendor strategy.

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 respect of supplier market power, we offer and promote alternative devices to provide greater choice for consumers and to help limit our reliance on a few key suppliers.

Additional information on supply chain sustainability can be found in our sustainability report at telus.com/sustainability.

10.7 Organizational change

Risk category: Strategic

We will partner, acquire and divest as necessary to accelerate the implementation of our growth strategy. Through the partnerships and acquisitions we pursue, 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 have implemented this strategy, we have experienced rapid growth and significantly expanded our operations into new business sectors and geographic markets, and the number of our team members has increased significantly over the past several years. We expect to develop and improve our internal systems in the locations where we operate in order to address the anticipated continued 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 limit the risks of operating from a limited number of countries and/or expand our capabilities and customer value.

propositions. We may not, however, be able to effectively manage our infrastructure and team member expansion, 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 not be able to develop or improve our internal systems. We also need to manage cultural differences between our team member populations, which may increase the risk for employment law claims. 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, financial performance, financial condition and cash flows.

A substantial majority of the assets and operations of our DLCX and TELUS Agriculture lines of business are located outside of Canada and the United States. In addition, the business strategies of DLCX and TELUS Agriculture may involve expanding or developing their business operations in emerging market regions, including Europe and Asia-Pacific. Due to the international nature of our business, we are exposed to various economic, political and other risks of doing business globally.

Potential impact

Business combination transactions add complexity to our corporate structure, product and service offerings, and operational systems and processes. If pre-acquisition due diligence is insufficient or ineffective, our investments may not realize potential synergies or generate strategic growth.

We may be unable to successfully identify, complete, integrate and realize the benefits of acquisitions or manage the associated risks. Consequently, any acquisition we complete may not result in anticipated or long-term benefits or synergies to us, and we may not be able to further develop the acquired business in the manner we anticipated.

Acquisitions involve a number of risks, including diversion of management's attention from operating our business, developing our relationships with customers and seeking new revenue opportunities; failure to retain key personnel of acquired companies; legal risks and liabilities relating to the acquisition or the acquired entity's legacy operations that may be unknown or undisclosed and for which we may not be indemnified fully or at all; failure to integrate the acquisition in a timely manner; and in the case of potential acquisitions, our ability to finance the acquisitions on attractive terms or at all, any of which could have an adverse effect on our business, financial performance, financial condition and cash flows. Future acquisitions may also require that we incur indebtedness or issue equity securities.

We could also experience financial or other setbacks if transactions encounter unanticipated problems, including problems related to execution, integration or underperformance relative to prior expectations. Post-acquisition activities include the review and alignment of team member cultures, accounting policies, treasury policies, corporate policies such as ethics and privacy policies, team member transfers and moves, information systems integration, optimization of service offerings and the establishment of control over new operations. Such activities may not be conducted efficiently and effectively. Our management may not be able to successfully integrate any future acquired business into our operations and culture on the anticipated timeline or at all, or maintain our standards, controls and policies, which could negatively impact the experience of our customers and clients, the optimization of our service offerings and our control over operations, and otherwise have a material adverse effect on our business, financial performance,

financial condition and cash flows. Consequently, acquisitions may not result in anticipated or long-term benefits or synergies for us, and we may not be able to further develop the acquired business in the manner we anticipated.

The risks to which we are exposed by doing business globally and in 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 only emerge after we have begun preparations and made investments to provide services in a new country or region. Our exposure to such risks may cause us to incur additional costs to mitigate the 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 effectively manage these impacts. 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 U.S. or Canadian legislation, executive order or otherwise. Some TI clients have been targeted by, and may in the future be subject to, such sanctions. Additionally, trade disputes between countries may also lead to unexpected operating difficulties in certain countries, including heightened regulatory scrutiny, greater difficulty transferring funds or negative impacts on currency exchanges. All of the foregoing could have a material adverse effect on our business, 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 fully viable and established. These investments may require high 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.

Changes over the past 12 months

Over the course of 2021, we made a number of acquisitions to support our growth strategy. Please refer to *Note 18* of the Consolidated financial statements for more information.

Mitigation

To support ongoing investment in leading-edge and innovative technology, we have diversified our approach to allow for varied levels of commitment, 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. Our TELUS Ventures investments include more than 50 active companies, and we continue to build on our commitment to help develop exciting new technologies with the potential to deliver benefits for our customers, stakeholders and shareholders. In addition, we continue to engage in partnerships that can conduct research and development of leading-edge innovative technology and services in sectors such as healthcare, agriculture and entertainment.

Over the course of time, we have built a disciplined corporate development and ventures expertise, with due diligence and post-acquisition integration planning rigour, reinforced by a well-defined process and governance approach to evaluating investments and acquisitions. Where a larger-scale business combination is contemplated, our teams follow a well-established and collaborative due-diligence review process, with oversight by our senior leadership and Board.

In addition, formal post-acquisition processes are in place to support onboarding, engagement and operational integration with our risk monitoring and management practices.

10.8 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 are dependent upon 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 driving excellence and efficiency in our operations, 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 TI team members assist with customer-serving activities further strengthens our ability to continue delivering exceptional customer service.

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, DLCX, TELUS Health and TELUS Agriculture. Inadequate or inefficient customer interactions (e.g. order taking, support contact, service delivery, billing accuracy, and network and services reliability) may increase customer dissatisfaction and churn rates. Failure to continue to execute effectively on organizational initiatives, such as our customers first priority, solutions advisor support, digitization and simplification, 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. Regulatory decisions may also limit our ability to invest in our customer experience.

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 high-quality corporate sustainability and social purpose initiatives on a timely basis, and effectively communicate them to our customers, our reputation may suffer, which may negatively impact our ability to attract new customers and retain existing customers.

Our TI business has derived a significant portion of its revenue from a limited number of large clients, and we believe this will continue in the near term. A leading social media company was TI's largest external client in the years ended December 31, 2021 and 2020, and accounted for approximately 18% and 16%, respectively, of its revenue in those periods. Additionally, the volume of work performed for specific clients of TI or the revenue it generates can vary from year to year. For example, a client may demand price reductions, change its customer engagement strategy or begin to provision services in-house, and continued consolidation in many of the verticals in which TI offers services could result in the loss of a client. In light of the foregoing, a major client in one year may not provide the same level of revenue in any subsequent year.

Any significant reduction in, or elimination of, the use of the services TI provides as a result of client consolidation or our removal from a key client's provider network would reduce TI's revenue and could negatively affect our business. In addition, such consolidation may encourage TI's

clients to apply more pressure on TI to lower the prices it charges for its solutions. All of the foregoing could have a material adverse effect on our business, financial condition, financial performance and prospects.

Changes over the past 12 months

The global pandemic has had widespread effects on many areas of service delivery. These include significant constraints on our interactions with our customers; a major acceleration of our transformation into a digital-first organization; and the proliferation of self-serve capabilities to help our customers. These impacts have affected our team around the world, requiring us to be agile in enabling our team members to work efficiently from home or from alternative locations, as well as virtually with customers through our virtual technician model (VTM) and do-it-yourself (DIY) capabilities.

Mitigation

Continued simplification and digitization, including our ongoing work on conversational interactive voice response and enhanced call-back capabilities, have improved first-time interaction experiences by reducing the number of call transfers and shortening customer wait times. We continue to enhance the reliability and functionality of our websites and applications, while promoting digital engagement to minimize effort for our customers and reduce the volume of calls related to basic transactions, interactions and other concerns.

To ensure minimal disruption of our ability to deliver on our service promise during any further lockdown scenarios, we quickly developed a robust capacity to ramp our virtual repair and installation program up or down at a community level in response to outbreak data, maximizing value and safety. This is in conjunction with our focus on further developing our DIY installation and repair program and our VTM, which will generate further internal cost savings and provide greater choice for our customers. We have also invested in our work-from-home capabilities around the world, including additional virtual private network (VPN) capacity, allowing more than 90% of our global workforce to work from home or from alternative locations for the foreseeable future and serve our customers safely. The work of our EMOC also helps us track outbreaks and coordinate responses to keep our customers and team members safe.

Our TI subsidiary was created with an intense focus on customer service excellence, continuous improvement and a values-driven culture with the goal 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 of over 62,000 team members in over 25 countries, minimizing business disruptions. Competence Call Center (CCC) (since rebranded as TELUS International Northern Europe or TINE and comprised substantially of CCC) and Lionbridge AI were acquired during 2020, with the latter's business subsequently rebranded as TELUS International AI Data Solutions (TIAI); these acquisitions help extend the reach of TI's customer service capabilities by diversifying its service offerings. The acquired CCC capabilities have enabled higher-value-added business services with a focus on trust and safety, including content moderation, while TIAI's solutions help improve data functionality and deliver secure, compliant, scalable and high-quality solutions for our TI subsidiary's clients.

Within TELUS Health, we have developed virtual care delivery options, including the capability to perform virtual health assessments from our local care centres. We have also introduced a "virtual first" approach to implementation of our software solutions. Virtual training and onboarding are being delivered to new physician and pharmacist clients, incorporating rigorous practices that ensure the safety of our customers and team members when on-site visits are required. The integration of virtual-visit

functionality into our EMR service offering across Canada allows clinicians to support their own roster of patients virtually while maintaining continuity of care and fully up-to-date health records. As of December 31, 2021, more than 950,000 consultations have been conducted through our various virtual care solutions, including TELUS MyCare, TELUS Health Virtual Care and TELUS EMR Virtual Visit.

As a social capitalism company, we are also committed to making a difference by building stronger, healthier communities and ensuring that the most vulnerable among us are not left behind. Our Internet for Good program is focused on connecting Canadians in need by providing low-cost high-speed internet access for low-income families, young people leaving foster care and people with disabilities, as well as empowering schools across Alberta and B.C. to extend the offer directly to families in need. In addition, our Mobility for Good program provides subsidized smartphones and plans for young people leaving foster care, low-income seniors and, new in 2021, Indigenous women at risk, helping them stay in touch with loved ones, maintain vital support networks and build new lives. We believe these initiatives increase our customers' loyalty and likelihood to recommend, and are key factors in differentiating us from our competitors. Additional information on our sustainability and environmental governance practices and related disclosure is included in *Section 10.12 Our environment*.

We continue to be ranked favourably in third-party reports based on customer and network experience. In 2021, we were ranked first in network coverage, speed, reliability or experience by Opensignal, Ookla and Tutela, as well as being ranked as the fastest ISP among major ISPs in Canada by U.S.-based PCMag. This successful performance was the result of continuing to evolve our coverage across Canada, increasing the accessibility of our network, and working to better understand the emerging network methodologies that can enhance coverage and LTE availability, all of which earned TELUS recognition for providing the best network coverage among our competitors.

10.9 Our systems and processes

Risk category: Operational

We are a key provider of essential telecommunications services, as well as security and health services in Canada. Through TELUS International, 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, 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 our customers.

We have a large number of interconnected operational and business support systems. Acquisitions, business combinations and the development and launch of new services typically require significant systems development and integration efforts. Acquisitions may also pose potential cybersecurity, privacy and brand risks. As next-generation 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 and our TI subsidiary's client contracts may involve complex and multi-faceted customer-specific enterprise requirements, including customized systems and reporting requirements in support of service delivery.

Potential impact

Our network, technology, infrastructure, supply chain, team members and operations may be materially impacted by disruptions in the functioning of critical infrastructure due to intentional threats (see *Section 10.10 Security and data protection*), labour disruptions (see *Section 10.11 Our team*), climate-related risks and natural hazards or unintentional threats (see *Section 10.12 Our environment*), health threats (such as epidemics or pandemics), competitive threats and geopolitical pressures. Any of these risks or hazards may lead to the disruption of our ability to deliver services to our customers and may also make it difficult or impossible for team members to reach or work in our business locations. Damage or destruction that interrupts our provision of services could adversely affect our reputation, our relationships with our customers and our leadership team's ability to administer and supervise our business, and could also cause us to incur substantial additional expenditures to repair or replace damaged equipment or sites. We may also be liable to our customers for any service disruption resulting from such damage or destruction. Our resiliency provisions and disaster recovery plans may not be sufficient to support continuity and reliability of service during disruptions or reduce 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. 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 highly skilled leaders and key personnel. Any of the above factors may adversely affect our business.

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 implement and maintain appropriate 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 significant number of legacy systems and proactively meet constantly evolving business requirements, we could experience an adverse impact on our business and financial performance.

Changes over the past 12 months

Expansion of our work-from-home programs due to the COVID-19 pandemic increased requirements on our VPN systems.

IT services are increasingly delivered by cloud-based vendors as either Software-as-a-Service (SaaS) or Infrastructure-as-a-Service (IaaS) and our reliance upon these third-party cloud-based computing services is growing. While this can result in benefits for 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 now take into account that the delivery of hardware and software services may occur outside of our own infrastructure, and therefore controls need to be incorporated into our operational support processes and tools.

In addition, we routinely have numerous integration activities, complex system and process change initiatives, and development projects underway.

Mitigation

During the COVID-19 pandemic, we expanded our VPN capacity in order to ensure stability, productivity and security for team members working from home and from alternative locations, and we accelerated the purchase and deployment of a new VPN system, improving connection capacity and reliability while enhancing security measures. For our TI subsidiary's clients, to the extent possible, we were able to redistribute customer volumes from facilities impacted by local government-mandated temporary site closures to locations that were less impacted. We have also equipped the majority of our customer-serving TI team members to provide remote support to our clients, as they have since the onset of the pandemic, and in some cases we have thoughtfully and strategically had team members return to work on-site. In addition, the TIAI business utilizes the services of a crowd-sourced provider base that is geographically dispersed across the globe.

In line with industry best practice, our approach is to separate business support systems (BSS) from operational support systems (OSS) and underlying network technology. Our aim is to decouple the introduction of new network technologies from the services we sell to customers so that both can evolve independently. This allows us to optimize network investments while limiting the impact on customer services, and also facilitates the introduction of new services. In addition, due to the maturing nature of telecommunications vendor software, we adopt industry-standard software for BSS/OSS functions, leverage SaaS and IaaS capacities, and avoid custom development where possible. This enables us to leverage vendor knowledge and industry practices acquired through the installation of those platforms at numerous global telecommunications companies. We have established a next-generation BSS/OSS framework to ensure that, as new services and technologies are developed, they are part of the next-generation framework that will ease the retirement of legacy systems in accordance with TeleManagement Forum's next-generation operations systems and software program. As part of our ongoing fibre roll-out, we have invested in new operational support systems that are consolidating our legacy systems and simplifying our current environment. Concurrent with our fibre roll-out, we are also migrating customers from our legacy copper network to our fibre network and beginning to decommission the copper network within our fibre footprint. This will improve our ability to support and maintain our systems with newer, more resilient technology and improve the customer experience. We also continue to make significant investments in system resiliency and reliability in support of our ongoing customers first initiatives.

For each new large enterprise deal, we look to leverage systems and processes developed for previous contracts while incorporating others as required, using a controlled methodology to draft a new custom solution and following standard industry practices for project management and systems support. 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.

Consistent with best practice, we continue to make smart investments in mitigating risk in older technology, modernizing key platforms and capabilities for greater flexibility and reliability, and securing the benefits and capabilities that cloud-based operations can offer. 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. Over the past two years, we have augmented our teams with additional digitization and cloud expertise so they can play a leading role, today and into the future. We are leveraging our 10-year partnership with Google Cloud to supplement our in-house expertise and experience as we extend the digitization of TELUS by harnessing the capabilities of Google Cloud Platform, as well as other partners and cloud-based service providers.

We have adopted a post-acquisition stabilization period for the SmartHome Security and automation line of business to deeply assess any risks, vulnerabilities and exposures, and consider the mitigation of key risks, before integrating common elements into our core systems and critical applications.

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. However, there can be no assurance that specific events, or a combination of events, will not disrupt our operations.

10.10 Security and data protection

Risk category: Operational

As a national provider of 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 in the wider threat landscape. The risks outlined below reflect both our experience and the trends we have observed in the wider ecosystem.

We have a number of assets that may be exposed to risks involving intentional threats. These include physical assets that may be exposed to terrorist attacks, vandalism and/or theft, including (but not limited to) cellular towers, distributive copper cable, corporate stores, network and telephone switch centres, and elements of corporate infrastructure.

Additionally, we operate data centres and collect and manage data in our business and on behalf of our customers (including, in the case of TELUS Health, sensitive personal health information) that may move across our interconnected operational and business support systems and networks. Depending on the nature of the data, it may be restricted for use within Canada or leveraged by our teams or outsourcing partners in Canada or abroad. Our systems and networks may also be subject to cyberattacks. Personal health information in particular is known to be a prime target for these attacks.

A number of TI's service contracts provide for high or unlimited liability for the benefit of its clients related to damages resulting from breaches of privacy or data security in connection with the provision of its services.

Although our network security measures and our authentication of customer credentials are designed to protect against unauthorized disclosure, alteration and destruction of, and access to, data on our networks, it is impossible 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 certain attacks, and there can 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 our users', customers' or clients' data. Additionally, outside parties may attempt to fraudulently induce team members, users, customers or clients to install malicious software, disclose sensitive information or access credentials, or take other actions that may provide access to our data or our users', customers' or clients' data. Because networking and computing environments are increasing in complexity and the techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently, become more sophisticated over time, or may be designed to remain dormant until a predetermined event and thus may not be identified until deployed against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. If an actual or perceived breach of our security measures occurs (or a breach of a third-party vendor's, customer's or client's security 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 harmed and we could lose users, customers and clients. Security breaches also expose us to risk involving loss of information, class action or other litigation brought both by customers and clients and by individuals whose information was compromised; or to remediation costs, increased costs for security measures, loss of revenue, damage to our reputation, and potential liability.

Potential impact

Physical security threats can place both our team members and our infrastructure, systems and networks at risk of incurring significant harm, including personal injury, destruction of property and loss of service and/or data. The risks and consequences of cyberattacks on our assets could surpass the risks and consequences of physical attacks, due to the rapidly evolving nature and sophistication of these threats.

We and our partners may also be subject to software, equipment or other system malfunctions 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 reputational and goodwill damages. Additionally, such damages could result in TELUS incurring costs arising from investigation 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 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 subject to significant liability to customers, our TI subsidiary's clients or its clients' customers for breaching contractual confidentiality and security provisions or for permitting access to personal information subject to privacy laws, as well as liability 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 information was compromised.

Similarly, unauthorized access to or through 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.

From a TELUS Health perspective, breaches involving personal health information have proven to be the most expensive to remediate; such a breach can have a significant impact on trust and reputation, and may also affect future health outcomes.

Changes over the past 12 months

Two major trends evident in the cybersecurity threat landscape in 2021 were supply chain attacks and the use of ransomware in cyberattacks. Supply chain attacks are attractive to cybercriminals since they can have a significant impact on downstream organizations, which adds to the pressure on the primary target and could permit the cybercriminals to leverage that pressure against the downstream organizations and make further demands. Ransomware has been increasingly used in attacks, according to a report from the Cybersecurity and Infrastructure Security Agency in August 2021, which noted a 62% increase in ransomware incidents and a 20% increase in ransomware losses reported between January and July 2021, compared to the same period in 2020.

With our perspective and our monitoring capabilities, we have observed that the frequency and sophistication of cyberattacks continue to increase, with attack techniques evolving in parallel with trends in technology. These attacks may involve a variety of techniques that include the targeting of individuals and the use of sophisticated malicious software and hardware, or a combination of both, to evade the technical and administrative safeguards that are in place (including firewalls, intrusion prevention systems, active monitoring and other measures).

Cyberattacks penetrating the network security of our data centres, or any unauthorized disclosure of, or access to, confidential information and data of our customers and clients or their end customers, could have a negative impact on our reputation and customer confidence, which could have a material adverse effect on our business, financial performance, financial condition and cash flows.

Mitigation

Our security program addresses risk through a number of mechanisms, including:

- Security awareness programs
- Controls based on policies, standards and methodologies that are aligned with recognized industry frameworks and practices
- Monitoring of external activities by potential attackers
- Incident response

- Regular security evaluations of our most important assets
- Identification and regular re-evaluation of our 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 initiatives across the Company.

Incident response is a critical component of control within our organization. Our technical capabilities help us identify security-related events, respond to possible threats and adjust our security posture appropriately. Additionally, 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.

10.11 Our team

Risk category: Operational

Our success depends on the abilities, experience, well-being and engagement of our team members, as well as our ability to attract and retain the talent upon which our service offerings depend. Each year, we launch a number of unique initiatives that are intended to improve our productivity and competitiveness. These may include acquisitions, operational business integrations, efficiency programs, business process automation and/or outsourcing, offshoring and reorganizations. Since keeping team members healthy is critical to keeping them engaged and productive, our well-being strategy provides an array of resources and initiatives to support optimal health and well-being for our team.

We believe that our unique customers first, inclusive and caring culture has contributed to our ability to attract and retain a highly skilled, 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 areas, open new delivery locations, increase the number of team members and acquire new businesses. Current thought-leadership suggests that the experience of the COVID-19 pandemic has altered many shared values and expectations; there is a significant amount of concern regarding a surge in voluntary turnover rates, given the difficulties many people have faced during this trying time and their renewed perspectives moving into the future. If our unique culture is not maintained, our ability to attract and retain highly skilled team members, customers and clients across our core verticals may be adversely impacted, and our operational and financial results may be negatively affected.

Our business could also be adversely affected if individuals providing their data annotation services through TIAI's crowdsourcing solutions were classified as employees. The classification of certain individuals who provide their services through third-party digital platforms as independent contractors is currently being challenged in courts, by legislators and by government agencies in the United States and many other countries where our TIAI business uses the services of

independent contractors. Similarly, some of our healthcare practitioners who are supporting our virtual care business in TELUS Health may be classified as employees instead of independent contractors by decision-makers in certain jurisdictions. We generally believe that most individuals who provide their data annotation services through TIAI's crowdsourcing solution and those healthcare practitioners who support our virtual care business are independent contractors. Since, among other things, independent contractors can choose whether, when, and where to provide services, and for data annotation professionals they are free to provide services on competitors' platforms, and they use their own equipment. In the case of healthcare practitioners, they are free to provide services in other non-virtual healthcare settings. We may not be successful in defending the independent contractor classification in the jurisdictions where we operate or where such classification is challenged. The costs associated with defending, settling or resolving any future lawsuits (including demands for arbitration) relating to the independent contractor classification could be material to our business.

Potential impact

Lost work time resulting from team member illness or injury can negatively affect organizational productivity and employee benefit costs. The loss of key team members through short-term and long-term disability (including absences resulting from mental health concerns), attrition and retirement, the inability to attract and retain team members with essential or evolving skills, including familiarity with legacy systems, or, in the case of team members leading recent acquisitions in emerging areas of our business, specialized knowledge of such businesses, or any deterioration in overall team member morale and engagement resulting from organizational changes, unresolved collective agreements or ongoing cost reduction initiatives, could have an adverse impact on our growth, business and profitability and our efforts to enhance the customer experience. In addition, changes in technology are shifting the set of skills needed by our team and driving competition for resources among global players.

Our corporate sustainability and social purpose initiatives are also important to our team members, as is our ability to offer resources and services to maintain optimal health and well-being. Our failure to meet or exceed our team members' evolving expectations in these areas could have adverse impacts on our ability to attract and retain team members.

Changes over the past 12 months

The COVID-19 pandemic continues to cause heightened uncertainty in many of our lives, resulting in more stress and anxiety and waning resiliency among our team members. Long before March 2020, when we began adopting stricter measures to prevent the spread of COVID-19, 500,000 Canadians per week were citing mental health symptoms or illnesses as the reason they were unable to work. Many Canadian workers – our team members included – are still working from home, isolated from peers and extended family members and friends, and juggling multiple competing priorities. More than 90% of our domestic team members (excluding field technicians and retail store representatives) and over 80% of our TI team members continue to work from home or from alternative work locations.

Global events and ongoing efforts from marginalized communities to achieve equality and social justice have also focused attention on the discrimination and racial injustice that continue to affect many communities.

Mitigation

Our People and Culture team works to provide an environment for our team members that is safe, empowering and engaging. Our culture is anchored in our TELUS leadership values, which were set out by our team nearly two decades ago. These values affirm that:

- We embrace change and initiate opportunity
- We have a passion for growth
- We believe in spirited teamwork
- We have the courage to innovate.

Our objective is to attract, develop and retain talented employees in Canada and internationally. We achieve this objective by investing in our people throughout their careers, and by offering diverse and inclusive employment prospects and development opportunities.

To support team members' overall well-being and to achieve a positive effect on absenteeism in the workplace, we take a holistic and proactive approach to health 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 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.

Having teams that are engaged leads to 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.

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, including changes due to the COVID-19 pandemic. Key highlights included team members confirming their belief that their safety is a priority for their leaders; that their leaders are providing the support they need during this extraordinary time; and that their work arrangements allow them to collaborate productively to meet the needs of customers. TELUS is the most engaged organization globally among organizations of our size and composition according to Kincentric, our survey provider.

In 2021, 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 leaders engaging their teams through our fair process engagement model; and
- Utilizing Pulsecheck feedback including our Inclusion index results to build and create action plans for improvements.

At TELUS, we believe that honouring the diversity of our team, customers and communities opens up new perspectives and enables us to connect for good and deliver remarkable outcomes for everyone.

Building on our initiatives in 2020 to encourage team members across TELUS to share our stance against racism and all forms of systemic bias and reaffirm our commitment to standing united in our pursuit of equity, fairness, social justice and systemic change, we continue to drive our renewed D&I strategy.

We appreciate and celebrate every team member's unique talents, voice and abilities, and we encourage them to always bring their whole selves to work. To promote diversity and inclusion at TELUS with a focus

on both behavioural and structural change, we developed a new inclusive leadership model, along with an inclusion index in our Pulsecheck survey, to measure our progress in fostering an inclusive culture. We achieved a score of 85%, indicating a strong sense of inclusion and belonging among team members.

Building on our commitment to Indigenous Peoples on which our long-standing, respectful and productive relationships, we formalized our commitment to reconciliation in 2021 and launched a five-year Indigenous Reconciliation Action Plan, setting us on a path that will bring our commitment to life. Developed with guidance from Indigenous voices and frameworks for reconciliation, the plan is based on four pillars on which we believe we can drive meaningful change – connectivity, enabling social outcomes, cultural responsiveness and relationships, and economic reconciliation.

We aim to attract and retain key team members through both monetary and non-monetary approaches. Our compensation and benefits program is designed to support 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 effective practices developed in recent years during the implementation of mergers, business integrations and efficiency-related reorganizations.

We have a post-acquisition integration team 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 employee 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.

Additionally, we continuously strive to raise the level of our team members' engagement. We believe that our strong team member engagement continues to be driven by our focus on the customer and team member experience, our success in the marketplace and our social purpose. We plan to continue our focus on other non-monetary factors that are supportive of team member engagement, including performance development, career opportunities, learning and development, recognition, diversity and inclusiveness, well-being resources and initiatives, our leading-edge Work Styles program (enabling team members to work where and how they will be most effective 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 report at telus.com/sustainability.

10.12 Our environment

Risk category: Operational

Our operations, infrastructure and team members 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 policy or the deployment of lower-emission technology.

Our data and voice communications infrastructure, including T1 delivery locations in Central America, India, Europe and the Philippines, may be damaged or disrupted as a result of 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, including the COVID-19 pandemic; technical disruptions and infrastructure breakdowns, including damage to, or interruption of, electrical grids, transportation systems, communication systems or telecommunication cables; issues with information technology systems and networks, including computer glitches, software vulnerabilities and electronic viruses or other malicious code; accidents and other events, such as fires, floods and failures 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 and may create delays and inefficiencies in providing services to clients and potentially result in closure of our operating sites. They also may make it difficult or impossible for team members to reach or work in our business locations. Some locations may not be well-suited to work-from-home approaches to providing client services due to connectivity, infrastructure or other issues.

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. 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. Such 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.

Potential impact

Evolving public expectations and increasingly stringent laws and regulations could result in increased costs of compliance, while failure to recognize and adequately respond to them could result in penalties, regulatory scrutiny or damage to our reputation and brand.

Damage or destruction that interrupts our provision of services could adversely affect our reputation and our relationships with our customers and clients, and could also cause us to incur additional expenditures to repair or replace damaged equipment or sites. Our resiliency provisions and disaster recovery plans may not be sufficient to support continuity and reliability of service during disruptions or reduce 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. 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, financial performance, financial condition and cash flows.

Changes over the past 12 months

The COVID-19 pandemic has had a significant impact on our operations and team members throughout 2021.

Along with the continued and widely shared concerns about climate-related and other environmental impacts on our business operations, there are growing expectations regarding the disclosure of environmental and sustainability governance strategies, targets, and risk management practices, including climate-related scenario analysis. In its 2021 Status Report, the TCFD stated that the number of organizations expressing support for TCFD had grown to more than 2,600 globally, with many companies having begun to implement TCFD recommendations. Our disclosure aligned with these recommendations can be found in our 2021 Annual Information Form.

Potential impacts associated with low levels of non-ionizing radio frequency (RF) emissions from mobile phones and cell towers continue to be a matter of public concern, and will remain a public concern as we deploy 5G technology, with the number of small cells in our infrastructure expected to increase as we continue to upgrade our network.

Mitigation

We have in place widely recognized and award-winning business continuity and disaster recovery programs that encompass provisions for monitoring and preparedness, mitigation, response and recovery. These programs enhance the safety of our team members, minimize the potential impact of threats to our facilities, infrastructure and business operations, support the maintenance of service to our customers and help keep our communities connected.

In response to the COVID-19 pandemic, our Corporate Business Continuity Office convened a cross-functional working group in January 2020, and in March 2020, our EMOC was activated. In 2021, EMOC continued to meet regularly to coordinate strategic management of the COVID-19 pandemic and advise on tactical issues such as door-to-door activities, retail safety measures, and technician safety in the field. COVID-19 case counts are closely monitored so that we can align our operations with public health measures within individual public health agency jurisdictions. These actions are likely to continue in 2022.

We also assembled a Medical Advisory Council (MAC), composed of leading medical professionals from across the country, along with other key leaders from within TELUS. The MAC meets regularly, advises on the Company's COVID-19 pandemic policy, and makes recommendations for specific health and safety measures, which are incorporated into our corporate infectious disease playbook and other guidance. These documents are continuously updated and provide foundational governance for all other pandemic-related playbooks for specific business functions.

The Corporate Business Continuity Office convened the EMOC an additional two times in 2021 to manage the impacts on TELUS of wildfires and flooding in British Columbia.

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 Corporate Governance Committee of our Board is responsible for oversight of corporate social responsibility and 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 report and other filings contains information pertaining to the governance and management of climate-related risks and opportunities. Included are approaches to assessing impacts of these risks using scenario analysis, as well as strategies for addressing impacts of these risks, risk management practices pertaining to these risks, and the metrics and targets used to manage them. Scenario analysis in 2021 included a consideration of risks and opportunities under a low-carbon adoption scenario and an extreme global warming scenario. Additionally, we have established corporate targets with respect to operational net carbon neutrality, renewable energy, energy efficiency and waste reduction. Included in these are science-based targets, approved by the Science-based Targets initiative, for our scope 1, 2 and 3 greenhouse gas (GHG) emissions. Related action plans include having executed multiple power purchase agreements for renewable energy.

An ISO 14001:2015 certified environmental management system is in place to identify and control environmental impacts associated with our operations and to support compliance with regulatory requirements. We continue to identify new ways to reduce our environmental impact.

See our climate-related financial disclosure in *Section 5.2* of our 2021 Annual Information Form. Additionally, a detailed report of our environmental risk mitigation activities and details with respect to our targets can be found in our sustainability report at telus.com/sustainability.

Canada's federal government is responsible for establishing safe limits for human exposure to RF electromagnetic fields. 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 also continues as part of the regulatory process concerning the installation of new cell towers.

10.13 Real estate matters

Risk category: Operational

Our real estate properties (owned or leased) include administrative office spaces, 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 are on buildings held under leases or licences with varying terms. We currently participate in two real estate joint ventures.

Investments in real estate property development, including return on investment and benefits realization, may be impacted by local economies, changes in construction costs and timelines, financing costs and partnership agreements. Our current and future investments in real estate may also be impacted by the COVID-19 pandemic as we continue to take precautionary measures and follow public health guidelines and restrictions to minimize the spread of the virus to our team members, tenants and the communities in which we operate.

Potential impact

Risks associated with our real estate investments include possible financing risks and uncertainty of future demand, occupancy and rental rates especially during 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 on investment and loan amounts should a project's business plan not be successfully realized.

Changes over the past 12 months

Over the course of 2021, we have:

- Renegotiated and executed two agreements with external global real estate experts for property management and the maintenance and repair of our real estate assets and subject to performance measures overseen by us
- Entered into binding joint venture development agreements with an external real estate development firm for the redevelopment of two surplus real estate sites
- Started executing on our real estate future mode of operation, which involves consolidation of a number of large office holdings throughout the country representing roughly a floor area reduction of 25% of our office space and have undertaken a floor and building hibernation program during the COVID-19 lockdowns to mitigate real estate operating costs
- Downsized our critical network infrastructure in existing network buildings and reduced required equipment space through customer migrations from copper to fibre-based services.

TELUS Sky has completed its development phase and additional office and residential leasing is underway. TELUS Ocean in Victoria, B.C. has received all required municipal planning approvals and commencement of construction and pre-leasing is planned for 2022.

Mitigation

For our construction projects (residential and commercial) in progress, budget overrun risks have been mitigated with 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 aim to mitigate leasing risk of vacant space by arranging pre-lease agreements with prospective tenants prior to construction completion.

On new deals, joint venture partners and developers are compensated partially 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 costs. We also rely on our internal and external legal teams to ensure that contracts, partnerships and procurements with third parties are created to ensure our interests are represented.

We plan in advance our lease strategy for those properties that are not directly owned including quarterly reviews for continued requirement/demand, lease expiry risk, rental rate risk, landlord risk and physical risk (such as poor building condition or flooding).

10.14 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, trade receivables securitization and public debt markets, as well as the continuation of the dividend growth plan outlined in our multi-year objectives.

The trading price may also be affected by TI factors, such as:

- The market price of TI subordinate voting shares
- TI's access to banks and public markets
- Actions taken or statements made by TELUS, TI or others concerning our relationship with TI
- Factors affecting the performance of TI, that 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*.

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 low rates.

There can be no assurance that we will maintain or improve our current credit ratings. Given the cash demands of the 3500 MHz spectrum auction held in 2021 and upcoming spectrum auctions, 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. 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 BBB+ or equivalent 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.

Changes over the past 12 months

At December 31, 2021, our senior unsecured debt was approximately \$17.8 billion (see the *Senior unsecured debt principal maturities* chart in *Section 4.3*). We operate a commercial paper program (maximum of US\$1.5 billion) that currently provides access to low-cost funding. As at December 31, 2021, we had \$1.9 billion of commercial paper outstanding, all of which was denominated in U.S. dollars (US\$1.5 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.

Mitigation

We may finance future capital 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 securitized trade receivables, use of commercial paper and/or the issuance of debt or equity securities. We have a shelf prospectus in effect until June 2023, under which we can offer up to \$2.75 billion of debt or equity securities as of the date of this MD&A. We believe that our investment grade credit ratings, coupled with our efforts to maintain a constructive relationship

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 April 1, 2026 (\$850 million available at December 31, 2021), as well as availability under other bank credit facilities (see *Section 7.6 Credit facilities*). 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, 2021 (see *Section 7.7 Sale of trade receivables*).

We successfully completed a number of debt transactions in 2020 and 2021 (see *Section 7.4*). As a result, the average term to maturity of our long-term debt (excluding commercial paper, the revolving component of the TELUS International (Cda) Inc. credit facility (TI credit facility), lease liabilities and other long-term debt) was 12.5 years at December 31, 2021 (compared to 12.2 years at December 31, 2020), and the average cost of our long-term debt was 3.72% (excluding commercial paper, the revolving component of the TI credit facility, lease liabilities and other long-term debt). Foreign currency forward contracts 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, 2021, TELUS International (Cda) Inc. had a credit facility consisting of US\$850 million of revolving components and US\$850 million of amortizing term loan components. For further details on the TI credit facility, see *Section 7.6 Credit facilities*.

We manage our capital structure and adjust it in light of changes in economic conditions and the risk characteristics of our business and telecommunications infrastructure. We have financial policies in place that are reviewed annually and are intended to help maintain our existing investment grade credit ratings in the range of BBB+ or the equivalent. Four 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 BBB+.

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 in 2021 under the normal course issuer bid (NCIB) program. In June 2021, we received approval for an NCIB to purchase and cancel up to 16 million Common Shares (to a maximum of \$250 million) from June 4, 2021, to June 3, 2022, which would allow us to purchase our Common Shares if and when we consider it advantageous, based on our financial position and outlook, and the market price of our Common Shares. 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*.

10.15 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 new legislation in itself 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 and TELUS Agriculture, operates in a number of foreign jurisdictions, including Armenia, Australia, Austria, Bosnia and Herzegovina, Brazil, Bulgaria, China, Costa Rica, the Czech Republic, Denmark, El Salvador, Finland, France, Germany, Guatemala, India, Ireland, Japan, Latvia, Mexico, the Philippines, Poland, Romania, Singapore, Slovakia, Spain, Switzerland, the Republic of Korea, Turkey, the United Kingdom and the United States, which increases our exposure to multiple forms of taxation. Generally, each jurisdiction has taxation 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.

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 25.2 to 25.8% in 2022 (compared to 25.8% in 2021). 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 our 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.

Changes over the past 12 months

Global and local tax policies are subject to continual change, which increases the complexity of taxation.

Canada, together with approximately 140 other countries comprising the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS), approved in principle in 2021 model Global Anti-Base Erosion Rules. These proposals introduced a form of 15% global minimum tax which is intended to be effective in 2023. Similar proposals were introduced by the European Commission in December 2021. These proposals, together with related changes to domestic laws and tax treaties, may result in an increase to our effective tax rate in certain jurisdictions.

Mitigation

We follow a comprehensive tax strategy that has been adopted by our Board. This strategy outlines 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 internal Taxation department.

10.16 The economy

Risk category: Financial

Risks to the Canadian economy include: fluctuations in oil prices, potential rises in interest rates and levels of consumer and mortgage debt, an acceleration in inflation, fluctuations in the housing market, the timing and rate of economic recovery from the effects of the COVID-19 pandemic, and uncertainty related to trade issues, including the ongoing imposition of tariffs, supply chain disruption and climate change.

In addition, as we expand our international operations through acquisitions, such as those within our TI and TELUS Agriculture businesses, we become more susceptible to global market conditions. Meanwhile, trade disputes between countries, as well as other economic and political uncertainties and developments outside of Canada, may have global implications, as supply chains have become increasingly integrated.

Potential impact

Economic uncertainty may cause consumers and business customers to reduce or delay discretionary spending, impacting new service purchases, volumes of use and 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 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 and cause potential new clients of TI to delay engaging TI, and could also cause existing clients to reduce or defer spending on TI's services or reduce or eliminate spending under existing contracts with TI.

Fluctuations in the Canadian economy could adversely impact growth in our customer base 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. Rising inflationary expectations could lead to increases in input costs such as labour, which may not be offset by revenue increases. 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 agriculture and logistics should remain reasonably unaffected, as food producers, distributors and retailers would continue to operate. Healthcare, particularly products and services related to logistics or vaccines, should do well as vaccines are rolled out, and hospitals and healthcare providers in certain countries could perform well. Cyclical industries such as retail, travel and hospitality, and others will continue to be negatively affected as consumers alter their behaviour because of the COVID-19 pandemic.

With certain acquisitions, operating costs and revenues, including TI's revenues, 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 certain actuarial assumptions related to expected plan asset returns, salary escalation, retirement ages, life expectancy, the performance of financial markets and future interest rates.

Changes over the past 12 months

In 2021, both the Canadian and the global economy continued to perform at suboptimal levels relative to their performance prior to the COVID-19 pandemic. There were indications of a recovery in the fourth quarter of 2021, as high vaccination rates appeared to be lessening the impact of the fourth wave in Canada compared to many other western countries. However, the emergence of the Omicron variant in December 2021 (which has continued into early 2022) has rekindled economic uncertainty with respect to 2022. The opening of the U.S.-Canada border in the fourth quarter of 2021 was expected to lead to improved roaming revenue in the first few months of 2022; however, the rapid spread of the Omicron variant is having a negative impact and there is no assurance that the border will remain open or that international travel will increase. Meanwhile, new COVID-19 variants (in addition to Omicron) may impact consumer behaviour, including international travel, and may lead to a delayed recovery in roaming revenue. We expect that the pandemic will continue to present challenges to both the Canadian and global economy throughout 2022, notwithstanding that vaccines have been developed and are being administered widely, including school-age children.

Interest rates are now expected to rise in 2022 and 2023, with several central banks around the world making specific mention of this monetary tool to combat rising inflation. If monetary bodies raise interest rates more quickly and further than the economy can absorb, there is a risk that both the Canadian and the global economy could slide into a recession later in the year or in 2023.

The Canadian dollar exchange rate with the U.S. dollar remained the same at \$1.27 at the end of 2020 and 2021.

The employee defined benefit pension plans, in aggregate with the application of the asset ceiling, were in a \$190 million deficit position at December 31, 2021 (compared to a \$913 million deficit position at the end of 2020). The solvency position, as determined under the *Pension Benefits Standards Act, 1985*, was estimated to be a surplus of \$1,366 million at the end of 2021 (compared to a \$375 million surplus at the end of 2020).

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 through the economic fluctuations that affect them and us. We also continue to pursue cost reduction and efficiency initiatives across our business operations. See *Section 4.3 Liquidity and capital resources* for our capital structure financial policies and plans.

An increase in our revenue denominated in U.S. dollars may help to mitigate currency risk, as our revenue base has been primarily in Canadian dollars.

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 help 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 defined benefit pension plans in 2022 is \$32.0 million (\$50.6 million in 2021).

10.17 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 expansion of our product and service offerings into areas such as managed services, security, healthcare and agriculture technology, and the initial public offering of shares by TI in February 2021 have also added to our compliance requirements, 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 operations in foreign jurisdictions, we are required to comply not only with Canadian laws and regulations, but also with local laws and regulations in foreign 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 and our operations into additional jurisdictions, and expand our product and service offerings in such jurisdictions, and this may also add to our regulatory, legal and tax exposure. In certain cases, laws with extraterritorial application may also impose obligations on us. See *Section 10.3 Regulatory matters*.

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*, the *Personal Information Protection and Electronic Documents Act*, *California Consumer Privacy Act*, the *California Invasion of Privacy Act*, *Personal Data Protection Bill of 2018*, and the *Data Privacy Act of 2012*. 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 a sizeable damages award 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.

Changes over the past 12 months

As our TELUS Health team and medical clinics offer new services (such as virtual care and electronic prescriptions), including in some cases to consumers and in other cases through third-party

partnerships, new risks arise from parameters such as dependence on third-party suppliers for legal compliance and/or compliance with medical professional standards, as well as a heightened possibility of political intervention.

As we add to our offerings in agriculture technology (such as animal health and management) and the jurisdictions in which we offer them, we face increased risks with respect to regulatory compliance and data security and privacy.

With the growth and development of technology-based industries, the value of intellectual property and proprietary rights has increased. Due to trends in awards for damages, costs to defend and the likelihood of settlements, property rights holders may be encouraged 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.

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*. Over three years, the amendments will phase in major changes and new regulatory requirements.

Mitigation

We believe that we have in place reasonable policies, controls, processes and contractual arrangements, as well as insurance coverage, intended to enable compliance and reduce our exposure to any related risks. We have a designated Chief Data and Trust Officer, whose role is to work across the enterprise to ensure that TELUS has in place appropriate processes and controls in order to facilitate legal compliance and to report on compliance to the Audit Committee.

Our team of 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 work to protect our intellectual property rights through litigation and other means.

We have a corporate disclosure policy that 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 Board of Directors, 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 relating 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 losses related to real estate joint ventures, long-term debt prepayment premium 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

(\$ millions)	Fourth quarters ended December 31		Years ended December 31	
	2021	2020	2021	2020
Net income attributable to Common Shares	644	260	1,655	1,207
Add (deduct) amounts net of amount attributable to non-controlling interests:				
Restructuring and other costs	43	65	170	244
Tax effect of restructuring and other costs	(11)	(15)	(41)	(62)
Income tax-related adjustments	3	(23)	(16)	(26)
Other equity losses related to real estate joint ventures	1	2	3	19
Long-term debt prepayment premium	-	-	10	18
Tax effect of long-term debt prepayment premium	-	-	(2)	(4)
Gain on disposition of financial solutions business	(410)	-	(410)	-
Tax effect of gain on disposition of financial solutions business	61	-	61	-
Retirement of a provision arising from business acquisition-related written put options within DLCX	-	-	-	(45)
Tax effect of retirement of a provision arising from business acquisition-related written put options within DLCX	-	-	-	10
Adjusted Net income	331	289	1,430	1,361

Reconciliation of adjusted basic EPS

(\$)	Fourth quarters ended December 31		Years ended December 31	
	2021	2020	2021	2020
Basic EPS	0.47	0.20	1.23	0.95
Add (deduct) amounts net of amount attributable to non-controlling interests:				
Restructuring and other costs	0.03	0.05	0.13	0.18
Tax effect of restructuring and other costs, per share	(0.01)	(0.01)	(0.03)	(0.04)
Income tax-related adjustments, per share	-	(0.02)	(0.01)	(0.02)
Other equity losses related to real estate joint ventures, per share	-	-	-	0.01
Long-term debt prepayment premium, after income taxes, per share	-	-	0.01	0.01
Gain on disposition of financial solutions business	(0.30)	-	(0.30)	-
Tax effect of gain on disposition of financial solutions business	0.04	-	0.04	-
Retirement of a provision arising from business acquisition-related written put options within DLCX, per share	-	-	-	(0.04)
Tax effect of retirement of a provision arising from business acquisition-related written put options within DLCX, per share	-	-	-	0.01
Adjusted basic EPS	0.23	0.22	1.07	1.06

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.

Capital expenditure intensity: This measure is calculated as capital expenditures (excluding spectrum licences) 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

Years ended December 31 (\$ millions, except ratio)	TTech		DLCX		Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Capital expenditures	3,372	2,675	126	100	-	-	3,498	2,775
Denominator – Operating revenues and other income	14,966	13,636	2,754	2,256	(462)	(429)	17,258	15,463
Capital expenditure intensity (%)	23	20	5	4	n/m	n/m	20	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 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)	2021	2020
Numerator – Sum of the last four quarterly dividends declared	1,711	1,520
Cash provided by operating activities	4,388	4,574
Less:		
Capital expenditures (excluding spectrum licences)	(3,498)	(2,775)
Denominator – Cash provided by operating activities less capital expenditures (excluding spectrum licences)	890	1,799
Ratio (%)	192	84

Available liquidity reconciliation

As at December 31 (\$ millions)	2021	2020
Cash and temporary investments, net	723	848
Net amounts available from the TELUS Corporation revolving credit facility	850	1,519
Amounts available under trade receivables securitization program	500	400
Available liquidity	2,073	2,767

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)	2021	2020
Sum of the last four quarterly dividends declared	1,711	1,520
Sum of the last four quarterly amount of dividends declared reinvested in Common Shares	(624)	(561)
Numerator – Sum of the last four quarterly dividends declared, net of dividend reinvestment plan effects	1,087	959
Denominator – Free cash flow ¹	777	1,435
Ratio (%)	140	67

¹ Reflects the impacts of our accelerated capital program announced on March 25, 2021.

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)	2021	2020
Net income attributable to Common Shares	1,655	1,207
Income taxes (attributable to Common Shares)	544	428
Borrowing costs (attributable to Common Shares) ¹	749	749
Numerator	2,948	2,384
Denominator – Borrowing costs	749	749
Ratio (times)	3.9	3.2

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 operating 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

Fourth quarters ended December 31 (\$ millions)	TTech		DLCX		Total	
	2021	2020	2021	2020	2021	2020
Net income					663	271
Financing costs					192	190
Income taxes					197	86
EBIT	973	495	79	52	1,052	547
Depreciation	508	504	37	35	545	539
Amortization of intangible assets	240	221	45	29	285	250
EBITDA	1,721	1,220	161	116	1,882	1,336
Add restructuring and other costs included in EBITDA	36	39	8	32	44	71
EBITDA – excluding restructuring and other costs	1,757	1,259	169	148	1,926	1,407
Other equity losses related to real estate joint ventures	1	2	–	–	1	2
Gain on disposition of financial solutions business	(410)	–	–	–	(410)	–
Adjusted EBITDA	1,348	1,261	169	148	1,517	1,409

EBITDA and Adjusted EBITDA reconciliations

Years ended December 31 (\$ millions)	TTech		DLCX		Total	
	2021	2020	2021	2020	2021	2020
Net income					1,698	1,260
Financing costs					796	771
Income taxes					580	451
EBIT	2,841	2,208	233	274	3,074	2,482
Depreciation	1,982	1,973	144	134	2,126	2,107
Amortization of intangible assets	912	795	178	110	1,090	905
EBITDA	5,735	4,976	555	518	6,290	5,494
Add restructuring and other costs included in EBITDA	148	182	38	77	186	259
EBITDA – excluding restructuring and other costs	5,883	5,158	593	595	6,476	5,753
Other equity losses related to real estate joint ventures	3	19	–	–	3	19
Gain on disposition of financial solutions business	(410)	–	–	–	(410)	–
Retirement of a provision arising from business acquisition-related written put options within DLCX	–	–	–	(71)	–	(71)
Adjusted EBITDA	5,476	5,177	593	524	6,069	5,701

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.

Calculation of EBITDA margin

Fourth quarters ended December 31 (\$ millions, except margin)	TTech		DLCX		Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Numerator – EBITDA	1,721	1,220	161	116	-	-	1,882	1,336
Denominator – Operating revenues and other income	4,237	3,595	757	577	(122)	(112)	4,872	4,060
EBITDA margin (%)	40.6	34.0	21.4	20.1	n/m	n/m	38.6	32.9

Calculation of EBITDA margin

Years ended December 31 (\$ millions, except margin)	TTech		DLCX		Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Numerator – EBITDA	5,735	4,976	555	518	-	-	6,290	5,494
Denominator – Operating revenues and other income	14,966	13,636	2,754	2,256	(462)	(429)	17,258	15,463
EBITDA margin (%)	38.3	36.5	20.2	22.9	n/m	n/m	36.4	35.5

Calculation of Adjusted EBITDA margin

Fourth quarters ended December 31 (\$ millions, except margin)	TTech		DLCX		Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Numerator – Adjusted EBITDA	1,348	1,261	169	148	-	-	1,517	1,409
Adjusted Operating revenues and other income:								
Operating revenues and other income	4,237	3,595	757	577	(122)	(112)	4,872	4,060
Other equity losses related to real estate joint ventures	1	2	-	-	-	-	1	2
Gain on disposition of financial solutions business	(410)	-	-	-	-	-	(410)	-
Denominator – Adjusted Operating revenues and other income	3,828	3,597	757	577	(122)	(112)	4,463	4,062
Adjusted EBITDA margin (%)	35.2	35.1	22.5	25.8	n/m	n/m	34.0	34.7

Calculation of Adjusted EBITDA margin

Years ended December 31 (\$ millions, except margin)	TTech		DLCX		Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Numerator – Adjusted EBITDA	5,476	5,177	593	524	-	-	6,069	5,701
Adjusted Operating revenues and other income:								
Operating revenues and other income	14,966	13,636	2,754	2,256	(462)	(429)	17,258	15,463
Other equity losses related to real estate joint ventures	3	19	-	-	-	-	3	19
Gain on disposition of financial solutions business	(410)	-	-	-	-	-	(410)	-
Retirement of a provision arising from business acquisition-related written put options within DLCX	-	-	-	(71)	-	-	-	(71)
Denominator – Adjusted Operating revenues and other income	14,559	13,655	2,754	2,185	(462)	(429)	16,851	15,411
Adjusted EBITDA margin (%)	37.6	37.9	21.6	24.0	n/m	n/m	36.0	37.0

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)

	2021	2020
Numerator – EBITDA – excluding restructuring and other costs	6,476	5,753
Denominator – Net interest cost	773	792
Ratio (times)	8.4	7.3

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 (excluding purchases of spectrum licences) that may be used to, among other things, pay dividends, repay debt, purchase shares or make other investments. We exclude impacts of accounting changes 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)	Fourth quarters ended December 31		Years ended December 31	
	2021	2020	2021	2020
EBITDA	1,882	1,336	6,290	5,494
Deduct gain on disposition of financial solutions business	(410)	-	(410)	-
Deduct non-cash gains from the sale of property, plant and equipment	-	(1)	-	(4)
Restructuring and other costs, net of disbursements	3	14	10	35
Effects of contract asset, acquisition and fulfilment (IFRS 15 impact) and TELUS Easy Payment device financing	(117)	(112)	(45)	43
Effects of lease principal (IFRS 16 impact)	(131)	(110)	(502)	(365)
Leases formerly accounted for as finance leases (IFRS 16 impact)	-	16	-	86
Items from the statements of cash flows:				
Share-based compensation, net	16	(62)	139	27
Net employee defined benefit plans expense	27	25	113	102
Employer contributions to employee defined benefit plans	(15)	(14)	(53)	(51)
Interest paid	(180)	(169)	(744)	(740)
Interest received	2	3	17	13
Capital expenditures (excluding spectrum licences) ¹	(909)	(613)	(3,498)	(2,775)
Free cash flow before income taxes	168	313	1,317	1,865
Income taxes paid, net of refunds	(186)	(95)	(601)	(430)
Effect of disposition of financial solutions business on income taxes paid	61	-	61	-
Free cash flow	43	218	777	1,435

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

(\$ millions)	Fourth quarters ended December 31		Years ended December 31	
	2021	2020	2021	2020
Free cash flow	43	218	777	1,435
Add (deduct):				
Capital expenditures (excluding spectrum licences)	909	613	3,498	2,775
Effects of lease principal and leases accounted for as finance leases prior to adoption of IFRS 16	131	94	502	279
Gain on disposition of financial solutions business, net of effect on income taxes paid	(349)	-	(349)	-
Individually immaterial items included in Net income neither providing nor using cash	162	108	(40)	85
Cash provided by operating activities	896	1,033	4,388	4,574

Mobile phone average billing per subscriber per month (ABPU):

Mobile phone ABPU is a non-GAAP ratio that does not have any standardized meaning prescribed by IFRS-IASB and therefore is unlikely to be comparable to similar measures presented by other issuers. Mobile phone ABPU is calculated as network revenue derived from monthly service plan, roaming and usage charges, as well as monthly re-payments of the outstanding device balance owing from customers on contract; divided by the average number of mobile

phone subscribers on the network during the period, and is expressed as a rate per month. Compared to ARPU, this measure provides management with a view of average monthly cash receipts from mobile services subscribers by reversing impacts of allocation of revenue to upfront performance obligations due to IFRS 15, in addition to device financing receipts, and is used to evaluate historical trending of an equivalent metric prior to the application of IFRS 15 and introduction of the device financing program.

Calculation of mobile phone ABPU

	Fourth quarters ended December 31		Years ended December 31	
	2021	2020	2021	2020
Numerator				
Mobile network revenue (\$ millions)	1,591	1,515	6,208	6,030
Re-payments of the outstanding device balance owing from customers on contract (\$ millions)	350	342	1,389	1,374
	1,941	1,857	7,597	7,404
Denominator – Simple average number of subscribers during the period ¹ (millions)	9.234	8.880	9.070	8.752
Annual average of billing per subscriber unit (\$)	210	209	838	846
Divide by number of months during the period	3	3	12	12
Mobile phone ABPU (\$)	70.09	69.70	69.83	70.49

1 Simple average number of subscribers calculated for quarterly periods as the average of beginning-of-period subscribers and end-of-period subscribers. For annual periods, it is calculated as the average of beginning-of-period subscribers and end-of-period subscribers for each quarterly period. It is used as an illustrative proxy, which does not materially differ from the actual average number of subscribers.

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)	2021	2020
Numerator – Net debt	20,535	19,826
Denominator – EBITDA – excluding restructuring and other costs	6,476	5,753
Ratio (times)	3.17	3.45

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 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)	2021	2020
Financing costs	796	771
Deduct: Employee defined benefit plans net interest	(26)	(16)
Add: Interest on long-term debt, excluding lease liabilities – capitalized	3	37
Net interest cost	773	792

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 TELUS subscriber on an active service plan with a recurring revenue-generating portable unit (e.g. tablets, internet keys, Internet of Things, wearables and connected cars) that is connected to the TELUS network and is intended for limited or no cellular voice capability.

Mobile phone subscriber means a TELUS subscriber on an active service plan with a recurring revenue-generating portable unit (e.g. feature phones and smartphones) that is connected to the TELUS network and provides voice, text and/or data connectivity.

Internet subscriber means a TELUS subscriber on an active internet plan with a recurring revenue-generating fixed unit that is connected to the TELUS network and provides internet connectivity.

Residential voice subscriber means a TELUS subscriber on an active phone plan with a recurring revenue-generating fixed unit that is connected to the TELUS network and provides voice service.

Security subscriber means a TELUS subscriber on an active security plan with a recurring revenue-generating fixed unit that is connected to the TELUS security and automation platform.

TV subscriber means a TELUS subscriber on an active TV plan with a recurring revenue-generating fixed unit subscription for video services from a TELUS TV platform (e.g. Optik TV and Pik TV).

Virtual care member means primary enrolment to receive services on an active TELUS Health virtual care plan.

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 and personal health security).

Digital health transactions mean the total number of health claims, dental claims, consultations or other paid transactions facilitated by TELUS Health services.

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, 2021, 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, 2021. 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, 2021.

Deloitte LLP, an Independent Registered Public Accounting Firm, audited the Company's Consolidated financial statements for the year ended December 31, 2021, 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, 2021.



Doug French
Executive Vice-president
and Chief Financial Officer
February 10, 2022



Darren Entwistle
President
and Chief Executive Officer
February 10, 2022

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, 2021 and 2020, 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, 2021, 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, 2021 and 2020, and its financial performance and its cash flows for each of the two years in the period ended December 31, 2021, in conformity 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, 2021, 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 10, 2022, 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 Matters

Critical audit matters are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. We determined that there are no critical audit matters.

Deloitte LLP

Chartered Professional Accountants
February 10, 2022
Vancouver, Canada

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, 2021, 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, 2021, 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 of and for the year ended December 31, 2021, of the Company and our report dated February 10, 2022, expressed an unqualified opinion on those financial statements.

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 International Financial Reporting Standards as issued by the International Accounting Standards Board. 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 International Financial Reporting Standards as issued by the International Accounting Standards Board, 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.



Chartered Professional Accountants
February 10, 2022
Vancouver, Canada

Consolidated statements of income and other comprehensive income

Years ended December 31 (millions except per share amounts)	Note	2021	2020
Operating Revenues			
Service		\$ 14,535	\$ 13,277
Equipment		2,303	2,064
Operating revenues (arising from contracts with customers)	6	16,838	15,341
Other income	7	420	122
Operating revenues and other income		17,258	15,463
Operating Expenses			
Goods and services purchased		6,699	6,268
Employee benefits expense	8	4,269	3,701
Depreciation	17	2,126	2,107
Amortization of intangible assets	18	1,090	905
		14,184	12,981
Operating Income		3,074	2,482
Financing costs	9	796	771
Income Before Income Taxes		2,278	1,711
Income taxes	10	580	451
Net Income		1,698	1,260
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		124	(111)
Foreign currency translation adjustment arising from translating financial statements of foreign operations		(130)	113
		(6)	2
Items never subsequently reclassified to income			
Change in measurement of investment financial assets		57	14
Employee defined benefit plan re-measurements		600	(312)
		657	(298)
		651	(296)
Comprehensive Income		\$ 2,349	\$ 964
Net Income Attributable to:			
Common Shares		\$ 1,655	\$ 1,207
Non-controlling interests		43	53
		\$ 1,698	\$ 1,260
Comprehensive Income Attributable to:			
Common Shares		\$ 2,341	\$ 893
Non-controlling interests		8	71
		\$ 2,349	\$ 964
Net Income Per Common Share	12		
Basic		\$ 1.23	\$ 0.95
Diluted		\$ 1.22	\$ 0.94
Total Weighted Average Common Shares Outstanding			
Basic		1,346	1,275
Diluted		1,351	1,278

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

Consolidated statements of financial position

As at December 31 (millions)	Note	2021	2020
Assets			
Current assets			
Cash and temporary investments, net		\$ 723	\$ 848
Accounts receivable	6(b)	2,671	2,355
Income and other taxes receivable		206	148
Inventories	1(l)	448	407
Contract assets	6(c)	443	439
Prepaid expenses	20	528	478
Current derivative assets	4(h)	13	2
		5,032	4,677
Non-current assets			
Property, plant and equipment, net	17	15,926	15,014
Intangible assets, net	18	17,485	15,048
Goodwill, net	18	7,281	7,160
Contract assets	6(c)	266	268
Other long-term assets	20	2,004	1,106
		42,962	38,596
		\$ 47,994	\$ 43,273
Liabilities and Owners' Equity			
Current liabilities			
Short-term borrowings	22	\$ 114	\$ 100
Accounts payable and accrued liabilities	23	3,705	2,971
Income and other taxes payable		104	122
Dividends payable	13	449	403
Advance billings and customer deposits	24	854	772
Provisions	25	96	73
Current maturities of long-term debt	26	2,927	1,432
Current derivative liabilities	4(h)	24	32
		8,273	5,905
Non-current liabilities			
Provisions	25	774	961
Long-term debt	26	17,925	18,856
Other long-term liabilities	27	907	1,265
Deferred income taxes	10	4,056	3,718
		23,662	24,800
Liabilities		31,935	30,705
Owners' equity			
Common equity	28	15,116	12,040
Non-controlling interests		943	528
		16,059	12,568
		\$ 47,994	\$ 43,273
Contingent liabilities	29		

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

Approved by the Directors:



David L. Mowat
Director



R.H. Auchinleck
Director

Consolidated statements of changes in owners' equity

		Common equity							
		Equity contributed							
		Common Shares (Note 28)					Accumulated other comprehensive income		Non-controlling interests
(millions)	Note	Number of shares	Share capital	Contributed surplus	Retained earnings			Total	Total
Balance as at January 1, 2020		1,209	\$ 5,660	\$ 398	\$ 4,371	\$ 119	\$ 10,548	\$ 111	\$ 10,659
Net income		–	–	–	1,207	–	1,207	53	1,260
Other comprehensive income (loss)	11	–	–	–	(312)	(2)	(314)	18	(296)
Dividends	13	–	–	–	(1,520)	–	(1,520)	–	(1,520)
Dividends reinvested and optional cash payments	13(b), 14(c)	23	541	–	–	–	541	–	541
Equity accounted share-based compensation		1	15	82	–	–	97	–	97
Issue of Common Shares in business combination		–	8	–	–	–	8	–	8
Common Shares issued		58	1,453	–	–	–	1,453	–	1,453
Change in ownership interests of subsidiaries		–	–	54	(34)	–	20	346	366
Balance as at December 31, 2020		1,291	\$ 7,677	\$ 534	\$ 3,712	\$ 117	\$ 12,040	\$ 528	\$ 12,568
Balance as at January 1, 2021		1,291	\$ 7,677	\$ 534	\$ 3,712	\$ 117	\$ 12,040	\$ 528	\$ 12,568
Net income		–	–	–	1,655	–	1,655	43	1,698
Other comprehensive income (loss)	11	–	–	–	600	86	686	(35)	651
Dividends	13	–	–	–	(1,711)	–	(1,711)	–	(1,711)
Dividends reinvested and optional cash payments	13(b), 14(c)	24	621	–	–	–	621	–	621
Equity accounted share-based compensation	14(b)	4	79	49	–	–	128	13	141
Common Shares issued	28(a)	51	1,267	–	–	–	1,267	–	1,267
Change in ownership interests of subsidiary	28(c)	–	–	430	–	–	430	394	824
Balance as at December 31, 2021		1,370	\$ 9,644	\$ 1,013	\$ 4,256	\$ 203	\$ 15,116	\$ 943	\$ 16,059

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

Consolidated statements of cash flows

Years ended December 31 (millions)	Note	2021	2020
Operating Activities			
Net income		\$ 1,698	\$ 1,260
Adjustments to reconcile net income to cash provided by operating activities:			
Depreciation and amortization		3,216	3,012
Deferred income taxes	10	47	76
Share-based compensation expense, net	14(a)	139	27
Net employee defined benefit plans expense	15(a)	113	102
Employer contributions to employee defined benefit plans		(53)	(51)
Non-current contract assets		2	60
Non-current unbilled customer finance receivables	20	(184)	(136)
Gain on disposition of financial solutions business	7	(410)	-
Loss from equity accounted investments	7, 21	10	29
Other		(108)	(75)
Net change in non-cash operating working capital	31(a)	(82)	270
Cash provided by operating activities		4,388	4,574
Investing Activities			
Cash payments for capital assets, excluding spectrum licences	31(a)	(3,097)	(2,822)
Cash payments for spectrum licences	18(a)	(2,219)	-
Cash payments for acquisitions, net	18(b)	(468)	(3,205)
Advances to, and investment in, real estate joint ventures and associates	21	(46)	(100)
Real estate joint venture receipts	21	4	5
Proceeds on disposition		508	86
Investment in portfolio investments and other		(148)	(129)
Cash used by investing activities		(5,466)	(6,165)
Financing Activities			
	31(b)		
Common Shares issued	28(a)	1,300	1,495
Dividends paid to holders of Common Shares	13(a)	(1,045)	(930)
Issue (repayment) of short-term borrowings, net		10	(8)
Long-term debt issued	26	4,891	4,882
Redemptions and repayment of long-term debt	26	(4,972)	(3,863)
Shares of subsidiary issued and sold to non-controlling interests, net	28(c)	827	400
Other		(58)	(72)
Cash provided by financing activities		953	1,904
Cash Position			
Increase (decrease) in cash and temporary investments, net		(125)	313
Cash and temporary investments, net, beginning of period		848	535
Cash and temporary investments, net, end of period		\$ 723	\$ 848
Supplemental Disclosure of Operating Cash Flows			
Interest paid		\$ (744)	\$ (740)
Interest received		\$ 17	\$ 13
Income taxes paid, net			
In respect of comprehensive income		\$ (563)	\$ (397)
In respect of business acquisitions		(38)	(33)
		\$ (601)	\$ (430)

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

Notes to consolidated financial statements

December 31, 2021

TELUS Corporation is one of Canada's largest telecommunications companies, providing a wide range of technology solutions, including mobile and fixed voice and data telecommunications services and products, healthcare software and technology solutions, and digitally-led customer experiences. Data services include: internet protocol; television; hosting, managed information technology and cloud-based services; software, data management and data analytics-driven smart-food chain technologies; 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, 2021, we have a 100% equity interest; and TELUS International (Cda) Inc., in which, as at December 31, 2021, we have a 55.1% equity interest, and which completed its initial public offering in February 2021, as discussed further in *Note 28(c)*.

Notes to consolidated financial statements	Page
General application	
1. Summary of significant accounting policies	146
2. Accounting policy developments	153
3. Capital structure financial policies	154
4. Financial instruments	157
Consolidated results of operations focused	
5. Segment information	163
6. Revenue from contracts with customers	165
7. Other income	166
8. Employee benefits expense	166
9. Financing costs	167
10. Income taxes	167
11. Other comprehensive income	169
12. Per share amounts	169
13. Dividends per share	170
14. Share-based compensation	170
15. Employee future benefits	174
16. Restructuring and other costs	178
Consolidated financial position focused	
17. Property, plant and equipment	179
18. Intangible assets and goodwill	180
19. Leases	183
20. Other long-term assets	184
21. Real estate joint ventures and investment in associate	185
22. Short-term borrowings	187
23. Accounts payable and accrued liabilities	187
24. Advance billings and customer deposits	187
25. Provisions	188
26. Long-term debt	189
27. Other long-term liabilities	193
28. Owners' equity	193
29. Contingent liabilities	195
Other	
30. Related party transactions	196
31. Additional statement of cash flow information	197

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, 2021 and 2020, were authorized by our Board of Directors for issue on February 10, 2022.

(a) Consolidation

Our consolidated financial statements include our accounts and the accounts of all of our subsidiaries, the principal ones of which are: TELUS Communications Inc. and TELUS International (Cda) Inc. TELUS Communications Inc. includes substantially all of our mobile and fixed operations, excluding the 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.

Accounting policy	Accounting policy requiring a more significant choice among policies and/or a more significant application of judgment	
	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

(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.

DEGREE OF DIFFICULTY		
Higher		Lower
SIGNIFICANCE	Higher	Lower
	<ul style="list-style-type: none"> The recoverability of intangible assets with indefinite lives (see <i>Note 18(f)</i> for discussion of key assumptions) The recoverability of goodwill (see <i>Note 18(f)</i> for discussion of key assumptions) 	<ul style="list-style-type: none"> Certain actuarial and economic assumptions used in determining defined benefit pension costs and accrued pension benefit obligations (see <i>Note 15(d)</i> for discussion of key assumptions)
	<ul style="list-style-type: none"> Determination of the amounts and composition of income and other tax assets and liabilities, including the amounts of unrecognized tax benefits 	<ul style="list-style-type: none"> The estimated useful lives of assets (see <i>(f)</i> following) Certain economic assumptions used in provisioning for asset retirement obligations (see <i>(m)</i> following)
Lower	<ul style="list-style-type: none"> Amounts for net identifiable assets acquired in business combinations and provisions related to business combinations The recoverability of long-term investments 	<ul style="list-style-type: none"> The recoverability of tangible and intangible assets subject to amortization Determination of allowances for doubtful accounts, unbilled customer finance receivables and contract assets Determination of the allowance for inventory obsolescence

Judgments

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.
- 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 upon customers' access to, or usage of, our telecommunications infrastructure; we believe that 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 believe that the decision to consider 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.

Judgment must also be exercised 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 better 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 that affect the financial statement disclosure of information regularly reviewed by our chief operating decision-maker used to

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

make resource allocation decisions and to assess performance (segment information, *Note 5*). A significant judgment we have historically made is in respect of distinguishing between our wireless and wireline operations and cash flows (and this extends to allocations of both direct and indirect expenses and capital expenditures). The clarity of this distinction has been increasingly affected by the convergence and integration of our wireless and wireline telecommunications infrastructure technology and operations. Less than one-half of the operating expenses included in the segment performance measure reported to our chief operating decision-maker during the year ended December 31, 2020, were direct costs; judgment, largely based upon historical experience, was applied in apportioning indirect expenses that were not objectively distinguishable between our wireless and wireline operations.

Until recently, our judgment was that our wireless and wireline telecommunications infrastructure technology and operations had not experienced sufficient convergence to objectively make their respective operations and cash flows practically indistinguishable. The continued build-out of our technology-agnostic fibre-optic infrastructure, in combination with converged edge network technology, has significantly affected this judgment, as have the commercialization of fixed-wireless telecommunications solutions for customers and the consolidation of our non-customer facing operations.

As a result, it has become increasingly difficult and impractical to objectively and clearly distinguish between our wireless and wireline operations and cash flows, and the assets from which those cash flows arise. Our judgment as to whether these operations can continue to be judged to be individual components of the business and discrete operating segments has changed; effective January 1, 2020, we embarked upon the modification of our internal and external reporting processes, systems and internal controls to accommodate the technology convergence-driven cessation of the historical distinction between our wireless and wireline operations at the level of regularly reported discrete performance measures that are provided to our chief operating decision-maker. We transitioned to a new segment reporting structure during the first quarter of 2021 (see *Note 5*).

The impracticality of objectively distinguishing between our wireless and wireline cash flows, and the assets from which those cash flows arise, is evidence of their increasing interdependence, and this has resulted in the unification of the wireless cash-generating unit and the wireline cash-generating unit as a single telecommunications cash-generating unit, and the identification of the digitally-led customer experiences – TELUS International cash-generating unit, for impairment testing purposes (see *Note 18(f)*). As our business continues to evolve, new cash-generating units may also develop.

- 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 an indefinite life, 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. Historically, these

judgments were necessary because of the convergence that our wireless and wireline telecommunications infrastructure technology and operations had experienced to date, and because of our continuous development. There were instances in which similar judgments were also necessary in respect of future capital expenditures in support of both wireless and wireline operations, which were a component of the determination of recoverable amounts used in the annual impairment testing, as discussed further in *Note 18(f)*.

- 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 needs to be accounted for as a provision.

(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.

(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 is more representative of the economic substance of the underlying transactions.

In order to apply hedge accounting, a high correlation (which indicates effectiveness) is required 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

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

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*.

(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; software, data management and data analytics-driven smart-food chain technologies; 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) arises from providing services and products facilitating access to, and usage of, our telecommunications infrastructure. Our digitally-led customer experiences – TELUS International segment service revenues 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 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. In instances where multiple contracts are entered into 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.

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 in instances where 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

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

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 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.

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 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 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).

The CRTC has established a mechanism to subsidize local exchange carriers, such as ourselves, that provide residential basic telephone service to high cost serving areas. The CRTC has determined the per

network access line/per band subsidy rate for all local exchange carriers. We recognize the subsidy on an accrual basis by applying the subsidy rate to the number of residential network access lines we provide in high cost serving areas, as discussed further in *Note 7*. Differences, if any, between interim and final subsidy rates set by the CRTC are accounted for as a change in estimate in the period in which the CRTC finalizes the subsidy rate.

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 the provision of software solutions in the accounting period in which they are provided.

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

(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	2 to 10 years
Access to rights-of-way, crowdsource assets and other	5 to 30 years

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

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.

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

The continuing program of asset life studies considers such items as the timing of technological obsolescence, competitive pressures and future infrastructure utilization plans; these considerations could also indicate that the carrying value of an asset may not be recoverable, in which case an impairment loss would be 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 the impairment testing is generally the reciprocal of the stability of the 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(s)). 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.

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

(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).

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

(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 expense 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.

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 Monte Carlo simulation-determined fair value. 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 that fair value is recognized in the financial statements. Proceeds arising from the exercise of share option awards are credited to share capital, as are the recognized grant-date fair values of the exercised share option awards.

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.

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, are 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, are classified as a liability, they 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 \$381 million as at December 31, 2021 (2020 – \$328 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, 2021, totalled \$2.2 billion (2020 – \$2.0 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.

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

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

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 date of acquisition, except for goodwill, is amortized over the estimated useful lives of the underlying assets to which the excess cost is attributed.

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 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 quoted market prices in an active market or do not have 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 other long-term investment, the carrying value of that other long-term investment is adjusted to its estimated fair value.

2 Accounting policy developments

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

In August 2020, the International Accounting Standards Board issued *Interest Rate Benchmark Reform – Phase 2*, which amends IFRS 9 *Financial Instruments*, IAS 39 *Financial Instruments: Recognition and Measurement*, IFRS 7 *Financial Instruments: Disclosures*, IFRS 4 *Insurance Contracts* and IFRS 16 *Leases*. The amendments are effective for periods beginning on or after January 1, 2021, although earlier application is permitted. Interest rate benchmarks such as interbank offer rates (IBORs) play an important role in global financial markets as they index a wide variety of financial products, including derivative financial instruments. Market developments have impacted the reliability of some existing benchmarks and, in this context, the Financial Stability Board has published a report setting out recommendations to reform such benchmarks. The *Interest Rate Benchmark Reform – Phase 2* amendments focus on the effects of the interest rate benchmark reform on a company's financial statements that arise when an interest rate benchmark used to calculate interest is replaced with an alternative benchmark rate; most significantly, there will be no requirement to de-recognize or adjust the amount of financial instruments for changes required by the reform, but will instead update the effective interest rate to reflect the change to the alternative benchmark rate. The effects, which have not been material in the current fiscal year, of these amendments on our financial performance and disclosure will be dependent upon the facts and circumstances of future changes in the derivative financial instruments we use, if any, and any future changes in interest rate benchmarks, if any, referenced by such derivative financial instruments we use.

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

- 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 is permitted. The amendments will 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. We are currently assessing the impacts of the amended standards, but do not expect that our financial disclosure will be 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 is permitted. With a view to reducing diversity in reporting, the amendments will 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. Based upon our current facts and circumstances, we do not expect our financial performance or disclosure to be materially affected by the application of the amended standard.

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

3 Capital structure financial policies

General

Our objective when managing capital is to maintain a flexible capital structure that optimizes the cost and availability of capital at acceptable risk.

In our definition of 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, and short-term borrowings, including those arising from securitized trade receivables.

We manage our 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 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, and/or increase or decrease the amount of trade receivables sold to an arm's-length securitization trust.

During 2021, our financial objectives, which are reviewed annually, were unchanged from 2020. We believe that our financial objectives are supportive of our long-term strategy.

We monitor 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.

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. This measure, historically, 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 debt covenants.

*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 in measuring compliance with certain debt covenants.

As at, or for the 12-month periods ended, December 31 (\$ in millions)	Objective	2021	2020
Components of debt and coverage ratios			
Net debt ¹		\$ 20,535	\$ 19,826
EBITDA – excluding restructuring and other costs ²		\$ 6,476	\$ 5,753
Net interest cost ³ (Note 9)		\$ 773	\$ 792
Debt ratio			
Net debt to EBITDA – excluding restructuring and other costs	2.20 – 2.70 ⁴	3.17	3.45
Coverage ratios			
Earnings coverage ⁵		3.9	3.2
EBITDA – excluding restructuring and other costs interest coverage ⁶		8.4	7.3

1 Net debt and total capitalization are calculated as follows:

As at December 31	Note	2021	2020
Long-term debt	26	\$ 20,852	\$ 20,288
Debt issuance costs netted against long-term debt		94	97
Derivative (assets) liabilities, net		7	120
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		191	69
Cash and temporary investments, net		(723)	(848)
Short-term borrowings	22	114	100
Net debt		20,535	19,826
Common equity		15,116	12,040
Non-controlling interests		943	528
Less: accumulated other comprehensive income included above in common equity and non-controlling interests		(186)	(135)
Total managed capitalization		\$ 36,408	\$ 32,259

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

Years ended December 31	Note	2021	2020
EBITDA	5	\$ 6,290	\$ 5,494
Restructuring and other costs	16	186	259
EBITDA – excluding restructuring and other costs		\$ 6,476	\$ 5,753

3 Net interest cost is defined as financing costs, excluding employee defined benefit plans net interest, 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, 2021, 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 recent 2021, and upcoming 2023 and 2024, spectrum auctions), as we believe that this range is supportive of 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 by 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 amounts 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 3.17 times as at December 31, 2021, down from 3.45 times one year earlier. The effect of the increase in net debt, primarily due to business acquisitions and the acquisition of spectrum licences, was exceeded by the effect of growth in EBITDA – excluding restructuring and other costs. EBITDA growth was reduced by COVID-19 pandemic impacts.

The earnings coverage ratio for the twelve-month period ended December 31, 2021, was 3.9 times, up from 3.2 times one year earlier.

An increase in income before borrowing costs and income taxes increased the ratio by 0.7. The EBITDA – excluding restructuring and other costs interest coverage ratio for the twelve-month period ended December 31, 2021, was 8.4 times, up from 7.3 times one year earlier. Growth in EBITDA – excluding restructuring and other costs increased the ratio by 0.9 and a decrease in net interest costs increased the ratio by 0.2. Fiscal 2021 EBITDA growth was reduced by COVID-19 pandemic impacts.

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 most recent four quarters' dividends declared 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).

For the 12-month periods ended December 31	Objective	2021	2020
Determined using most comparable IFRS-IASB measures			
Ratio of TELUS Corporation Common Share dividends declared to cash provided by operating activities – less capital expenditures (excluding spectrum licences)		192%	84%
Determined using management measures			
TELUS Corporation Common Share dividend payout ratio – net of dividend reinvestment plan effects	60%–75% ¹	140%	67%
1 Our objective range for the TELUS Corporation Common Share dividend payout ratio is 60%–75% of free cash flow on a prospective basis.			
For the 12-month periods ended December 31 (millions)		2021	2020
TELUS Corporation Common Share dividends declared		\$ 1,711	\$ 1,520
Amount of TELUS Corporation Common Share dividends declared reinvested in TELUS Corporation Common Shares		(624)	(561)
TELUS Corporation Common Share dividends declared – net of dividend reinvestment plan effects		\$ 1,087	\$ 959
Our calculation of free cash flow, and the reconciliation to cash provided by operating activities, is as follows:			
For the 12-month periods ended December 31 (millions)	Note	2021	2020
EBITDA	5	\$ 6,290	\$ 5,494
Deduct gain on disposition of financial solutions business	7	(410)	–
Deduct non-cash gains from the sales of property, plant and equipment		–	(4)
Restructuring and other costs, net of disbursements		10	35
Effects of contract asset, acquisition and fulfilment and TELUS Easy Payment device financing		(45)	43
Effect of lease principal	31(b)	(502)	(365)
Leases accounted for as finance leases prior to adoption of IFRS 16		–	86
Items from the Consolidated statements of cash flows:			
Share-based compensation, net	14	139	27
Net employee defined benefit plans expense	15	113	102
Employer contributions to employee defined benefit plans		(53)	(51)
Interest paid		(744)	(740)
Interest received		17	13
Capital expenditures (excluding spectrum licences)	5	(3,498)	(2,775)
Free cash flow before income taxes		1,317	1,865
Income taxes paid, net of refunds		(601)	(430)
Effect of disposition of financial solutions business on income taxes paid		61	–
Free cash flow		777	1,435
Add (deduct):			
Capital expenditures (excluding spectrum licences)	5	3,498	2,775
Effects of lease principal and leases accounted for as finance leases prior to adoption of IFRS 16		502	279
Gain on disposition of financial solutions business, net of effect on income taxes paid		(349)	–
Individually immaterial items included in net income neither providing nor using cash		(40)	85
Cash provided by operating activities		\$ 4,388	\$ 4,574

*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 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 measure that management, and investors, use to evaluate the performance of our business.

4 Financial instruments

(a) Risks – overview

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

Financial instrument	Accounting classification	Risks				
		Credit	Liquidity	Market risks		
				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		

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)	2021	2020
Cash and temporary investments, net	\$ 723	\$ 848
Accounts receivable	3,216	2,716
Contract assets	709	707
Derivative assets	89	42
	\$ 4,737	\$ 4,313

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 deemed 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 or negotiated rate on outstanding non-current customer account balances.

As at December 31 (millions)		2021			2020		
	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		\$ 883	\$ (8)	\$ 875	\$ 815	\$ (19)	\$ 796
30–60 days past billing date		330	(7)	323	339	(17)	322
61–90 days past billing date		92	(9)	83	90	(19)	71
More than 90 days past billing date		140	(21)	119	98	(43)	55
Unbilled customer finance receivables		1,323	(65)	1,258	1,026	(42)	984
		\$ 2,768	\$ (110)	\$ 2,658	\$ 2,368	\$ (140)	\$ 2,228
Current		\$ 2,194	\$ (81)	\$ 2,113	\$ 1,986	\$ (119)	\$ 1,867
Non-current	20	574	(29)	545	382	(21)	361
		\$ 2,768	\$ (110)	\$ 2,658	\$ 2,368	\$ (140)	\$ 2,228

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 above a specific balance 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)	2021	2020
Balance, beginning of period	\$ 140	\$ 55
Additions (doubtful accounts expense)	42	91
Accounts written off ¹ less than recoveries	(77)	(22)
Other	5	16
Balance, end of period	\$ 110	\$ 140

1 For the year ended December 31, 2021, accounts written off, but that were still subject to enforcement activity, totalled \$110 (2020 – \$92).

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 deemed necessary.

As at December 31 (millions)		2021			2020		
		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		\$ 595	\$ (24)	\$ 571	\$ 611	\$ (29)	\$ 582
The 12-month period ending two years hence		259	(11)	248	265	(12)	253
Thereafter		19	(1)	18	16	(1)	15
		\$ 873	\$ (36)	\$ 837	\$ 892	\$ (42)	\$ 850

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.

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 potential credit losses due to the possible 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 and bilateral bank facilities (*Note 22*), a commercial paper program (*Note 26(c)*) and syndicated credit facilities (*Note 26(d), (f)*);
- maintaining an in-effect shelf prospectus;
- 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, 2021, TELUS Corporation could offer \$2.75 billion of debt or equity securities pursuant to a shelf prospectus that is in effect until June 2023 (2020 – \$2.0 billion of debt or equity securities pursuant to a shelf prospectus that was in effect until June 2022). We believe that our investment grade credit ratings contribute to reasonable access to capital markets.

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 following tables.

As at December 31, 2021 (millions)	Non-derivative		Derivative				Other	(Receive)	Pay	Total
	Non-interest bearing financial liabilities	Short-term borrowings¹	Composite long-term debt							
			Long- term debt, excluding leases¹ (Note 26)	Leases (Note 26)	Currency swap agreement amounts to be exchanged²					
					(Receive)	Pay				
2022	\$ 3,395	\$ 15	\$ 3,130	\$ 504	\$ (2,050)	\$ 2,059	\$ 8	\$ (544)	\$ 540	\$ 7,057
2023	62	1	1,167	364	(149)	148	-	-	-	1,593
2024	13	101	1,724	305	(149)	148	-	-	-	2,142
2025	14	-	2,217	176	(522)	540	-	-	-	2,425
2026	2	-	1,901	144	(116)	118	-	-	-	2,049
2027-2031	7	-	7,351	398	(1,784)	1,852	-	-	-	7,824
Thereafter	-	-	10,499	344	(2,805)	2,877	-	-	-	10,915
Total	\$ 3,493	\$ 117	\$ 27,989	\$ 2,235	\$ (7,575)	\$ 7,742	\$ 8	\$ (544)	\$ 540	\$ 34,005
			Total (Note 26(ii))				\$ 30,391			

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, 2021.

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, 2021. 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.

As at December 31, 2020 (millions)	Non-derivative		Derivative							
	Non-interest bearing financial liabilities	Short-term borrowings¹	Composite long-term debt				Other	Currency swap agreement amounts to be exchanged		Total
			Long- term debt, excluding leases¹ (Note 26)	Leases (Note 26)	Currency swap agreement amounts to be exchanged²					
					(Receive)	Pay				
								(Receive)	Pay	
2021	\$ 2,669	\$ 101	\$ 1,658	\$ 538	\$ (882)	\$ 892	\$ –	\$ (454)	\$ 475	\$ 4,997
2022	74	–	2,204	371	(149)	151	–	–	–	2,651
2023	8	–	1,149	230	(149)	151	6	–	–	1,395
2024	8	–	1,706	191	(150)	151	–	–	–	1,906
2025	9	–	2,868	145	(525)	575	–	–	–	3,072
2026–2030	12	–	7,953	417	(1,836)	1,898	–	–	–	8,444
Thereafter	–	–	9,877	379	(2,889)	2,949	–	–	–	10,316
Total	\$ 2,780	\$ 101	\$ 27,415	\$ 2,271	\$ (6,580)	\$ 6,767	\$ 6	\$ (454)	\$ 475	\$ 32,781
			Total				\$ 29,873			

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, 2020.

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, 2020. 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 some inventory purchases and capital asset acquisitions are sourced internationally. The U.S. dollar is the only foreign currency to which we have a significant exposure as at the balance sheet date.

Our foreign exchange 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 value 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, fluctuations 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 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.

Short-term 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), (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 risk**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 rather than trading purposes.

(g) Market risks

Net income and other comprehensive income for the years ended December 31, 2021 and 2020, could have varied if the Canadian dollar: U.S. dollar exchange rate, the U.S. dollar: European euro exchange rate and market interest rates 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 derivative financial instrument notional amounts as at the 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 date have been used in the calculations.

Income tax expense, which is reflected net in the sensitivity analysis, reflects 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	
	2021	2020	2021	2020	2021	2020
Reasonably possible changes in market risks ¹						
10% change in C\$: US\$ exchange rate						
Canadian dollar appreciates	\$ 1	\$ -	\$(33)	\$ 14	\$(32)	\$ 14
Canadian dollar depreciates	\$(1)	\$ -	\$ 33	\$ (14)	\$ 32	\$ (14)
10% change in US\$: € exchange rate						
U.S. dollar appreciates	\$ -	\$ -	\$(56)	\$ (54)	\$(56)	\$ (54)
U.S. dollar depreciates	\$ -	\$ -	\$ 56	\$ 54	\$ 56	\$ 54
25 basis point change in interest rates						
Interest rates increase						
Canadian interest rate	\$(4)	\$(1)	\$ 90	\$ 107	\$ 86	\$ 106
U.S. interest rate	\$ -	\$ -	\$(93)	\$(107)	\$(93)	\$(107)
Combined	\$(4)	\$(1)	\$ (3)	\$ -	\$ (7)	\$ (1)
Interest rates decrease						
Canadian interest rate	\$ 4	\$ 1	\$(94)	\$(112)	\$(90)	\$(111)
U.S. interest rate	\$ -	\$ -	\$ 98	\$ 113	\$ 98	\$ 113
Combined	\$ 4	\$ 1	\$ 4	\$ 1	\$ 8	\$ 2

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 quoted market prices in active markets for the same or similar financial instruments or on the current rates offered to us for financial instruments of the same maturity, as well as on 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).

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)					2021					2020
	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 Assets²										
Derivatives used to manage										
Currency risk arising from U.S. dollar revenues	HFT ⁴	-	\$ -	\$ -	-	2021	\$ 87	\$ 2	US\$1.00: C\$1.27	
Currency risk arising from U.S. dollar-denominated purchases	HFH ³	2022	\$ 301	6	US\$1.00: C\$1.25	-	\$ -	-	-	
Currency risk arising from Indian rupee-denominated purchases	HFT ⁴	2022	\$ 12	-	US\$1.00: ₹76	-	\$ -	-	-	
Currency risk arising from U.S. dollar-denominated long-term debt (Note 26(b)-(c))	HFH ³	2022	\$ 664	2	US\$1.00: C\$1.26	2021	\$ 95	-	US\$1.00: C\$1.27	
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	\$ 31	3	€1.00: US\$1.09	2025	\$ 34	-	€1.00: US\$1.09	
Interest rate risk associated with refinancing of debt maturing	HFH ³	2022	\$ 250	2	1.35%	-	\$ -	-	-	
				\$ 13				\$ 2		
Other Long-Term Assets²										
Derivatives used to manage										
Currency risk arising from U.S. dollar-denominated long-term debt ⁶ (Note 26(b)-(c))	HFH ³	2048	\$ 2,133	\$ 76	US\$1.00: C\$1.27	2048	\$ 2,176	\$ 40	US\$1.00: C\$1.27	
Current Liabilities²										
Derivatives used to manage										
Currency risk arising from U.S. dollar revenues	HFT ⁴	2022	\$ 116	\$ 3	US\$1.00: C\$1.27	-	\$ -	\$ -	-	
Currency risk arising from U.S. dollar-denominated purchases	HFH ³	2022	\$ 108	1	US\$1.00: C\$1.28	2021	\$ 388	21	US\$1.00: C\$1.34	
Currency risk arising from Indian rupee-denominated purchases	HFT ⁴	2022	\$ 2	-	US\$1.00: ₹75	-	\$ -	-	-	
Currency risk arising from U.S. dollar-denominated long-term debt (Note 26(b)-(c))	HFH ³	2022	\$ 1,248	12	US\$1.00: C\$1.28	2021	\$ 647	11	US\$1.00: C\$1.29	
Interest rate risk associated with non-fixed rate credit facility amounts drawn (Note 26(f))	HFH ³	2022	\$ 120	3	2.64%	2022	\$ 8	-	2.64%	
Interest rate risk associated with refinancing of debt maturing	HFH ³	2022	\$ 500	5	1.59%	-	\$ -	-	-	
				\$ 24				\$ 32		
Other Long-Term Liabilities²										
Derivatives used to manage										
Currency risk arising from U.S. dollar-denominated long-term debt ⁶ (Note 26(b)-(c))	HFH ³	2049	\$ 3,185	\$ 52	US\$1.00: C\$1.33	2049	\$ 3,260	\$ 82	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	2025	\$ 483	21	€1.00: US\$1.09	2025	\$ 557	67	€1.00: US\$1.09	
Interest rate risk associated with non-fixed rate credit facility amounts drawn (Note 26(f))	HFH ³	-	\$ -	-	-	2022	\$ 120	6	2.64%	
				\$ 73				\$ 155		

1 Fair value measured at reporting date using significant other observable inputs (Level 2).

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, 2021, the foreign currency basis spread included in the fair value of the derivative instruments, which is used for purposes of assessing hedge ineffectiveness, was \$53 (2020 – \$101).

7 We designate only the spot element as the hedging item. As at December 31, 2021, the foreign currency basis spread included in the fair value of the derivative instruments, which is used for purposes of assessing hedge ineffectiveness, was \$1 (2020 – \$(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)	2021		2020	
	Carrying value	Fair value	Carrying value	Fair value
Long-term debt, excluding leases (Note 26)	\$ 18,976	\$ 20,383	\$ 18,451	\$ 20,313

(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 (a), 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.

Years ended December 31 (millions)	Note	Amount of gain (loss) recognized in other comprehensive income (effective portion) (Note 11)		Location	Gain (loss) reclassified from other comprehensive income to income (effective portion) (Note 11)	
		2021	2020		Amount	
					2021	2020
Derivatives used to manage currency risk						
Arising from U.S. dollar-denominated purchases		\$ (1)	\$ (6)	Goods and services purchased	\$ (24)	\$ (9)
Arising from U.S dollar-denominated long-term debt ¹	26(b)-(c)	27	(44)	Financing costs	(50)	12
Arising from net investment in a foreign operation ²		47	(67)	Financing costs	(1)	-
		73	(117)		(75)	3
Derivatives used to manage other market risks						
Arising from changes in share-based compensation costs and other		-	(6)	Employee benefits expense and financing costs	(4)	1
		\$ 73	\$ (123)		\$ (79)	\$ 4

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, 2021, were \$(48) (2020 - \$63).

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, 2021, were \$2 (2020 - \$(1)).

The following table sets out the gains and losses 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.

Years ended December 31 (millions)	Gain (loss) recognized in income on derivatives		
	Location	2021	2020
Derivatives used to manage currency risk	Financing costs	\$ (2)	\$ 11

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 January 1, 2020, we embarked upon the modification of our internal and external reporting processes, systems and internal controls to accommodate the technology convergence-driven cessation of the historical distinction between our wireless and wireline operations at the level of regularly reported discrete performance measures that are provided to our chief operating decision-maker.

Prior to the World Health Organization characterizing COVID-19 as a pandemic, we had anticipated transitioning to a new segment reporting structure during 2020; commencing with the three-month period ended March 31, 2021, we have now transitioned to our new segment reporting structure and have recast comparative amounts on a comparable basis.

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; software, data management and data analytics-driven smart-food chain technologies; and home and business security); certain healthcare software and technology solutions; voice and other telecommunications services revenues; and equipment sales.

The digitally-led customer experiences – TELUS International segment (DLCX), 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 solutions, 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.

Years ended December 31 (millions)	TELUS technology solutions						Digitally-led customer experiences – TELUS International ¹		Eliminations		Total	
	Mobile		Fixed		Segment total		2021	2020	2021	2020	2021	2020
	2021	2020	2021	2020	2021	2020						
Operating revenues												
External revenues												
Service	\$ 6,297	\$ 6,096	\$ 5,928	\$ 5,444	\$ 12,225	\$ 11,540	\$ 2,310	\$ 1,737	\$ –	\$ –	\$ 14,535	\$ 13,277
Equipment	2,042	1,809	261	255	2,303	2,064	–	–	–	–	2,303	2,064
Revenues arising from contracts with customers	\$ 8,339	\$ 7,905	\$ 6,189	\$ 5,699	14,528	13,604	2,310	1,737	–	–	16,838	15,341
Other income (Note 7)					420	19	–	103	–	–	420	122
					14,948	13,623	2,310	1,840	–	–	17,258	15,463
Intersegment revenues					18	13	444	416	(462)	(429)	–	–
					\$ 14,966	\$ 13,636	\$ 2,754	\$ 2,256	\$ (462)	\$ (429)	\$ 17,258	\$ 15,463
EBITDA ²					\$ 5,735	\$ 4,976	\$ 555	\$ 518	\$ –	\$ –	\$ 6,290	\$ 5,494
Restructuring and other costs included in EBITDA (Note 16)					148	182	38	77	–	–	186	259
Equity losses related to real estate joint venture					3	19	–	–	–	–	3	19
Gain on disposition of financial solutions business (Note 7)					(410)	–	–	–	–	–	(410)	–
Retirement of provision arising from business acquisition-related written put options within DLCX					–	–	–	(71)	–	–	–	(71)
Adjusted EBITDA ²					\$ 5,476	\$ 5,177	\$ 593	\$ 524	\$ –	\$ –	\$ 6,069	\$ 5,701
CAPEX, excluding spectrum licences ³					\$ 3,372	\$ 2,675	\$ 126	\$ 100	\$ –	\$ –	\$ 3,498	\$ 2,775
Operating revenues – external and other income (above)												
											\$ 17,258	\$ 15,463
Goods and services purchased											6,699	6,268
Employee benefits expense											4,269	3,701
EBITDA (above)											6,290	5,494
Depreciation											2,126	2,107
Amortization											1,090	905
Operating income											3,074	2,482
Financing costs											796	771
Income before income taxes											\$ 2,278	\$ 1,711

¹ The digitally-led customer experiences – TELUS International segment is comprised of our consolidated TELUS International (Cda) Inc. subsidiary and a line of business retrospectively reorganized into, and accounted for using predecessor accounting prospectively applied by, TELUS International (Cda) Inc. (see Note 28(c)). 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 and adjusted EBITDA because they are key measures that management uses to evaluate the performance of our business, and EBITDA is also utilized in measuring compliance with certain debt covenants.

³ Total capital expenditures (CAPEX); see Note 31(a) for a reconciliation of capital expenditures, 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 where the goods and/or services are provided; for the year ended December 31, 2021, we attributed approximately \$2.6 billion (2020 – \$1.9 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, 2021, on a historical cost basis, we had approximately \$2.2 billion (2020 – \$2.2 billion) and approximately \$2.2 billion (2020 – \$2.2 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 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)	2021	2020
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	\$ 2,369	\$ 2,279
During the 12-month period ending two years hence	915	883
Thereafter	56	35
	\$ 3,340	\$ 3,197

- 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 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	2021	2020
Customer accounts receivable		\$ 2,194	\$ 1,986
Accrued receivables – customer		313	241
Allowance for doubtful accounts	4(b)	(81)	(119)
		2,426	2,108
Accrued receivables – other		245	247
Accounts receivable – current		\$ 2,671	\$ 2,355

(c) Contract assets

Years ended December 31 (millions)	Note	2021	2020
Balance, beginning of period		\$ 850	\$ 1,238
Net additions arising from operations		1,324	959
Amounts billed in the period and thus reclassified to accounts receivable ¹		(1,343)	(1,363)
Change in impairment allowance, net	4(b)	6	15
Other		-	1
Balance, end of period		\$ 837	\$ 850
To be billed and thus reclassified to accounts receivable during:			
The 12-month period ending one year hence		\$ 571	\$ 582
The 12-month period ending two years hence		248	253
Thereafter		18	15
Balance, end of period		\$ 837	\$ 850

Reconciliation of contract assets presented in the Consolidated statements of financial position – current

Gross contract assets		\$ 571	\$ 582
Reclassification to contract liabilities of contracts with contract assets less than contract liabilities	24	(13)	(10)
Reclassification from contract liabilities of contracts with contract liabilities less than contract assets	24	(115)	(133)
		\$ 443	\$ 439

1 For the year ended December 31, 2021, amounts billed for our mobile products and services and reclassified to accounts receivable totalled \$734 (2020 – \$1,015).

7 Other income

Years ended December 31 (millions)	Note	2021	2020
Government assistance		\$ 8	\$ 13
Other sublet revenue	19	4	4
Investment income (loss), gain (loss) ¹ on disposal of assets and other		404	(12)
Interest income	21(b)	4	4
Changes in business combination-related provisions		-	113
		\$ 420	\$ 122

1 During the year ended December 31, 2021, we disposed of our financial solutions business, which was a part of our TELUS technology solutions segment, and realized a gain on disposition of \$410 before income taxes.

We receive government assistance, as defined by IFRS-IASB, from a number of sources and, if not in respect of capital, generally include such amounts received in Other income, other than in respect of the Canada Emergency Wage Subsidy program amounts, as set out in *Note 8*. We recognize such amounts on an accrual basis as the subsidized services are provided or as the subsidized costs are incurred.

CRTC subsidy

Local exchange carriers' costs of providing the level of residential basic telephone services that the CRTC requires to be provided in high cost serving areas are greater than the amounts the CRTC allows the local exchange carriers to charge for the levels of service. To ameliorate the situation, the CRTC directs the collection of contribution payments, in a central fund, from all registered Canadian telecommunications

service providers (including voice, data and mobile service providers) that are then disbursed to incumbent local exchange carriers as subsidy payments to partially offset the costs of providing residential basic telephone services in non-forborne high cost serving areas. The subsidy payment disbursements are based upon a total subsidy requirement calculated on a per network access line/per band subsidy rate. For the year ended December 31, 2021, our subsidy receipts were \$5 million (2020 – \$10 million).

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, 2021, we recorded \$3 million (2020 – \$3 million).

8 Employee benefits expense

Years ended December 31 (millions)	Note	2021	2020
Employee benefits expense – gross			
Wages and salaries ¹		\$ 4,118	\$ 3,668
Share-based compensation ²	14	236	173
Pensions – defined benefit	15(a)	113	102
Pensions – defined contribution	15(f)	106	94
Restructuring costs ²	16(a)	79	49
Employee health and other benefits		227	190
		4,879	4,276
Capitalized internal labour costs, net			
Contract acquisition costs	20		
Capitalized		(91)	(74)
Amortized		66	55
Contract fulfilment costs	20		
Capitalized		(2)	(2)
Amortized		5	4
Property, plant and equipment		(362)	(350)
Intangible assets subject to amortization		(226)	(208)
		(610)	(575)
		\$ 4,269	\$ 3,701

1 For the years ended December 31, 2021 and 2020, wages and salaries are net of Canada Emergency Wage Subsidy program amounts.

2 For the year ended December 31, 2021, \$8 of share-based compensation in the digitally-led customer experiences segment was included in restructuring costs.

9 Financing costs

Years ended December 31 (millions)	Note	2021	2020
Interest expense			
Interest on long-term debt, excluding lease liabilities – gross		\$ 683	\$ 676
Interest on long-term debt, excluding lease liabilities – capitalized ¹		(3)	(37)
Interest on long-term debt, excluding lease liabilities		680	639
Interest on lease liabilities	19	66	70
Interest on short-term borrowings and other		15	5
Interest accretion on provisions	25	18	16
Long-term debt prepayment premium		10	18
		789	748
Employee defined benefit plans net interest	15	26	16
Foreign exchange		(3)	14
		812	778
Interest income		(16)	(7)
		\$ 796	\$ 771
Net interest cost	3	\$ 773	\$ 792
Interest on long-term debt, excluding lease liabilities – capitalized ¹		(3)	(37)
Employee defined benefit plans net interest		26	16
		\$ 796	\$ 771

1 Interest on long-term debt, excluding lease liabilities, at a composite rate of 3.10% (2020 – 4.33%) 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)	2021	2020
Current income tax expense		
For the current reporting period	\$ 563	\$ 474
Adjustments recognized in the current period for income taxes of prior periods	(30)	(99)
	533	375
Deferred income tax expense		
Arising from the origination and reversal of temporary differences	25	3
Revaluation of deferred income tax liability to reflect future income tax rates	-	(6)
Adjustments recognized in the current period for income taxes of prior periods	22	79
	47	76
	\$ 580	\$ 451

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)		2021		2020
Income taxes computed at applicable statutory rates	\$ 589	25.8%	\$ 446	26.1%
Revaluation of deferred income tax liability to reflect future income tax rates	-	-	(6)	(0.4)
Adjustments recognized in the current period for income taxes of prior periods	(8)	(0.3)	(20)	(1.3)
Non-deductible amounts	23	1.0	20	1.2
Gain on disposition	(46)	(2.0)	-	-
Other	22	1.0	11	0.7
Income tax expense per Consolidated statements of income and other comprehensive income	\$ 580	25.5%	\$ 451	26.3%

(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.

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 estimated as follows:

(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 and share-based compensation amounts	Provisions not currently deductible	Losses available to be carried forward ¹	Other	Net deferred income tax liability
As at January 1, 2020 ²	\$ 1,616	\$ 1,608	\$ (77)	\$ 418	\$ (140)	\$ (212)	\$ (11)	\$ 6	\$ 3,208
Deferred income tax expense recognized in									
Net income	85	82	37	(111)	(31)	8	(33)	39	76
Other comprehensive income	-	-	-	-	(109)	-	-	(13)	(122)
Deferred income taxes charged directly to owners' equity and other (Note 18(c))	591	2	-	-	-	(11)	(23)	(14)	545
As at December 31, 2020 ³	2,292	1,692	(40)	307	(280)	(215)	(67)	18	3,707
Deferred income tax expense recognized in									
Net income	75	59	7	(112)	(28)	41	(23)	28	47
Other comprehensive income	-	-	-	-	209	-	-	37	246
Deferred income taxes charged directly to owners' equity and other (Note 18(b))	79	-	-	-	-	-	(6)	(52)	21
As at December 31, 2021 ⁴	\$ 2,446	\$ 1,751	\$ (33)	\$ 195	\$ (99)	\$ (174)	\$ (96)	\$ 31	\$ 4,021

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

² Deferred tax liability of \$3,214, net of deferred tax asset of \$6 (included in Other long-term assets).

³ Deferred tax liability of \$3,718, net of deferred tax asset of \$11 (included in Other long-term assets).

⁴ Deferred tax liability of \$4,056, net of deferred tax asset of \$35 (included in Other long-term assets).

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 difference and it is probable that it 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, 2021, we recorded Investment Tax Credits of \$21 million (2020 – \$12 million). Of this amount, \$14 million (2020 – \$6 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

	Items that may subsequently be reclassified to income											
	Change in unrealized fair value of derivatives designated as cash flow hedges in current period <i>(Note 4(i))</i>								Item never reclassified to income		Item never reclassified to income	
	Derivatives used to manage currency risk			Derivatives used to manage other market risks								
		Prior period (gains) losses transferred to net income			Prior period (gains) losses transferred to net income			Cumulative foreign currency translation adjustment	Change in measurement of investment financial assets	Accumulated other comprehensive income	Employee defined benefit plan re-measurements	Other comprehensive income
Years ended December 31 (millions)	Gains (losses) arising		Total	Gains (losses) arising		Total	Total					
Accumulated balance as at January 1, 2020			\$ 66			\$ (1)	\$ 65	\$ 42	\$ 12	\$ 119		
Other comprehensive income (loss)												
Amount arising	\$ (117)	\$ (3)	(120)	\$ (6)	\$ (1)	(7)	(127)	113	17	3	\$ (421)	\$ (418)
Income taxes	\$ (5)	\$ (9)	(14)	\$ (2)	\$ –	(2)	(16)	–	3	(13)	(109)	(122)
Net			(106)			(5)	(111)	113	14	16	\$ (312)	\$ (296)
Accumulated balance as at December 31, 2020			(40)			(6)	(46)	155	26	135		
Other comprehensive income (loss)												
Amount arising	\$ 73	\$ 75	148	\$ –	\$ 4	4	152	(130)	66	88	\$ 809	\$ 897
Income taxes	\$ 9	\$ 18	27	\$ –	\$ 1	1	28	–	9	37	209	246
Net			121			3	124	(130)	57	51	\$ 600	\$ 651
Accumulated balance as at December 31, 2021			\$ 81			\$ (3)	\$ 78	\$ 25	\$ 83	\$ 186		
Attributable to:												
Common Shares										\$ 203		
Non-controlling interests										(17)		
										\$ 186		

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)	2021	2020
Basic total weighted average number of Common Shares outstanding	1,346	1,275
Effect of dilutive securities – Restricted share units	5	3
Diluted total weighted average number of Common Shares outstanding	1,351	1,278

For the years ended December 31, 2021 and 2020, 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, 2021, less than 1 million (2020 – 1 million) outstanding TELUS Corporation share option awards were excluded in the calculation of diluted net 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		Paid to shareholders	Total	Declared		Paid to shareholders	Total
	Effective	Per share			Effective	Per share		
Quarter 1 dividend	Mar. 11, 2021	\$ 0.3112	Apr. 1, 2021	\$ 404	Mar. 11, 2020	\$ 0.29125	Apr. 1, 2020	\$ 371
Quarter 2 dividend	June 10, 2021	0.3162	July 2, 2021	428	June 10, 2020	0.29125	July 2, 2020	372
Quarter 3 dividend	Sep. 10, 2021	0.3162	Oct. 1, 2021	430	Sep. 10, 2020	0.29125	Oct. 1, 2020	374
Quarter 4 dividend	Dec. 10, 2021	0.3274	Jan. 4, 2022	449	Dec. 11, 2020	0.31120	Jan. 4, 2021	403
		\$ 1.2710		\$ 1,711		\$ 1.18495		\$ 1,520

On February 9, 2022, the Board of Directors declared a quarterly dividend of \$0.3274 per share on our issued and outstanding TELUS Corporation Common Shares payable on April 1, 2022, to holders of record at the close of business on March 11, 2022. 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, 2022.

(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, 2021, of \$582 million (2020 – \$524 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 following share-based compensation amounts:

Years ended December 31 (millions)		2021			2020		
	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)	\$ 185	\$ (35)	\$ 150	\$ 131	\$ (109)	\$ 22
Employee share purchase plan	(c)	41	(41)	-	33	(33)	-
Share option awards	(d)	18	(29)	(11)	9	(4)	5
		\$ 244	\$ (105)	\$ 139	\$ 173	\$ (146)	\$ 27
TELUS technology solutions		\$ 150	\$ (44)	\$ 106	\$ 135	\$ (123)	\$ 12
Digitally-led customer experiences		94	(61)	33	38	(23)	15
		\$ 244	\$ (105)	\$ 139	\$ 173	\$ (146)	\$ 27

¹ Within employee benefits expense (see Note 8), for the year ended December 31, 2021, restricted share units expense of \$178 and share option awards expense of \$17 are 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. The 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 (which have their grant-date fair value determined using a Monte Carlo simulation). The 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 are graded-vesting. Accounting for restricted share units, as either equity instruments or

liability instruments, is based upon the expected manner of their settlement when they are granted. Grants of restricted share units prior to fiscal 2019 were accounted for as liability instruments, as the associated obligation was normally cash-settled.

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. The estimate, which reflects a variable payout, of the fair value of the notional subset of our restricted share units affected by the relative total shareholder return performance condition is determined using a Monte Carlo simulation. Grants of restricted share units in 2021 and 2020 are accounted for as equity-settled, as that was their expected manner of settlement when granted.

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

Number of non-vested restricted share units as at December 31	2021	2020
Restricted share units without market performance conditions		
Restricted share units with only service conditions	5,481,486	5,718,328
Notional subset affected by total customer connections performance condition	366,983	298,957
	5,848,469	6,017,285
Restricted share units with market performance conditions		
Notional subset affected by relative total shareholder return performance condition	1,100,949	896,870
	6,949,418	6,914,155

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

Years ended December 31	2021			2020		
	Number of restricted share units ¹		Weighted average grant-date fair value	Number of restricted share units ¹		Weighted average grant-date fair value
	Non-vested	Vested		Non-vested	Vested	
Outstanding, beginning of period						
Non-vested	6,017,285	–	\$ 24.55	6,468,954	–	\$ 23.37
Vested	–	29,870	\$ 24.58	–	30,800	\$ 22.02
Granted						
Initial award	3,131,508	–	\$ 25.98	3,199,809	–	\$ 25.36
In lieu of dividends	385,783	1,394	\$ 26.74	428,750	624	\$ 23.08
Variable payout related	16,886	–	\$ 25.53	–	–	–
Vested	(3,354,451)	3,354,451	\$ 24.10	(3,696,539)	3,696,539	\$ 23.14
Settled						
In cash	–	(58,704)	\$ 24.67	–	(3,053,349)	\$ 22.82
In equity	–	(3,277,873)	\$ 24.07	–	(644,744)	\$ 24.17
Forfeited	(348,542)	–	\$ 21.59	(383,689)	–	\$ 23.82
Outstanding, end of period						
Non-vested	5,848,469	–	\$ 25.67	6,017,285	–	\$ 24.55
Vested	–	49,138	\$ 25.63	–	29,870	\$ 24.58

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 2021 are accounted for as equity-settled, as that was their expected manner of settlement when granted.

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

Years ended December 31	2021						2020	
	Number of restricted share units		Weighted average grant-date fair value	Number of restricted share units		Weighted average grant-date fair value		
	Non-vested	Vested		Non-vested	Vested			
Outstanding, beginning of period	1,383,642	–	US\$ 7.94	2,093,603	–	US\$ 6.11		
Granted – initial award	1,383,983	–	US\$ 27.26	357,966	–	US\$ 11.11		
Vested	(805,429)	805,429	US\$ 7.29	(982,395)	982,395	US\$ 5.95		
Settled								
In cash	–	(773,185)	US\$ 6.31	–	(982,395)	US\$ 5.95		
In equity	–	(32,244)	US\$ 31.01	–	–	US\$ –		
Forfeited	(111,389)	–	US\$ 20.16	(85,532)	–	US\$ 7.00		
Outstanding, end of period	1,850,807	–	US\$ 21.94	1,383,642	–	US\$ 7.94		

(c) TELUS Corporation employee share purchase plan

We have an employee share purchase plan under which eligible employees up to a certain job classification can purchase TELUS Corporation Common Shares through regular payroll deductions. In respect of TELUS Corporation Common Shares held within the employee share purchase plan, TELUS Corporation Common Share dividends declared during the year ended December 31, 2021, of \$42 million (2020 – \$37 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 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 TELUS International (Cda) Inc.'s own 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 time of grant. Share option awards granted in fiscal 2021 and 2020 were for front-line employees.

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	2021		2020	
	Number of share options	Weighted average share option price ¹	Number of share options	Weighted average share option price
Outstanding, beginning of period	3,014,700	\$ 21.59	–	\$ –
Granted	324,900	\$ 25.96	3,171,600	\$ 21.57
Forfeited	(289,300)	\$ 21.75	(156,900)	\$ 21.29
Outstanding, end of period	3,050,300	\$ 22.04	3,014,700	\$ 21.59

¹ The weighted average remaining contractual life is 5.4 years. No options were exercisable as at the balance sheet date.

The weighted average fair value of share option awards granted, and the weighted average assumptions used in the fair value estimation at the time of grant, calculated by using the Black-Scholes model (a closed-form option pricing model), are as follows:

Years ended December 31	2021	2020
Share option award fair value (per share option)	\$ 0.93	\$ 0.65
Risk-free interest rate	0.79%	0.95%
Expected lives ¹ (years)	4.25	4.25
Expected volatility	12.5%	12.3%
Dividend yield	4.8%	5.4%

1 The maximum contractual term of the share option awards granted in 2021 and 2020 was seven years.

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 TELUS International (Cda) Inc. subordinate voting share price appreciation. 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	2021				2020			
	US\$ denominated		C\$ denominated		US\$ denominated		C\$ denominated	
	Number of share options	Weighted average share option price ¹	Number of share options	Share option price	Number of share options	Weighted average share option price	Number of share options	Share option price
Outstanding, beginning of period	3,922,056	US\$ 6.94	242,244	\$ 4.75	4,484,790	US\$ 6.91	242,244	\$ 4.75
Granted	579,949	US\$ 25.00	–	\$ –	–	US\$ –	–	\$ –
Exercised	(1,321,238)	US\$ 5.74	(242,244)	\$ 4.75	(562,734)	US\$ 6.21	–	\$ –
Outstanding, end of period	3,180,767	US\$ 10.74	–	\$ –	3,922,056	US\$ 6.94	242,244	\$ 4.75
Exercisable, end of period	2,096,582	US\$ 7.45	–	\$ –	3,267,423	US\$ 6.58	242,244	\$ 4.75

1 For 2,600,818 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 5.6 years; for the balance of share options, the price is US\$25.00 and the weighted average remaining contractual life is 9.2 years.

The weighted average fair value of share option awards granted, and the weighted average assumptions used in the fair value estimation at the time of grant, calculated by using the Black-Scholes model (a closed-form option pricing model), are as follows:

Year ended December 31	2021
Share option award fair value (per share option)	US\$ 5.34
Risk-free interest rate	0.73%
Expected lives ¹ (years)	6.5
Expected volatility	19.3%
Dividend yield	NIL%

1 The maximum contractual term of the share option awards granted in 2021 was ten years.

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		2021			2020		
(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		\$ -	\$ (120)		\$ -	\$ (111)	
Benefits earned for past service		-	(6)		-	(3)	
Employees' contributions		18	-		19	-	
Administrative fees		(5)	-		(7)	-	
		13	(126)	\$ (113)	12	(114)	\$ (102)
Financing costs	9						
Notional income on plan assets ² and interest on defined benefit obligations accrued		238	(261)		285	(297)	
Interest effect on asset ceiling limit	(c)	(3)	-		(4)	-	
		235	(261)	(26)	281	(297)	(16)
Defined benefit (cost) included in net income³				(139)			(118)
Other comprehensive income	11						
Difference between actual results and estimated plan assumptions ⁴		661	(456)		480	(67)	
Changes in plan financial assumptions	(d)	-	657		-	(836)	
Changes in the effect of limiting net defined benefit assets to the asset ceilings	(c)	(53)	-		2	-	
		608	201	809	482	(903)	(421)
Defined benefit (cost) included in comprehensive income³				670			(539)
Amounts included in operating activities cash flows							
Employer contributions	(e)	53	-	53	51	-	51
Benefits paid by plans		(474)	474	-	(477)	477	-
Plan account balances⁵							
Change in year		435	288	723	349	(837)	(488)
Balance, beginning of year		9,608	(10,521)	(913)	9,259	(9,684)	(425)
Balance, end of year		\$ 10,043	\$ (10,233)	\$ (190)	\$ 9,608	\$ (10,521)	\$ (913)
Funded status – plan surplus (deficit)							
Pension plans that have plan assets in excess of defined benefit obligations accrued	20	\$ 9,141	\$ (8,688)	\$ 453	\$ 721	\$ (708)	\$ 13
Pension plans that have defined benefit obligations accrued in excess of plan assets							
Funded		902	(1,286)	(384)	8,887	(9,550)	(663)
Unfunded		-	(259)	(259)	-	(263)	(263)
	27	902	(1,545)	(643)	8,887	(9,813)	(926)
		\$ 10,043	\$ (10,233)	\$ (190)	\$ 9,608	\$ (10,521)	\$ (913)
PBSR solvency position⁶							
Pension plans that have plan assets in excess of defined benefit obligations accrued				\$ 1,366			\$ 516
Funded pension plans that have defined benefit obligations accrued in excess of plan assets				-			(153)
				\$ 1,366			\$ 363
Defined benefit obligations accrued owed to:							
Active members			\$ (2,343)			\$ (2,461)	
Deferred members			(528)			(561)	
Pensioners			(7,362)			(7,499)	
			\$ (10,233)			\$ (10,521)	

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.

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 (see (d)). For the year ended December 31, 2021, the difference between actual results and estimated plan assumptions for defined benefit obligations includes \$375 in respect of changes in mortality-related assumptions (see (d)).

5 The measurement date used to determine the plan assets and defined benefit obligations accrued was December 31.

(Continued on next page)

(Continued from previous page)

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, 2021 and 2020, are interim estimates and updated estimates, respectively. The interim estimate as at December 31, 2020, was a net surplus of \$375.

Interim estimated solvency ratios as at December 31, 2021, ranged from 106% to 122% (2020 – updated estimate is 94% to 108%; interim estimate was 95% to 109%) and the estimated three-year average solvency ratios, adjusted as required by the PBSR, ranged from 99% to 113% (2020 – updated estimate is 96% to 108%; interim estimate was 97% to 109%).

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 2.9% (2020 – 2.5%). A hypothetical decrease of 25 basis points in the composite weighted average discount rate would result in a \$297 decrease in the PBSR solvency position as at December 31, 2021 (2020 – \$330); 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, 2021 and 2020, 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 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 (the current contract expired on December 31, 2021 – see *Note 29(c)*), 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, 2021 and 2020, our contributions comprised a significant proportion of the employer contributions to the union pension plan; similarly, a significant proportion of the plan participants were our active and retired employees.

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 three defined contribution pension plans, which are contributory, and these are the primary pension plans we sponsor that are available to our non-unionized and certain of our unionized employees. For the years ended December 31, 2021 and 2020, 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, which are all non-contributory and, as at December 31, 2021 and 2020, 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 (SIPP), which is reviewed and approved annually by the designated governing body. The SIPP 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 SIPP may provide for the use of derivative products to facilitate investment operations and to manage risk, provided that no short position is taken and no guidelines and limits established in the SIPP are violated. Internally and externally managed funds are not permitted to invest directly in our securities, or those of our subsidiaries, and are prohibited from increasing grandfathered investments in our securities; any such grandfathered

investments were made prior to the merger of BC TELECOM Inc. and TELUS Corporation, our predecessors.

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' investment in equity securities is allocated to foreign equity securities with the intent of further diversifying plan assets. 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, 2021, the present value-weighted average timing of estimated cash flows for the obligations (duration) of the defined benefit pension plans was 14.0 years (2020 – 14.1 years) and of the other defined benefit plans was 6.1 years (2020 – 5.8 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, in aggregate, is as follows:

As at December 31 (millions)	Total		Fair value measurements at reporting date using			
			Quoted prices in active markets for identical items		Other	
	2021	2020	2021	2020	2021	2020
Asset class						
Equity securities						
Canadian	\$ 1,104	\$ 1,044	\$ 945	\$ 849	\$ 159	\$ 195
Foreign	2,861	2,699	826	685	2,035	2,014
Debt securities						
Issued by national, provincial or local governments	1,290	1,453	1,120	1,225	170	228
Corporate debt securities	2,436	2,087	–	–	2,436	2,087
Asset-backed securities	6	32	–	–	6	32
Commercial mortgages	680	803	–	–	680	803
Cash, cash equivalents and other	820	528	37	20	783	508
Real estate	1,025	1,085	–	–	1,025	1,085
	10,222	9,731	\$ 2,928	\$ 2,779	\$ 7,294	\$ 6,952
Effect of asset ceiling limit						
Beginning of year	(123)	(121)				
Interest effect on asset ceiling limit	(3)	(4)				
Change in the effect of limiting net defined benefit assets to the asset ceiling	(53)	2				
End of year	(179)	(123)				
	\$ 10,043	\$ 9,608				

As at December 31, 2021, pension benefit trusts that we administered held no TELUS Corporation Common Shares and no TELUS International (Cda) Inc. subordinate voting shares, and held debt of TELUS Corporation with a fair value of approximately \$2 million (2020 – \$2 million) (see (c) – *Allowable and prohibited investment types*). As at December 31, 2021 and 2020, pension benefit trusts that we administered did not lease real estate to us.

Asset allocations

Our defined benefit pension plans' target asset allocations and actual asset allocations are as follows:

	Target allocation	Percentage of plan assets at end of year	
Years ended December 31	2022	2021	2020
Equity securities	25–55%	38%	38%
Debt securities	40–75%	51%	51%
Real estate	10–30%	11%	11%
Other	0–15%	–	–
		100%	100%

(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, 2021 and 2020, 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 in measuring our defined benefit obligations accrued are as follows:

	2021	2020
Mortality assumptions used to determine defined benefit obligations accrued at December 31		
Life expectancy at 65 for a member currently at age 65 (years)	24.2	22.7
Discount rate ¹ used to determine:		
Net benefit costs for the year ended December 31	2.50%	3.10%
Defined benefit obligations accrued as at December 31	2.95%	2.50%
Current service cost in subsequent fiscal year	3.10%	2.70%
Rate of future increases in compensation used to determine:		
Net benefit costs for the year ended December 31	2.90%	2.90%
Defined benefit obligations accrued as at December 31	3.00%	2.90%

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	2021		2020	
	Change in obligations	Change in expenses	Change in obligations	Change in expenses
Increase (decrease) (millions)				
Sensitivity of key demographic assumptions to an increase of one year ¹ in life expectancy	\$ 323	\$ 11	\$ 349	\$ 11
Sensitivity of key financial assumptions to a hypothetical decrease of 25 basis points ¹ in:				
Discount rate	\$ 366	\$ 13	\$ 386	\$ 15
Rate of future increases in compensation	\$ (34)	\$ (3)	\$ (36)	\$ (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 the obligations and expenses. 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 for funding purposes utilizing average solvency ratios, our funding may include the provision of letters of

credit. As at December 31, 2021, undrawn letters of credit in the amount of \$115 million (2020 – \$108 million) secured certain obligations of the defined benefit pension plans, including non-registered unfunded plans.

Our best estimate of fiscal 2022 employer contributions to our defined benefit plans is approximately \$32 million for defined benefit pension plans. This estimate is based upon the mid-year 2021 annual funding valuations that were prepared by actuaries using December 31, 2020, 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 2022.

Future benefit payments

Estimated future benefit payments from our funded and unfunded defined benefit pension plans, calculated as at December 31, 2021, are as follows:

Years ending December 31 (millions)	Funded	Unfunded	Total
2022	\$ 457	\$ 11	\$ 468
2023	467	11	478
2024	473	11	484
2025	478	12	490
2026	485	12	497
2027–2031	2,492	69	2,561

(f) Defined contribution plans – expense

Our total defined contribution pension plan costs recognized were as follows:

Years ended December 31 (millions)	2021	2020
Union pension plan and public service pension plan contributions	\$ 20	\$ 21
Other defined contribution pension plans	86	73
	\$ 106	\$ 94

We expect that our 2022 union pension plan and public service pension plan contributions will be approximately \$22 million.

(g) Other defined benefit plans

For the year ended December 31, 2021, other defined benefit plan current service cost was \$2 million (2020 – \$3 million). Estimated future benefit payments from our other defined benefit plans, calculated as at December 31, 2021, are \$1 million annually for the five-year period from 2022 to 2026 and \$5 million for the five-year period from 2027 to 2031.

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; adverse retrospective regulatory decisions; and certain incremental atypical costs incurred in connection with the COVID-19 pandemic.

Restructuring and other costs are presented in the Consolidated statements of income and other comprehensive income, as set out in the following table:

Years ended December 31 (millions)	Restructuring (b)		Other (c)		Total	
	2021	2020	2021	2020	2021	2020
Goods and services purchased	\$ 62	\$ 160	\$ 45	\$ 49	\$ 107	\$ 209
Employee benefits expense	79	49	–	1	79	50
	\$ 141	\$ 209	\$ 45	\$ 50	\$ 186	\$ 259

(b) Restructuring provisions

Employee-related provisions and other provisions, as presented in Note 25, include amounts in respect of restructuring activities. In 2021, 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, 2021, incremental external costs were incurred in connection with business acquisition activity. 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.

Also during the year ended December 31, 2021, other costs were incurred in connection with the COVID-19 pandemic. Incremental costs were incurred due to proactive steps we elected to take in order to keep our customers and employees safe, including adjustments to the frequency of real estate cleaning and maintenance, among other items. As well, costs that have been incurred in the normal course but which are unable to contribute normally to the earning of revenues have been deemed atypical.

17 Property, plant and equipment

Owned assets							Right-of-use lease assets (Note 19)					
		Network assets	Buildings and leasehold improvements	Computer hardware and other	Land	Assets under construction	Total	Network assets	Real estate	Other	Total	Total
(millions)	Note											
At cost												
As at January 1, 2020		\$ 31,713	\$ 3,314	\$ 1,373	\$ 48	\$ 421	\$ 36,869	\$ 219	\$ 1,267	\$ 60	\$ 1,546	\$ 38,415
Additions¹		998	43	62	5	1,191	2,299	282	224	24	530	2,829
Additions arising from business acquisitions		4	22	12	–	–	38	–	74	6	80	118
Dispositions, retirements and other		(497)	(70)	(142)	–	–	(709)	(2)	(64)	(8)	(74)	(783)
Assets under construction put into service		752	119	100	1	(972)	–	–	–	–	–	–
Net foreign exchange differences		2	–	(2)	–	–	–	–	5	–	5	5
As at December 31, 2020		32,972	3,428	1,403	54	640	38,497	499	1,506	82	2,087	40,584
Additions¹		730	53	82	5	1,593	2,463	300	220	34	554	3,017
Additions arising from business acquisitions	18(b)	–	1	2	–	–	3	–	4	–	4	7
Dispositions, retirements and other		(455)	(36)	(47)	–	–	(538)	(205)	(32)	(17)	(254)	(792)
Assets under construction put into service		1,266	92	88	16	(1,462)	–	–	–	–	–	–
Net foreign exchange differences		(3)	(1)	(3)	–	–	(7)	–	(4)	–	(4)	(11)
As at December 31, 2021		\$ 34,510	\$ 3,537	\$ 1,525	\$ 75	\$ 771	\$ 40,418	\$ 594	\$ 1,694	\$ 99	\$ 2,387	\$ 42,805
Accumulated depreciation												
As at January 1, 2020		\$ 21,060	\$ 2,052	\$ 875	\$ –	\$ –	\$ 23,987	\$ 6	\$ 174	\$ 16	\$ 196	\$ 24,183
Depreciation²		1,547	127	158	–	–	1,832	37	221	17	275	2,107
Dispositions, retirements and other		(489)	(70)	(142)	–	–	(701)	–	(16)	(6)	(22)	(723)
Net foreign exchange differences		2	–	(2)	–	–	–	–	3	–	3	3
As at December 31, 2020		22,120	2,109	889	–	–	25,118	43	382	27	452	25,570
Depreciation²		1,526	135	167	–	–	1,828	77	204	17	298	2,126
Dispositions, retirements and other		(573)	(38)	(116)	–	–	(727)	(56)	(15)	(10)	(81)	(808)
Net foreign exchange differences		(3)	1	(2)	–	–	(4)	–	(5)	–	(5)	(9)
As at December 31, 2021		\$ 23,070	\$ 2,207	\$ 938	\$ –	\$ –	\$ 26,215	\$ 64	\$ 566	\$ 34	\$ 664	\$ 26,879
Net book value												
As at December 31, 2020		\$ 10,852	\$ 1,319	\$ 514	\$ 54	\$ 640	\$ 13,379	\$ 456	\$ 1,124	\$ 55	\$ 1,635	\$ 15,014
As at December 31, 2021		\$ 11,440	\$ 1,330	\$ 587	\$ 75	\$ 771	\$ 14,203	\$ 530	\$ 1,128	\$ 65	\$ 1,723	\$ 15,926

1 For the year ended December 31, 2021, additions include \$(171) (2020 – \$157) in respect of asset retirement obligations (see Note 25).

2 For the year ended December 31, 2021, depreciation includes \$7 (2020 – \$23) in respect of impairment of real estate right-of-use lease assets.

As at December 31, 2021, our contractual commitments for the acquisition of property, plant and equipment totalled \$574 million over a period ending December 31, 2023 (2020 – \$235 million over a period ending December 31, 2022).

18 Intangible assets and goodwill

(a) Intangible assets and goodwill, net

		Intangible assets subject to amortization					Intangible assets with indefinite lives			Total intangible assets and goodwill
		Customer contracts, related customer relationships and subscriber base		Access to rights-of-way, crowdsource assets and other	Assets under construction		Spectrum licences	Total intangible assets	Goodwill ^{1,2}	
(millions)	Note		Software			Total				
At cost										
As at January 1, 2020		\$ 1,032	\$ 5,870	\$ 137	\$ 254	\$ 7,293	\$ 9,937	\$ 17,230	\$ 5,671	\$ 22,901
Additions		–	88	4	548	640	–	640	–	640
Additions arising from business acquisitions		1,766	357	263	–	2,386	9	2,395	1,812	4,207
Dispositions, retirements and other (including capitalized interest)	9	100	(421)	(41)	–	(362)	(36)	(398)	–	(398)
Assets under construction put into service		–	586	–	(586)	–	–	–	–	–
Net foreign exchange differences		47	(1)	–	–	46	–	46	41	87
As at December 31, 2020		2,945	6,479	363	216	10,003	9,910	19,913	7,524	27,437
Additions		–	139	5	720	864	2,272	3,136	–	3,136
Additions arising from business acquisitions	(b)	161	187	18	–	366	–	366	255	621
Dispositions, retirements and other (including capitalized interest)	9	(15)	(740)	52	–	(703)	3	(700)	(60)	(760)
Assets under construction put into service		–	657	4	(661)	–	–	–	–	–
Net foreign exchange differences		(63)	1	(5)	–	(67)	–	(67)	(74)	(141)
As at December 31, 2021		\$ 3,028	\$ 6,723	\$ 437	\$ 275	\$ 10,463	\$ 12,185	\$ 22,648	\$ 7,645	\$ 30,293
Accumulated amortization										
As at January 1, 2020		\$ 285	\$ 4,028	\$ 71	\$ –	\$ 4,384	\$ –	\$ 4,384	\$ 364	\$ 4,748
Amortization		215	671	19	–	905	–	905	–	905
Dispositions, retirements and other		(10)	(424)	6	–	(428)	–	(428)	–	(428)
Net foreign exchange differences		5	(1)	–	–	4	–	4	–	4
As at December 31, 2020		495	4,274	96	–	4,865	–	4,865	364	5,229
Amortization		288	750	52	–	1,090	–	1,090	–	1,090
Dispositions, retirements and other		(62)	(747)	24	–	(785)	–	(785)	–	(785)
Net foreign exchange differences		(9)	2	–	–	(7)	–	(7)	–	(7)
As at December 31, 2021		\$ 712	\$ 4,279	\$ 172	\$ –	\$ 5,163	\$ –	\$ 5,163	\$ 364	\$ 5,527
Net book value										
As at December 31, 2020		\$ 2,450	\$ 2,205	\$ 267	\$ 216	\$ 5,138	\$ 9,910	\$ 15,048	\$ 7,160	\$ 22,208
As at December 31, 2021		\$ 2,316	\$ 2,444	\$ 265	\$ 275	\$ 5,300	\$ 12,185	\$ 17,485	\$ 7,281	\$ 24,766

1 The amount for goodwill arising from business acquisitions for the year ended December 31, 2020, has 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, 2021, our contractual commitments for the acquisition of intangible assets totalled \$26 million over a period ending December 31, 2023 (2020 – \$56 million over a period ending December 31, 2024).

During 2021, we acquired 3500 MHz spectrum licences from the previous licensee for \$249 million; such transfer of licences has been approved by Innovation, Science and Economic Development Canada.

During 2021, we obtained the use of AWS-4 and 2500 MHz spectrum licences from the original licensees and have accounted for them as intangible assets with indefinite lives; such subordination of licences has been approved by Innovation, Science and Economic Development Canada. The terms of payment for the obtained AWS-4 spectrum licences are such that the amounts owed to the original licensee are accounted for as a long-term financial liability, as set out in *Note 26(g)*; we paid \$21 million for the obtained 2500 MHz spectrum licenses.

Innovation, Science and Economic Development Canada held its 3500 MHz band spectrum auction during the period from June 15, 2021, through July 23, 2021. We were the successful auction participant for 142 spectrum licences, with a total purchase price of approximately \$1.95 billion.

(b) Business acquisitions

Blacksmith Applications Holdings Inc.

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 is complementary to, and was made with a view to growing, our existing smart data solutions business.

The primary factor that contributed 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 acquired workforce and the benefits of acquiring an established business). The amount assigned to goodwill may be deductible for income tax purposes.

Individually immaterial transactions

During the year ended December 31, 2021, we acquired 100% ownership of businesses 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 capacities of the businesses). A portion of the amounts assigned to goodwill may be deductible for income tax purposes. Any differences between the results of operations currently presented and pro forma operating revenues, net income and basic and diluted net income per Common Share amounts reflecting the results of operations as if the business acquisitions had been completed at the beginning of the current fiscal year are immaterial (as are the post-acquisition operating revenues and net income of the acquired businesses for the year ended December 31, 2021).

Acquisition-date fair values

Acquisition-date fair values assigned to the assets acquired and liabilities assumed are set out in the following table:

(millions)	Blacksmith Applications Holdings Inc. ¹	Total of individually immaterial transactions ¹	Total
Assets			
Current assets			
Cash	\$ 26	\$ 4	\$ 30
Accounts receivable ²	14	3	17
Other	1	5	6
	41	12	53
Non-current assets			
Property, plant and equipment			
Owned assets	–	3	3
Right-of-use lease assets	3	1	4
Intangible assets subject to amortization ³	262	104	366
Other	–	19	19
	265	127	392
Total identifiable assets acquired	306	139	445
Liabilities			
Current liabilities			
Short-term borrowings	–	4	4
Accounts payable and accrued liabilities	31	5	36
Income and other taxes payable	–	1	1
Advance billings and customer deposits	18	2	20
Current maturities of long-term debt	2	1	3
	51	13	64
Non-current liabilities			
Long-term debt	73	1	74
Other long-term liabilities	5	–	5
Deferred income taxes	66	5	71
	144	6	150
Total liabilities assumed	195	19	214
Net identifiable assets acquired	111	120	231
Goodwill	161	94	255
Net assets acquired	\$ 272	\$ 214	\$ 486
Acquisition effected by way of:			
Cash consideration	\$ 272	\$ 214	\$ 486

- 1 The purchase price allocation, primarily in respect of customer contracts, related customer relationships and leasehold interests 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 8 years; software is expected to be amortized over periods of 5–10 years; and other intangible assets are expected to be amortized over periods of 2–4 years.

(c) Business acquisitions – prior period

In 2020, we acquired businesses that were complementary to our existing lines of business. As at December 31, 2020, purchase price allocations had not been finalized. During the year ended December 31, 2021, the preliminary acquisition-date fair values for other current assets, intangible assets subject to amortization, goodwill, accounts payable, income and other taxes payable, provisions, deferred income tax liabilities and retained earnings were increased (decreased) by \$(6 million), \$22 million, \$(75 million), \$9 million, \$(13 million), \$37 million, \$(58 million), and \$(34 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) Business acquisition – subsequent to reporting period

Fully Managed Inc.

On January 1, 2022, we acquired 100% ownership of Fully Managed Inc. for cash and contingent consideration of approximately \$137 million. Fully Managed Inc. provides managed information technology support, technology strategy and network management. The investment was made with a view to growing our end-to-end capabilities to support small and medium-sized business customers.

As at February 10, 2022, our initial provision for the net identifiable assets acquired is in the range of \$50 million – \$60 million; 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 business. Upon having sufficient time to review the books and records of the acquired business, 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.

(e) 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 spectrum 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.

(f) 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. Also as referred to in *Note 1(b)*, effective January 1, 2020, we embarked upon the modification of our internal and external reporting processes, systems and internal controls to accommodate the technology convergence-driven cessation of the historical distinction between our wireless and wireline operations and, with effect from January 1, 2021, transitioned to a new segment reporting structure, as referred to in *Note 5*; concurrent with the transition to a new segment reporting structure, there was necessarily a redetermination of our cash-generating units and such redetermination, reflected in the disclosed December 2021 annual test cash-generating units used for intangible assets with indefinite lives and goodwill for impairment testing, aligned with the new segment reporting structure. The December 2020 annual test reflected the historical cash-generating unit distinction.

The carrying values allocated to intangible assets with indefinite lives and goodwill are set out in the following table.

As at December 31 (millions)	Intangible assets with indefinite lives		Goodwill		Total	
	2021	2020	2021	2020 ¹	2021	2020
TELUS technology solutions	\$ 12,185	\$ –	\$ 5,367	\$ –	\$ 17,552	\$ –
Digitally-led customer experiences – TELUS International	–	–	1,914	–	1,914	–
Wireless	–	9,910	–	2,890	–	12,800
Wireline	–	–	–	4,270	–	4,270
	\$ 12,185	\$ 9,910	\$ 7,281	\$ 7,160	\$ 19,466	\$ 17,070

¹ The goodwill balance for wireline as at December 31, 2020, has been adjusted, as set out in (c).

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 to use for 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 2021 annual impairment test purposes, at a consolidated post-tax notional rate of 6.6% and 9.0% for each of the TELUS technology solutions and the digitally-led customer experiences – TELUS International cash-generating units, respectively

(2020 – 7.0% for each of the wireless cash-generating unit and the wireline cash-generating unit). For impairment testing valuations, cash flows subsequent to the three-year projection period are extrapolated, for December 2021 annual impairment test purposes, generally using perpetual growth rates of 1.95% and 3.0% for each of the TELUS technology solutions cash-generating unit and the digitally-led customer experiences – TELUS International cash-generating unit, respectively (2020 – 2.00% for each of the wireless cash-generating unit and the wireline cash-generating unit); 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 the 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 the 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 investment 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 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 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 their owned-equipment situated on real estate right-of-use lease assets, competitors to co-locate telecommunications infrastructure equipment. Of our real estate right-of-use lease assets used for purposes of siting 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	2021	2020
Income from subleasing right-of-use lease assets			
Co-location sublet revenue included in operating service revenues		\$ 22	\$ 17
Other sublet revenue included in other income	7	\$ 4	\$ 4
Lease payments		\$ 568	\$ 434

20 Other long-term assets

As at December 31 (millions)	Note	2021	2020
Pension assets	15	\$ 453	\$ 13
Unbilled customer finance receivables	4(b)	545	361
Derivative assets	4(h)	76	40
Deferred income taxes		35	11
Costs incurred to obtain or fulfill contracts with customers		109	103
Real estate joint venture advances	21(b)	114	114
Investment in real estate joint venture	21(b)	1	1
Investment in associates	21	100	69
Portfolio investments ¹			
At fair value through net income		26	13
At fair value through other comprehensive income		370	223
Prepaid maintenance		62	50
Refundable security deposits and other		113	108
		\$ 2,004	\$ 1,106

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:

Years ended December 31 (millions)	2021			2020		
	Costs incurred to			Costs incurred to		
	Obtain contracts with customers	Fulfill contracts with customers	Total	Obtain contracts with customers	Fulfill contracts with customers	Total
Balance, beginning of period	\$ 323	\$ 11	\$ 334	\$ 344	\$ 14	\$ 358
Additions	282	2	284	261	4	265
Amortization	(269)	(7)	(276)	(282)	(7)	(289)
Balance, end of period	\$ 336	\$ 6	\$ 342	\$ 323	\$ 11	\$ 334
Current ¹	\$ 230	\$ 3	\$ 233	\$ 225	\$ 6	\$ 231
Non-current	106	3	109	98	5	103
	\$ 336	\$ 6	\$ 342	\$ 323	\$ 11	\$ 334

¹ Presented in the Consolidated statements of financial position in prepaid expenses.

21 Real estate joint ventures and investment in associate

(a) General

Real estate joint ventures

In 2013, we partnered, as equals, with two arm's-length parties in a residential, retail and commercial real estate redevelopment project, TELUS Sky, in Calgary, Alberta. The new-build tower, completed in 2020, was to be built to the LEED Platinum standard.

(b) Real estate joint ventures

Summarized financial information

As at December 31 (millions)	2021	2020
Assets		
Current assets		
Cash and temporary investments, net	\$ 11	\$ 11
Other	28	18
	39	29
Non-current assets		
Investment property	328	332
Other	10	13
	338	345
	\$ 377	\$ 374

1 The equity amounts recorded by the real estate joint venture 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 venture.

Years ended December 31 (millions)	2021	2020
Revenue	\$ 13	\$ 2
Depreciation and amortization	\$ 7	\$ 3
Interest expense ¹	\$ 3	\$ 1
Net income (loss) and comprehensive income (loss) ²	\$ (18)	\$ (42)

1 During the year ended December 31, 2020, the real estate joint venture capitalized \$4 of financing costs.

2 As the real estate joint ventures are partnerships, no provision for income taxes of the partners is made in determining the real estate joint ventures' net income and comprehensive income.

Associate

We have acquired a 35% (2020 – 28%) basic equity interest in Miovision Technologies Incorporated, an associate that 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 equity interest.

As at December 31 (millions)	2021	2020
Liabilities and owners' equity		
Current liabilities		
Accounts payable and accrued liabilities	\$ 10	\$ 21
Construction credit facilities	–	342
	10	363
Non-current liabilities		
Construction credit facilities	342	–
	342	–
	352	363
Owners' equity		
TELUS ¹	9	5
Other partners	16	6
	25	11
	\$ 377	\$ 374

Our real estate joint ventures activity

Our real estate joint ventures investment activity is set out in the following table.

Years ended December 31 (millions)	2021			2020		
	Loans and receivables ¹	Equity ²	Total	Loans and receivables ¹	Equity ²	Total
Related to real estate joint ventures' statements of income and other comprehensive income						
Comprehensive income (loss) attributable to us ³	\$ -	\$ (3)	\$ (3)	\$ -	\$ (14)	\$ (14)
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 (<i>Note 7</i>)	4	-	4	4	-	4
Cash flows in the current reporting period						
Construction credit facilities						
Amounts advanced	-	-	-	10	-	10
Financing costs paid to us	(4)	-	(4)	(4)	-	(4)
Funds we advanced or contributed, excluding construction credit facilities	-	10	10	-	17	17
Funds repaid to us and earnings distributed	-	-	-	-	(1)	(1)
Net increase (decrease)	-	7	7	10	2	12
Real estate joint ventures carrying amounts						
Balance, beginning of period	114	(11)	103	104	(2)	102
Valuation provision	-	(4)	(4)	-	(11)	(11)
Balance, end of period	\$ 114	\$ (8)	\$ 106	\$ 114	\$ (11)	\$ 103

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, 2021 and 2020, 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 long-term liabilities (*Note 27*).

3 As the real estate joint ventures are partnerships, no provision for income taxes of the partners is made 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; for lease accounting purposes, the first lease commenced during the three-month period ended June 30, 2019. During the year ended December 31, 2021, the TELUS Sky real estate joint venture recognized \$8 million (2020 – \$NIL) of revenue from our office tenancy; of this amount, one-third was due to our economic interest in the real estate joint venture and two-thirds was due to our partners' economic interests in the real estate joint venture.

Construction credit facilities

The TELUS Sky real estate joint venture has a credit agreement, maturing August 31, 2023, with Canadian financial institutions (as 66⅔% lender) and TELUS Corporation (as 33⅓% lender) to provide \$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.

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 (2020 – \$500 million). The term of this revolving-period securitization agreement ends December 31, 2024 (2020 – December 31, 2021), 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 (2020 – BB) from DBRS Limited or the securitization trust may require the sale program to 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, 2021, we had sold to the trust (but continued to recognize) trade receivables of \$118 million (2020 – \$123 million). Short-term borrowings of \$100 million (2020 – \$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 bank facilities and/or other.

23 Accounts payable and accrued liabilities

As at December 31 (millions)	2021	2020
Accrued liabilities	\$ 1,539	\$ 1,251
Payroll and other employee-related liabilities	633	545
Restricted share units liability	28	18
	2,200	1,814
Trade accounts payable	1,213	855
Interest payable	173	173
Indirect taxes payable and other ¹	119	129
	\$ 3,705	\$ 2,971

1 The December 31, 2020, balance of indirect taxes payable and other has been adjusted, as set out in Note 18(c).

24 Advance billings and customer deposits

As at December 31 (millions)	2021	2020
Advance billings	\$ 636	\$ 551
Deferred customer activation and connection fees	6	7
Customer deposits	10	34
Contract liabilities	652	592
Other	202	180
	\$ 854	\$ 772

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	2021	2020
Balance, beginning of period		\$ 806	\$ 801
Revenue deferred in previous period and recognized in current period		(593)	(577)
Net additions arising from operations		637	539
Additions arising from business acquisitions		20	43
Balance, end of period		\$ 870	\$ 806
Current		\$ 780	\$ 735
Non-current	27		
Deferred revenues		82	61
Deferred customer activation and connection fees		8	10
		\$ 870	\$ 806
Reconciliation of contract liabilities presented in the Consolidated statements of financial position – current			
Gross contract liabilities		\$ 780	\$ 735
Reclassification to contract assets of contracts with contract liabilities less than contract assets	6(c)	(115)	(133)
Reclassification from contract assets of contracts with contract assets less than contract liabilities	6(c)	(13)	(10)
		\$ 652	\$ 592

25 Provisions

(millions)	Asset retirement obligation	Employee-related	Written put options and contingent consideration ¹	Other	Total
As at January 1, 2020	\$ 495	\$ 64	\$ 227	\$ 92	\$ 878
Additions	–	48	186	200	434
Reversals	(5)	(1)	(114)	(20)	(140)
Uses	(3)	(69)	(112)	(143)	(327)
Interest effects ²	174	–	2	–	176
Effects of foreign exchange, net	–	–	13	–	13
As at December 31, 2020	661	42	202	129	1,034
Additions	23	84	8	70	185
Reversals	(8)	(2)	(2)	(11)	(23)
Uses	(4)	(58)	(9)	(88)	(159)
Interest effects ²	(171)	–	4	–	(167)
As at December 31, 2021	\$ 501	\$ 66	\$ 203	\$ 100	\$ 870
Current	\$ 4	\$ 55	\$ 7	\$ 30	\$ 96
Non-current	497	11	196	70	774
As at December 31, 2021	\$ 501	\$ 66	\$ 203	\$ 100	\$ 870

¹ The December 31, 2020, balance of written put options and contingent consideration has been adjusted, as set out in *Note 18(c)*.

² The difference of \$(186) (2020 – \$160) between the asset retirement obligation interest effects in this table and the amount included in the amount disclosed in *Note 9* is in respect 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*.

Asset retirement obligation

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

The 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 results, 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.

Other

The provisions for other include: legal claims; non-employee-related restructuring activities; contract termination costs and onerous contracts related to business acquisitions; and costs incurred in connection with the COVID-19 pandemic. 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	2021	2020
Senior unsecured			
TELUS Corporation senior notes	(b)	\$ 15,258	\$ 15,021
TELUS Corporation commercial paper	(c)	1,900	731
TELUS Communications Inc. debentures	(e)	448	622
Secured			
TELUS International (Cda) Inc. credit facility	(f)	1,062	1,804
Other	(g)	308	273
		18,976	18,451
Lease liabilities	(h)	1,876	1,837
Long-term debt		\$ 20,852	\$ 20,288
Current		\$ 2,927	\$ 1,432
Non-current		17,925	18,856
Long-term debt		\$ 20,852	\$ 20,288

(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 certain 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 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. On or after the respective redemption present value spread cessation dates set out in the table below, the notes 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. In addition, accrued and unpaid interest, if any, will be paid to the date fixed for redemption.

Series	Issued	Maturity	Issue price	Effective interest rate ¹	Principal face amount		Redemption present value spread	
					Originally issued	Outstanding at financial statement date	Basis points ²	Cessation date
2.35% Notes, Series CT	March 2015	March 2022 ³	\$997.31	2.39%	\$1.0 billion	\$NIL	35.5	Feb. 28, 2022
3.35% Notes, Series CJ	December 2012	March 2023	\$998.83	3.36%	\$500 million	\$500 million	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 ⁴	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 ⁴	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
3.15% Notes, Series CAA	December 2019	February 2030	\$996.49	3.19%	\$600 million	\$600 million	39.5	Nov. 19, 2029
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% ⁵	\$750 million	\$750 million	34	Aug. 13, 2031
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 ⁶	April 2044	\$987.91 ⁶	4.93% ⁶	\$500 million ⁶	\$900 million ⁶	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 ⁷	March 2048	\$998.06 ⁷	4.71% ⁷	\$325 million ⁷	\$475 million ⁷	58.5	Sept. 6, 2047
4.60% U.S. Dollar Notes ⁴	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 ⁴	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 ⁸	February 2050	\$997.54 ⁸	3.97% ⁸	\$400 million ⁸	\$800 million ⁸	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

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 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 On July 16, 2021, we exercised our right to early redeem, on August 17, 2021, all of our 2.35% Notes, Series CT. The long-term debt prepayment premium recorded was \$10 million before income taxes (see Note 9).

4 We have entered into foreign exchange derivatives (cross currency interest rate exchange agreements) that effectively converted 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
4.60% U.S. Dollar Notes	4.41%	\$974 million	\$1.2985
4.30% U.S. Dollar Notes	4.27%	\$672 million	\$1.3435

5 If we have not obtained a sustainability performance target verification assurance certificate for the fiscal year ended December 31, 2030, the note will bear interest at a rate of 3.85% for the period from November 14, 2030, through November 13, 2031. Similarly, if we redeem the 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 a rate of 3.85%.

6 \$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%.

7 \$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 at an issue price of \$1,014.11 and an effective interest rate of 4.61% in March 2018.

8 \$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 \$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 amount at any one time of \$1.9 billion equivalent (US\$1.5 billion maximum) (2020 – \$1.4 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, 2021, we had \$1.9 billion (2020 – \$731 million) of commercial paper outstanding, all of which was denominated in U.S. dollars (US\$1.5 billion; 2020 – US\$574 million), with an effective average interest rate of 0.35%, maturing through May 2022.

(d) TELUS Corporation credit facility

As at December 31, 2021, TELUS Corporation had an unsecured revolving \$2.75 billion bank credit facility, expiring on April 6, 2026 (2020 – \$2.25 billion bank credit facility, expiring on May 31, 2023), with a syndicate of financial institutions, which is to be used for general corporate purposes, including the backstopping of commercial paper.

The TELUS Corporation credit facility bears interest at prime rate, U.S. Dollar Base Rate, a bankers' acceptance rate or London interbank offered rate (LIBOR) (as such terms are 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. 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 facility.

Continued access to the TELUS Corporation credit facility is not contingent upon TELUS Corporation maintaining a specific credit rating.

As at December 31 (millions)	2021	2020
Net available	\$ 850	\$ 1,519
Backstop of commercial paper	1,900	731
Gross available	\$ 2,750	\$ 2,250

We had \$193 million of letters of credit outstanding as at December 31, 2021 (2020 – \$190 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 bank credit facility. Further, we had arranged \$359 million of incremental letters of credit to allow us to participate in Innovation, Science and Economic Development Canada's 3500 MHz band spectrum auction that was held in June–July 2021, as further described in *Note 18(a)*. Concurrent with funding the purchase of the spectrum licences, these incremental letters of credit were extinguished.

(e) TELUS Communications Inc. debentures

The Series 3 and 5 Debentures were issued by a predecessor corporation of TELUS Communications Inc., BC TEL, under a Trust Indenture dated May 31, 1990. The Series B Debentures were issued 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.

Series ¹	Issued	Maturity	Issue price	Principal face amount		Redemption present value spread (basis points)
				Originally issued	Outstanding at financial statement date	
10.65% Debentures, Series 3	June 1991	June 2021	\$998.00	\$175 million	\$NIL	N/A (non-redeemable)
9.65% Debentures, Series 5 ²	April 1992	April 2022	\$972.00	\$150 million	\$249 million	N/A (non-redeemable)
8.80% Debentures, Series B	September 1995	September 2025	\$995.10	\$200 million	\$200 million	15 ³

1 Interest is payable semi-annually.

2 Series 4 Debentures were exchangeable, at the holder's option, effective on April 8 of any year during the four-year period from 1996 to 1999, for Series 5 Debentures; \$99 million of Series 4 Debentures were exchanged for Series 5 Debentures.

3 At any time prior to the maturity date set out in the table, 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, 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, 2021, TELUS International (Cda) Inc. had a credit facility, secured by its assets, expiring on January 28, 2025, with a syndicate of financial institutions, joined in 2020 by TELUS Corporation. The credit facility is comprised of US\$620 million (TELUS Corporation as a lender of approximately 7.5%) and US\$230 million (TELUS Corporation as a lender of 12.5%) revolving components and amortizing US\$600 million (TELUS Corporation as 12.5% lender) and US\$250 million term loan components. The credit facility is non-recourse to TELUS Corporation. The outstanding revolving components and term loan components had a weighted average interest rate of 1.88% as at December 31, 2021.

As at December 31 (millions)	2021			2020		
	Revolving components ¹	Term loan components ²	Total	Revolving components	Term loan components	Total
Available	US\$ 725	US\$ N/A	US\$ 725	US\$ 132	US\$ N/A	US\$ 132
Outstanding						
Due to other	109	737	846	653	775	1,428
Due to TELUS Corporation	16	71	87	65	75	140
	US\$ 850	US\$ 808	US\$ 1,658	US\$ 850	US\$ 850	US\$ 1,700

1 Revolving component available is gross of swingline draw of US\$8.

2 We have entered into a receive-floating interest rate, pay-fixed interest rate exchange agreement that effectively converts our interest obligations on US\$95 of the debt to a fixed rate of 2.64%.

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\$394 of the principal payments, and associated interest obligations, to European euro obligations with an effective fixed interest rate of 0.65% and an effective fixed economic exchange rate of US\$1.0932-€1.00. These have been accounted for as a net investment hedge in a foreign operation (see *Note 4*).

The TELUS International (Cda) Inc. credit facility bears interest at prime rate, U.S. Dollar Base Rate, a bankers' acceptance rate or London inter-bank offered rate (LIBOR) (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: 5.25:1.00 through fiscal 2021, 4.50:1.00 during fiscal 2022 and 3.75:1.00 subsequently; 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 an amortization schedule which requires that 5% of the principal advanced be repaid each year of the term of the agreement, with the balance due at maturity

and December 22, 2022, for the US\$250 million component, respectively.

(g) Other

Other liabilities bear interest at 3.19%, are secured by the AWS-4 spectrum licences associated with these other liabilities and a real estate holding, 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 4.05% as at December 31, 2021.

(i) Long-term debt maturities

Anticipated requirements to meet long-term debt repayments, calculated for long-term debt owing as at December 31, 2021, are as follows:

Composite long-term debt denominated in				Canadian dollars		U.S. dollars			Other currencies	
Years ending December 31 (millions)	Long-term debt, excluding leases	Leases (Note 19)	Total	Long-term debt, excluding leases	Leases (Note 19)	Currency swap agreement amounts to be exchanged		Total	Leases (Note 19)	Total
						(Receive) ¹	Pay			
2022	\$ 266	\$ 370	\$ 636	\$ 2,234	\$ 30	\$(1,929)	\$ 1,940	\$ 2,275	\$ 37	\$ 2,948
2023	533	250	783	33	28	(28)	28	61	33	877
2024	1,119	219	1,338	33	15	(28)	28	48	27	1,413
2025	1,019	110	1,129	672	12	(406)	422	700	18	1,847
2026	1,420	86	1,506	–	13	–	–	13	16	1,535
2027–2031	4,163	264	4,427	1,395	8	(1,395)	1,459	1,467	40	5,934
Thereafter	4,663	279	4,942	1,585	–	(1,585)	1,646	1,646	–	6,588
Future cash outflows in respect of composite long-term debt principal repayments										
	13,183	1,578	14,761	5,952	106	(5,371)	5,523	6,210	171	21,142
Future cash outflows in respect of associated interest and like carrying costs ²										
	6,616	329	6,945	2,238	19	(2,204)	2,219	2,272	32	9,249
Undiscounted contractual maturities (Note 4(c))										
	\$ 19,799	\$ 1,907	\$ 21,706	\$ 8,190	\$ 125	\$(7,575)	\$ 7,742	\$ 8,482	\$ 203	\$ 30,391

¹ Where applicable, cash flows reflect foreign exchange rates as at December 31, 2021.

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, 2021.

27 Other long-term liabilities

As at December 31 (millions)	Note	2021	2020
Contract liabilities	24	\$ 82	\$ 61
Other		3	5
Deferred revenues		85	66
Pension benefit liabilities	15	643	926
Other post-employment benefit liabilities		66	64
Restricted share unit liabilities		–	17
Derivative liabilities	4(h)	73	155
Investment in real estate joint ventures	21(b)	9	12
Other		23	15
		899	1,255
Deferred customer activation and connection fees	24	8	10
		\$ 907	\$ 1,265

28 Owners' equity

(a) TELUS Corporation Common Share capital – general

Our authorized share capital is as follows:

As at December 31	2021	2020
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 66⅔% 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.

During the three-month period ended March 31, 2021, we issued approximately 51 million Common Shares for gross proceeds of \$1.3 billion.

As at December 31, 2021, approximately 62 million Common Shares were reserved for issuance from Treasury under a dividend reinvestment and share purchase plan (see *Note 13(b)*); approximately 20 million Common Shares were reserved for issuance from Treasury under a restricted share unit plan (see *Note 14(b)*); and approximately 90 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 2021, we received approval for a normal course issuer bid to purchase and cancel up to 16 million of our Common Shares (up to a maximum amount of \$250 million) from June 4, 2021, to June 3, 2022.

(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 principal places of business in Asia, Central America, Europe and North America.

In February 2021, TELUS International (Cda) Inc. made an initial public offering of subordinate voting shares; both TELUS Corporation and a non-controlling shareholder of TELUS International (Cda) Inc. individually also offered subordinate voting shares in conjunction with the initial public offering. In September 2021, non-controlling shareholders of

TELUS International (Cda) Inc. individually offered subordinate voting shares in a secondary offering. Due to the voting rights associated with the remaining multiple voting shares held by TELUS Corporation, as at December 31, 2021, we retained a 70.9% voting and controlling interest and a 55.1% economic interest in TELUS International (Cda) Inc. subsequent to the public purchase of subordinate voting shares; as at December 31, 2020, TELUS Corporation held a 62.6% voting, controlling and economic interest. Changes in the ownership interests of our TELUS International (Cda) Inc. subsidiary during the year ended December 31, 2021, are set out in the following table.

Year ended December 31, 2021 (millions)	Effects of initial public offering and secondary offering on recorded amounts of owners' equity			Other	Total
	Net cash proceeds	Income taxes	Net		
Initial public offering of subordinate voting shares by TELUS International (Cda) Inc.	\$ 630	\$ (10)	\$ 640		
Secondary offering of TELUS International (Cda) Inc. subordinate voting shares by TELUS Corporation	197	4	193		
	\$ 827	\$ (6)	\$ 833		
Contributed surplus			\$ 440	\$ (10)	\$ 430
Non-controlling interests			393	1	394
			\$ 833	\$ (9)	\$ 824

Summarized financial information

Summarized financial information of our TELUS International (Cda) Inc. subsidiary is set out in the following table.

As at, or for the years ended, December 31 (millions) ¹	2021	2020
Statement of financial position²		
Current assets	\$ 874	\$ 740
Non-current assets	\$3,804	\$ 4,016
Current liabilities	\$1,098	\$ 679
Non-current liabilities	\$1,475	\$ 2,660
Statement of income and other comprehensive income		
Revenue and other income	\$2,754	\$ 2,222
Net income	\$ 99	\$ 141
Comprehensive income	\$ 22	\$ 189
Statement of cash flows		
Cash provided by operating activities	\$ 347	\$ 353
Cash used by investing activities	\$ (138)	\$ (2,511)
Cash provided by financing activities	\$ (252)	\$ 2,268

¹ As required by IFRS-IASB, this summarized financial information excludes inter-company eliminations.

² The December 31, 2020, balances have been adjusted to reflect finalization of purchase price allocations for the acquisition of Lionbridge AI in fiscal 2020, as explained further in *Note 18(c)*.

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.

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.

Handset subsidy class action

In 2016, a class action was brought in Quebec against us and other telecommunications carriers alleging that we breached the Quebec *Consumer Protection Act* and the *Civil Code of Quebec* by making false or misleading representations relating to the handset subsidy provided to our mobile customers, and by charging our mobile customers inflated rate plan prices and termination fees higher than those permitted under the *Act*. The claim was later amended to also seek compensation for amounts paid by class members to unlock their mobile devices. The authorization hearing was held on April 30 and May 1, 2019, and on July 15, 2019, the Quebec Superior Court dismissed the authorization application. The Plaintiff's appeal of this decision was dismissed by the Quebec Court of Appeal on July 23, 2021. The Plaintiff has not sought leave to appeal to the Supreme Court of Canada and the time for doing so has now expired. The action is therefore at an end.

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, 2021, we had no liability recorded in respect of our indemnification obligations.

See *Note 21(b)* for details regarding our guarantees to the real estate joint ventures.

(c) Concentration of labour

In 2021, we commenced collective bargaining with the Telecommunications Workers Union, United Steelworkers Local 1944, to renew a collective agreement that expired on December 31, 2021; the contract covered approximately 23% of our Canadian workforce as at December 31, 2021. The expired contract remains in effect while the parties are bargaining, until a new agreement is reached.

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)	2021	2020 ¹
Short-term benefits	\$ 16	\$ 14
Post-employment pension ² and other benefits	13	8
Share-based compensation ³	70	42
	\$ 99	\$ 64

1 To reflect the expanded roles and responsibilities of Executive Team members who are not also Executive Leadership Team members, in fiscal 2021 we expanded our definition of key management personnel to include all Executive Team members, and we have applied such definition retrospectively.

2 Our Executive Team members 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.

3 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 for 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 2021 and 2020, including, as set out in the following table, to our key management personnel. 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 2021 and 2020 initial awards are included in the amounts in the table above.

Years ended December 31	2021			2020		
(\$ in millions)	Number of units	Notional value ¹	Grant-date fair value ¹	Number of units	Notional value ¹	Grant-date fair value ¹
TELUS Corporation						
Restricted share units	1,273,308	\$ 33	\$ 36	981,088	\$ 25	\$ 33
TELUS International (Cda) Inc.						
Restricted share units	437,857	15	15	-	-	-
Share options	167,693	1	1	-	-	-
		16	16		-	-
		\$ 49	\$ 52		\$ 25	\$ 33

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. No share options were awarded to our key management personnel in fiscal 2020.

The amount recorded for liability-accounted restricted share units and share options awards outstanding as at December 31, 2021 was \$7 million (2020 – \$10 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 accounted for as liabilities have been paid out when a director ceased 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 year ended December 31, 2021, no amount was paid out (2020 – \$3 million). As at December 31, 2021 and 2020, no liability-accounted awards were outstanding.

During the year ended December 31, 2021, key management personnel exercised 215,973 TELUS International (Cda) Inc. share options (2020 – NIL), which had an intrinsic value of \$7 million (2020 – NIL) at the time of exercise, reflecting a weighted average price at the date of exercise of \$39.58 (2020 – N/A).

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, 2021, we provided management and administrative services to our defined benefit pension plans; the charges for these services were on a cost recovery basis and amounted to \$7 million (2020 – \$7 million).

(c) Transactions with real estate joint venture

During the years ended December 31, 2021 and 2020, we had transactions with the TELUS Sky real estate joint venture, which is a related party, as set out in *Note 21*. As at December 31, 2021, we had recorded lease liabilities of \$95 million (2020 – \$76 million) in respect of our TELUS Sky lease, and monthly cash payments are made in accordance with the lease agreement; one-third of those amounts is due to our economic interest in the real estate joint venture.

31 Additional statement of cash flow information

(a) Statements of cash flows – operating activities and investing activities

Years ended December 31 (millions)	Note	2021	2020
Operating activities			
Net change in non-cash operating working capital			
Accounts receivable		\$ (290)	\$ (231)
Inventories		(41)	30
Contract assets		(4)	298
Prepaid expenses		(44)	79
Accounts payable and accrued liabilities		289	189
Income and other taxes receivable and payable, net		(77)	(49)
Advance billings and customer deposits		62	54
Provisions		23	(100)
		\$ (82)	\$ 270
Investing activities			
Cash payments for capital assets, excluding spectrum licences			
Capital asset additions			
Gross capital expenditures			
Property, plant and equipment	17	\$ (3,188)	\$ (2,672)
Intangible assets subject to amortization	18	(864)	(640)
		(4,052)	(3,312)
Additions arising from leases	17	554	530
Additions arising from non-monetary transactions		-	7
Capital expenditures	5	(3,498)	(2,775)
Effect of asset retirement obligations		171	(157)
		(3,327)	(2,932)
Other non-cash items included above			
Change in associated non-cash investing working capital		401	(50)
Non-cash change in asset retirement obligation		(171)	160
		230	110
		\$ (3,097)	\$ (2,822)

(b) Changes in liabilities arising from financing activities

		Statement of cash flows		Non-cash changes		
(millions)	Beginning of period	Issued or received	Redemptions, repayments or payments	Foreign exchange movement (Note 4(i))	Other	End of period
Year ended December 31, 2020						
Dividends payable to holders of Common Shares	\$ 352	\$ –	\$ (1,469)	\$ –	\$ 1,520	\$ 403
Dividends reinvested in shares from Treasury	–	–	539	–	(539)	–
	\$ 352	\$ –	\$ (930)	\$ –	\$ 981	\$ 403
Short-term borrowings	\$ 100	\$ 215	\$ (223)	\$ –	\$ 8	\$ 100
Long-term debt						
TELUS Corporation senior notes	\$ 14,479	\$ 1,500	\$ (900)	\$ (60)	\$ 2	\$ 15,021
TELUS Corporation commercial paper	1,015	1,782	(2,116)	50	–	731
TELUS Communications Inc. debentures	621	–	–	–	1	622
TELUS International (Cda) Inc. credit facility	431	1,600	(191)	(27)	(9)	1,804
Other	267	–	(319)	–	325	273
Lease liabilities	1,661	–	(365)	7	534	1,837
Derivatives used to manage currency risk arising from U.S. dollar-denominated long-term debt – liability (asset)	(37)	2,137	(2,109)	94	35	120
	18,437	7,019	(6,000)	64	888	20,408
To eliminate effect of gross settlement of derivatives used to manage currency risk arising from U.S. dollar-denominated long-term debt	–	(2,137)	2,137	–	–	–
	\$ 18,437	\$ 4,882	\$ (3,863)	\$ 64	\$ 888	\$ 20,408
Year ended December 31, 2021						
Dividends payable to holders of Common Shares	\$ 403	\$ –	\$ (1,665)	\$ –	\$ 1,711	\$ 449
Dividends reinvested in shares from Treasury	–	–	620	–	(620)	–
	\$ 403	\$ –	\$ (1,045)	\$ –	\$ 1,091	\$ 449
Short-term borrowings	\$ 100	\$ 12	\$ (2)	\$ –	\$ 4	\$ 114
Long-term debt						
TELUS Corporation senior notes	\$ 15,021	\$ 1,250	\$ (1,000)	\$ (13)	\$ –	\$ 15,258
TELUS Corporation commercial paper	731	3,585	(2,378)	(38)	–	1,900
TELUS Communications Inc. debentures	622	–	(175)	–	1	448
TELUS International (Cda) Inc. credit facility	1,804	56	(797)	(4)	3	1,062
Other	273	–	(89)	–	124	308
Lease liabilities	1,837	–	(502)	1	540	1,876
Derivatives used to manage currency risk arising from U.S. dollar-denominated long-term debt – liability (asset)	120	2,406	(2,437)	10	(95)	4
	20,408	7,297	(7,378)	(44)	573	20,856
To eliminate effect of gross settlement of derivatives used to manage currency risk arising from U.S. dollar-denominated long-term debt	–	(2,406)	2,406	–	–	–
	\$ 20,408	\$ 4,891	\$ (4,972)	\$ (44)	\$ 573	\$ 20,856

Glossary

4G (fourth generation): Wireless technologies, including HSPA+, LTE, LTE advanced and LTE advanced pro, as defined by the International Telecommunications Union.

5G (fifth generation): The next generation of converged wireless technologies, expected to provide higher speeds, improved coverage and lower latency, all of which are critical as the number of connected devices continues to increase rapidly.

Fibre-optic network: Hair-thin glass fibres along which light pulses are transmitted. Optical fibre networks are used to transmit large amounts of data between locations at high upload and download speeds.

Fibre to the x (FTTx): A collective term for any broadband network architecture using optical fibre to replace all or part of the existing copper local loops. FTTH denotes fibre to the home, FTTP denotes fibre to the premises and FTTN denotes fibre to the node or neighbourhood.

HSPA+ (High-speed packet access plus): A 4G technology capable of delivering manufacturer-rated wireless data download speeds of up to 21 Mbps (typical speeds of 4 to 6 Mbps). HSPA+ dual-cell technology can double those download speeds.

Incumbent local exchange carrier (ILEC): An established telecommunications company providing local telephone service. Non-ILEC refers to the telecommunications operations of TELUS outside its traditional ILEC operating territories, where TELUS competes with the incumbent telephone company (e.g. Ontario and most of Quebec).

Internet of Things (IoT): A network of uniquely identifiable end points (or things) that interact without human intervention, most commonly over a wireless network. These systems collect, analyze and act on information in real time and can be deployed to enable the creation of smart connected businesses, homes, vehicles and cities.

Internet protocol (IP): A packet-based protocol for sending and receiving data across networks.

IP-based network: A network designed using IP and QoS (quality of service) technology to reliably and efficiently support all types of customer traffic, including voice, data and video. An IP-based network allows a variety of IP devices and advanced applications to communicate over a single common network.

IP TV (internet protocol television): A television service (offered as Optik TV and Pik TV at TELUS) that uses a two-way digital broadcast signal sent through a network by way of a streamed broadband connection to a dedicated set-top box (or through an app for Pik TV).

Licensed assisted access (LAA): An LTE feature that makes use of unlicensed spectrum in combination with licensed spectrum to deliver enhanced performance for mobile device users.

LTE (long-term evolution): The leading 4G global wireless technology standard. LTE advanced (LTE-A) and LTE advanced pro offer higher speeds and greater capacity, moving networks closer to 5G. LTE is capable of delivering manufacturer-rated wireless data download speeds of up to 150 Mbps (typical speeds of 12 to 45 Mbps), and LTE-A can offer speeds nearly 10 times higher (in select regions).

Machine-to-machine (M2M): Technologies and networked devices that are able to exchange information and perform actions without human intervention.

Mobile virtual network operator (MVNO): A mobile service operator that leases access to a wireless network from other carriers to resell services to end customers.

Normal course issuer bid (NCIB): A program that enables a company to purchase its own shares, typically for cancellation, through exchanges or private purchases over a set period of time.

Over-the-top (OTT): Content, services and applications in a video format, for which delivery occurs through a medium other than the established video delivery infrastructure.

Passive optical network (PON): A fibre-based transmission technology used for delivering broadband network access. GPON (gigabit-capable passive optical network) delivers data download speeds of up to 2.4 Gbps and upload speeds of up to 1.2 Gbps; XGS-PON (10-gigabit-capable symmetrical passive optical network) delivers data download and upload speeds of up to 2.5 Gbps.

Small cell: Low-powered radio access nodes that can operate in licensed and unlicensed spectrum within a limited range to provide densification and capacity to a macro wireless network.

Spectrum: The range of electromagnetic radio frequencies used in the transmission of voice, data and video. The capacity of a wireless network is in part a function of the amount of spectrum licensed and utilized by the carrier.

Sustainability-linked bond: A debt financing instrument with terms aligned to the borrower's performance against predetermined sustainability performance targets and principles.

Virtual private network (VPN): The extension of an encrypted, private network across a public network that allows users to securely send and receive data, as if users were directly connected to a private network.

Voice over internet protocol (VoIP): The transmission of voice signals over the internet or IP network.

For financial definitions, see Section 11 of Management's discussion and analysis.

Investor information

Stock exchanges and TELUS trading symbols

Toronto Stock Exchange (TSX)

TELUS Corporation: T CUSIP: 87971M103

New York Stock Exchange (NYSE)

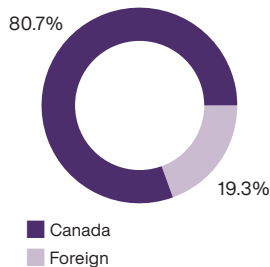
TELUS Corporation: TU CUSIP: 87971M103

Member of

- S&P/TSX Composite Index
- S&P/TSX 60 Index
- S&P/TSX Telecom Index
- MSCI World Communication Services Index
- MSCI World Telecom Services Index
- Dow Jones Sustainability North America Index
- STOXX Global ESG Leaders indices
- Euronext Vigeo Index: World 120
- Jantzi Social Index
- FTSE4Good Index

Share ownership facts as at December 31, 2021

Estimated share ownership



- Total outstanding shares were 1,370,214,882
- TELUS team members held 34,147,343 shares in employee share plans, equivalent to 2.5% of the total number of outstanding shares, which collectively made team members our fourth largest TELUS shareholder
- TELUS shares are widely held between large institutional investors and smaller retail investors
- Registered shareholders of

common shares totalled 36,733. The Canadian Depository for Securities (CDS) represents one registration and holds securities for many non-registered shareholders. We estimate that TELUS had more than 1,004,000 non-registered shareholders at year-end.

Dividend policy and dividend growth programs

Dividends declared in 2021 were \$1.2710, representing a 7.3% increase over the previous year.

Our long-term dividend payout ratio guideline is calculated as 60 to 75% of prospective free cash flow. In May 2019, we announced an intention to target ongoing semi-annual dividend increases, with the increase to be 7 to 10% annually, through to the end of 2022. This further extends our multi-year dividend growth program originally

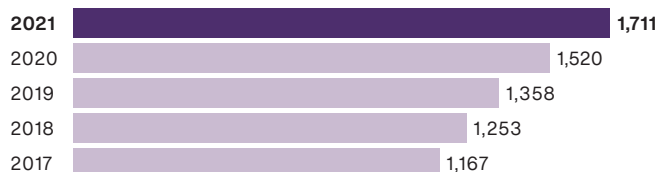
announced in May 2011 and extended for three-year periods in both May 2013 and May 2016, and provides investors with ongoing clarity with respect to our intentions regarding our dividend growth program. Since 2011, we have raised our dividend 21 times, bringing the total number of our dividend increases to 28 since 2004.

Notwithstanding this, dividend decisions will continue to be dependent on earnings and free cash flow and subject to the Board's assessment and determination of TELUS' financial situation, capital requirements and economic outlook on a quarterly basis. There can be no assurance that the Company will maintain its dividend growth program through 2022 or that its dividend growth program will be extended.

TELUS advises that, unless noted otherwise, all quarterly dividends paid since January 2006 are eligible dividends under the *Income Tax Act*. Under this legislation, Canadian residents may be entitled to enhanced dividend tax credits that reduce the income tax otherwise payable. For more information, visit telus.com/dividends.

Total dividends declared to shareholders

(\$ millions)



Dividend reinvestment and share purchase plan

Investors may take advantage of the automatic dividend reinvestment and share purchase plan to acquire additional common shares without fees. Under this plan, eligible shareholders can have their dividends reinvested automatically into additional shares. TELUS may elect to purchase common shares in the open market or by issuance from treasury (less a discount, if any, of up to 5%). TELUS will provide advance notification to participants if and when an election is made to change the method of purchasing common shares, and if by treasury issuance, any discount offered or any change in the rate of discount. Effective October 1, 2019, until TELUS elects otherwise, TELUS offers shares from treasury at a 2% discount from the average market price.

We also offer a share purchase feature, under which eligible shareholders can, on a monthly basis, buy TELUS shares (maximum \$20,000 per calendar year and minimum \$100 per transaction) without brokerage commissions or service charges.

This plan is managed by Computershare Trust Company of Canada.



Visit telus.com/drisp or contact Computershare for information and enrolment forms

2022 expected dividend¹ and earnings dates

	Ex-dividend dates ²	Dividend record dates	Dividend payment dates	Earnings release dates
Quarter 1	March 10	March 11	April 1	May 6
Quarter 2	June 9	June 10	July 4	August 5
Quarter 3	September 8	September 9	October 3	November 4
Quarter 4	December 8	December 9	January 3, 2023	February 9, 2023

1 Dividends are subject to Board of Directors' approval.

2 Shares purchased on this date forward will not be entitled to the dividend payable on the corresponding dividend payment date.

Normal course issuer bid programs

Our current normal course issuer bid program, which is effective from June 4, 2021 to June 3, 2022, allows us to purchase our shares if and when we consider it opportunistic, based on our financial position and outlook and on the market price of our shares. The share purchase

program is subject to the Board's assessment and determination and there can be no assurance that it will be completed or maintained.

Since May 2013, we have purchased a total of 140 million shares for \$2.6 billion. No shares have been purchased or cancelled since 2018.

Per-share data¹

	Applying IFRS 16			Excluding IFRS 16	
	2021	2020	2019	2018	2017
Basic earnings	\$ 1.23	\$ 0.95	\$ 1.45	\$ 1.34	\$ 1.31
Dividends declared	\$ 1.2710	\$ 1.18495	\$ 1.12625	\$ 1.05	\$ 0.99
Dividends declared as per cent of basic earnings	103%	125%	78%	78%	75%
Cash provided by operating activities	\$ 3.26	\$ 3.59	\$ 3.26	\$ 3.40	\$ 3.33
Free cash flow ²	\$ 0.58	\$ 1.13	\$ 0.77	\$ 1.01	\$ 0.81

Common shares

Closing price	\$ 29.79	\$ 25.21	\$ 25.14	\$ 22.63	\$ 23.81
Dividend yield – calculated as dividends declared divided by closing price	4.3%	4.7%	4.5%	4.6%	4.1%
Price to earnings ratio – calculated as closing price divided by basic earnings	24	27	17	17	18

1 Adjusted to reflect the two-for-one share split effective March 17, 2020.

2 See Section 11.1 of Management's discussion and analysis.

Share prices and volumes¹**Toronto Stock Exchange**

Common shares (T)					2021					2020
(C\$ except volume)	Year 2021	Q4	Q3	Q2	Q1	Year 2020	Q4	Q3	Q2	Q1
High	30.04	30.04	29.99	28.14	27.54	27.74	26.02	24.74	25.42	27.74
Low	24.93	27.34	27.39	25.12	24.93	18.55	22.50	22.04	21.51	18.55
Close	29.79	29.79	27.84	27.80	25.03	25.21	25.21	23.43	22.77	22.25
Volume (millions)	658.2	135.5	124.2	152.7	245.8	667.2	150.0	125.8	155.2	236.2
Dividend declared (per share)	1.2710	0.3274	0.3162	0.3162	0.3112	1.18495	0.3112	0.29125	0.29125	0.29125

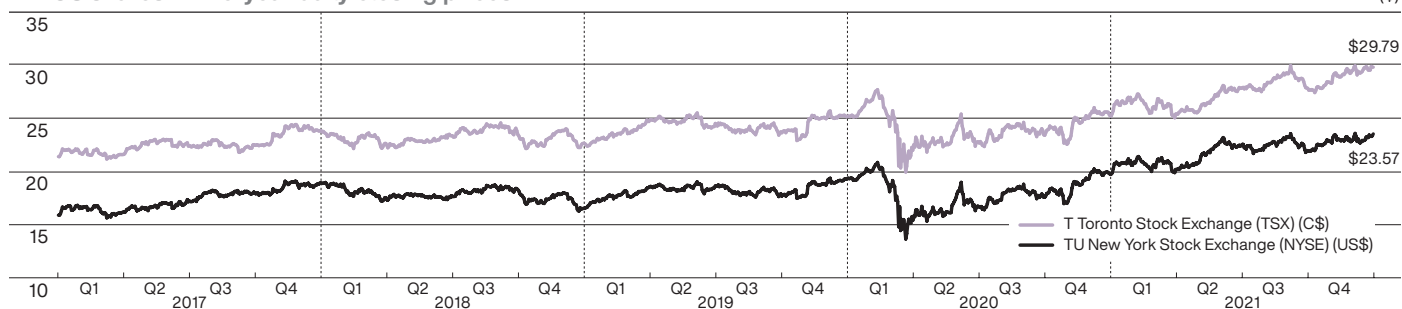
New York Stock Exchange

Common shares (TU)					2021					2020
(US\$ except volume)	Year 2021	Q4	Q3	Q2	Q1	Year 2020	Q4	Q3	Q2	Q1
High	23.73	23.73	23.67	23.28	21.85	20.91	20.31	18.90	19.02	20.91
Low	19.74	21.76	21.48	19.98	19.74	13.54	16.87	16.22	15.20	13.54
Close	23.57	23.57	21.96	22.43	19.93	19.80	19.80	17.61	16.77	15.78
Volume (millions)	288.3	55.7	65.6	66.6	100.4	314.8	69.5	70.4	84.7	90.2
Dividend declared (per share) ²	1.017	0.258	0.250	0.261	0.248	0.891	0.239	0.223	0.211	0.218

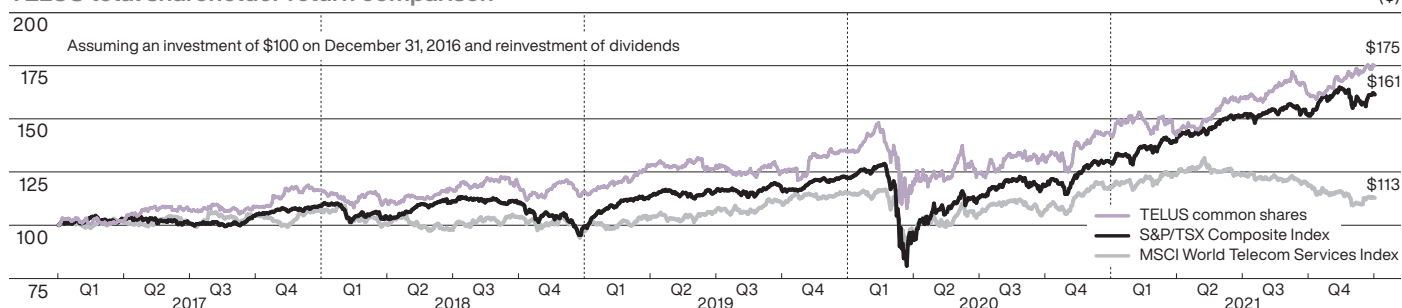
1 Adjusted to reflect the two-for-one share split effective March 17, 2020.

2 Converted using the foreign exchange rate as of the record date.

TELUS shares – Five-year daily closing prices



TELUS total shareholder return comparison



TELUS Corporation senior notes

	Coupon rate	Face value	Maturing
Canadian Dollar Notes			
Series CJ	3.35%	\$500 million	March 2023
Series CK	3.35%	\$1.1 billion	April 2024
Series CQ	3.75%	\$800 million	January 2025
Series CV	3.75%	\$600 million	March 2026
Series CZ	2.75%	\$800 million	July 2026
Series CAC	2.35%	\$600 million	January 2028
Series CX	3.625%	\$600 million	March 2028
Series CY	3.30%	\$1.0 billion	May 2029
Series CAA	3.15%	\$600 million	February 2030
Series CAD	2.05%	\$500 million	October 2030
Series CAF	2.85%	\$750 million	November 2031
Series CL	4.40%	\$600 million	April 2043
Series CN	5.15%	\$400 million	November 2043
Series CP ¹	4.85%	\$900 million	April 2044
Series CR	4.75%	\$400 million	January 2045
Series CU	4.40%	\$500 million	January 2046
Series CW ²	4.70%	\$475 million	March 2048
Series CAB ³	3.95%	\$800 million	February 2050
Series CAE	4.10%	\$500 million	April 2051
U.S. Dollar Notes	2.80%	US\$600 million	February 2027
U.S. Dollar Notes	3.70%	US\$500 million	September 2027
U.S. Dollar Notes	4.60%	US\$750 million	November 2048
U.S. Dollar Notes	4.30%	US\$500 million	June 2049

¹ Includes \$500 million originally issued in April 2014 and \$400 million issued in December 2015.

² Includes \$325 million originally issued in March 2017 and \$150 million issued in February 2018.

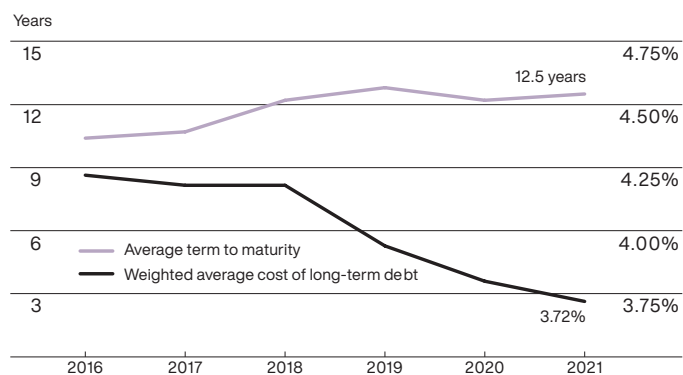
³ Includes \$400 million originally issued in December 2019 and \$400 million issued in May 2020.

Credit rating summary

As of December 31, 2021	DBRS Ltd.	Standard & Poor's Rating Services	Moody's Investors Service	Fitch Ratings
TELUS Corporation				
Notes	BBB (high)	BBB+	Baa1	BBB+
Commercial paper	R-2 (high)	A-2	P-2	–
TELUS Communications Inc.				
Debentures	BBB (high)	BBB+	–	BBB+

Long-term debt

Average term to maturity and weighted average cost of our long-term debt¹



¹ Excluding commercial paper, the revolving component of the TELUS International credit facility, lease liabilities and other long-term debt.

Details of our long-term debt

At the end of 2021, the average term to maturity of our long-term debt (excluding commercial paper, the revolving component of the TELUS International credit facility, lease liabilities and other long-term debt) was 12.5 years, compared to 12.2 years at the end of 2020. Additionally, the weighted average cost of our long-term debt (excluding commercial paper, the revolving component of the TELUS International credit facility, lease liabilities and other long-term debt) was 3.72% at the end of 2021, compared to 3.80% at the end of 2020. For a detailed list of long-term debt of the Company and our subsidiaries, see Note 26 of the Consolidated financial statements.

Key TELUS events for investors in 2021

- Completed an equity offering issuing 51.3 million common shares, raising approximately \$1.3 billion to be used to accelerate our investments in fibre and 5G broadband connectivity, as well as in digitization to enhance customer experiences
- Entered a strategic alliance with Google Cloud to co-innovate on new services and solutions that support digital transformation within key industries, including communications technology, healthcare, agriculture, security and connected home
- Issued the first sustainability-linked bond in Canada, raising \$750 million of senior unsecured 2.85% notes maturing in November 2031, linking our cost of borrowing to our science-based target of reducing scope 1 and 2 greenhouse gas emissions by 46% over 2019 levels by 2030
- Issued \$500 million of senior unsecured 4.10% notes maturing in April 2051 and early redeemed \$1 billion in senior unsecured 2.35% notes with a March 2022 maturity
- Acquired 142 licences of 3500 MHz band spectrum equating to 16.4 MHz of spectrum for a total purchase price of \$1.95 billion
- Entered into a multi-year agreement with General Motors Canada (GM) that will connect GM's next-generation vehicles to our 5G network
- Advanced our agriculture business through the acquisitions of Blacksmith Applications Holdings and Conservis, and the assets of Herdtrax
- Announced the sale of our financial solutions business for \$500 million, with net proceeds to be used to support strategic growth investments and debt retirement
- Expanded strategic partnership with IBM to provide enterprises with fast, secure and reliable 5G industry solutions
- Our subsidiary, TELUS International (TI), completed an initial public offering (IPO) and secondary offering of 42.6 million subordinate voting shares in February. The offerings raised aggregate gross proceeds of approximately \$1.4 billion, representing the largest technology IPO in TSX history
- TI successfully completed a public secondary offering of approximately 16.6 million subordinate voting shares in September at a price of US\$34.00 per share by certain selling shareholders, including Baring Private Equity Asia. TELUS Corporation did not participate in the offering.

Awards

- Earned the top spot in major independent network awards, including Opensignal, Ookla and Tutela, for the coverage, speed, reliability or experience of our network
- Recognized as the fastest internet service provider (ISP) among major ISPs in Canada by PCMag
- Received the COVID-19 Response and Recovery Award from the Disaster Recovery Institute (DRI) Canada for 2021
- Named one of Strategy Magazine's 2021 Brands of the Year
- Received the 2021 Excellence in Governance Award in the category of Sustainability (joint winner) from the Governance Professionals of Canada
- Acknowledged for corporate social responsibility in the:
 - Dow Jones Sustainability North America Index for the 21st consecutive year
 - Corporate Knights 2022 Global 100 Most Sustainable Corporations in the World index for the 10th time
 - Corporate Knights Best 50 Corporate Citizens in Canada for the 15th time

- Recognized for employer excellence by:
 - Ranking as one of the top Canadian companies on the Forbes World's Best Employers 2021 list
 - Receiving the BEST Award for excellence in employee learning and development from the Association for Talent Development for the 16th time
 - Placing first in the Canadian Telecom Summit's Canadian ICT Employer of Choice Award
 - Mediacorp Canada as one of Canada's Top 100 Employers for the 13th time
 - Mediacorp Canada as one of Canada's Best Diversity Employers for the 12th time
 - Mediacorp Canada as one of Canada's Greenest Employers for the eighth time.

Analyst coverage

As of January 2022, 16 equity analysts covered TELUS. For a full list, see analyst coverage on telus.com/investors.

Information for security holders outside of Canada

Cash dividends paid to shareholders resident in countries with which Canada has an income tax convention are usually subject to Canadian non-resident withholding tax of 15%. If you have any questions, contact Computershare. For individual investors who are U.S. citizens and/or U.S. residents, quarterly dividends paid on TELUS shares are considered qualified dividends under the Internal Revenue Code and may be eligible for special U.S. tax treatment.

Information for security holders of TELUS International

TSX TELUS International: TIXT CUSIP: 87975H100

NYSE TELUS International: TIXT CUSIP: 87975H100

For information on TELUS International, including financial-related filings and investor events, please visit telusinternational.com/investors.

Foreign ownership monitoring – non-Canadian common shares

Under federal legislation, total non-Canadian ownership of common shares of Canadian telecommunications companies, including TELUS, is limited to 33⅓%.

For registered shareholders and shares trading on the TSX, a reservation system controls and monitors this level. This system requires non-Canadian purchasers of common shares to obtain a reservation number from Computershare by contacting the Reservations Unit at 1-877-267-2236 (toll-free) or telusreservations@computershare.com. The purchaser is notified within two hours if common shares are available for registration.

For 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).

Mergers and acquisitions – shareholder impacts

Visit telus.com/m&a for information on how your shareholdings have been affected by various merger and acquisition transactions. Information is also available regarding capital gains, valuation dates and share prices for 1971 and 1994.

For more information

For questions on:

- Direct registration system (DRS) advice or accounts
- Dividend payments and the dividend reinvestment and share purchase plan
- Change of address and e-delivery of shareholder documents
- Transfer or loss of share certificates and estate settlements
- Exchange of share certificates due to a merger or acquisition

Contact the transfer agent and registrar

Computershare Trust Company of Canada

1-800-558-0046 or 1 (514) 982-7129 (outside North America)

email: telus@computershare.com

visit: computershare.com

For questions regarding:

- Additional financial or statistical information
- Industry and Company developments
- The latest news releases and investor presentations

Contact TELUS Investor Relations

1-800-667-4871 or 1 (604) 643-4113 (outside North America)

email: ir@telus.com

visit: telus.com/investors

TELUS executive office

510 West Georgia Street
Vancouver, British Columbia
Canada V6B 0M3
(604) 697-8044

TELUS general information

1-800-308-5992
(604) 432-2151

Auditors

Deloitte LLP

Ethics Line

As part of our ethics policy, this hotline allows team members and others to anonymously and confidentially raise accounting, internal control and ethical inquiries or complaints.

1-888-265-4112

visit: telus.ethicspoint.com



Help us preserve the world our children will inherit

Sign up for electronic delivery of shareholder documents and help us protect the environment for future generations.

The benefits of e-delivery include access to important Company documents in a convenient, timely and environmentally friendly way that also reduces our environmental impact, as well as printing and mailing costs. Approximately 61,000 of our shareholders currently receive the annual report by e-delivery.

To help make a difference, sign up for e-delivery of TELUS information at **telus.com/electronicdelivery**.

Stay connected with TELUS

TELUS Corporation
510 West Georgia Street
Vancouver,
British Columbia
Canada V6B 0M3
(604) 697-8044



telus.com



twitter.com/telus



Instagram.com/telus



facebook.com/telus



youtube.com/telus



Instagram.com/darren_entwistle



Linkedin.com/company/telus



Invest in the power of our purpose

Our social purpose

Leveraging our global-leading technology and compassion to drive social change and enable remarkable outcomes

Putting customers first

Empowering our highly engaged team to deliver outstanding customer experiences over our leading broadband networks

Fostering a brighter future

Strengthening our leadership position across the healthcare and agriculture value chains to deliver better health outcomes and ensure a safer food supply for people around the world

Execution excellence

Delivering consistent and leading operational execution in a dynamic and evolving environment

Proven track record of growth

Driving consistent profitable revenue and customer growth by leveraging our world-class networks, leading customer service and attractive bundled product offerings

Unique and diversified asset mix

Advancing our long-term growth strategy through technology-oriented growth engines, including TELUS International, TELUS Health and TELUS Agriculture

Commitment to operational efficiency

Amplifying our efficiency and effectiveness efforts to improve our cost structure and better serve our growing customer base

Technology leadership

Enhancing our world-class 5G and PureFibre networks to enable a superior customer experience and empower all Canadians to thrive in the digital world

Strong financial profile

Maintaining a robust balance sheet and investment grade credit ratings, enabling ready access to capital markets

Returning capital to shareholders

Executing on our multi-year dividend growth program, returning \$1.7 billion to our shareholders in 2021

Leading disclosure

Providing extensive and transparent financial, corporate governance and sustainability disclosure

