

TELUS CORPORATION

Management's discussion and analysis

2016 Q3

Caution regarding forward-looking statements

This document contains forward-looking statements about expected events and the financial and operating performance of TELUS Corporation. 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. Forward-looking statements include statements relating to annual targets, outlook, updates, our multi-year dividend growth program, our multi-year share purchase program and trends. 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*, *predict*, *could*, *expect*, *intend*, *may*, *plan*, *seek*, *should*, *strive* and *will*. By their nature, forward-looking statements do not refer to historical facts, are subject to inherent risks and require us to make assumptions. Our assumptions are presented in *Section 9 General trends, outlook and assumptions* in our Management’s discussion and analysis (MD&A) for 2015 and updated in *Section 9 Update to assumptions* in this MD&A. There is significant risk that forward-looking statements will not prove to be accurate. Accordingly, readers are cautioned not to place undue reliance on forward-looking statements. Except as required by law, we disclaim any intention or obligation to update or revise any forward-looking statements.

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

- **Competition** including: continued intense rivalry across all services among wireless and wireline telecommunications companies, cable-TV providers, other communications companies and over-the-top (OTT) services, which, among other things, places pressures on average revenue per subscriber unit per month (ARPU) and churn for all services; mergers and acquisitions of industry competitors; our ability to continue to retain customers through an enhanced customer service experience; pressures on wireless ARPU and churn from market conditions and government actions, customer usage patterns, flat-rate pricing trends for voice and data, inclusive long distance plans for voice and increasing availability of Wi-Fi networks for data; pressures on high-speed Internet and TV ARPU and churn resulting from market conditions, government actions and customer usage patterns; residential and business network access line (NAL) losses; subscriber additions and retention volumes, and associated costs for wireless, TV and high-speed Internet services; our ability to obtain and offer content on a timely basis across multiple devices on wireless and TV platforms at a reasonable cost; and competition from global players for international roaming services.
- **Technological substitution** including: reduced utilization and increased commoditization of traditional wireline voice local and long distance services from impacts of OTT applications and wireless substitution, an overall slower market growth for high-speed Internet access (HSIA) services and an overall market contraction for TV services; the increasing number of households that have only wireless and/or Internet-based telephone services; continuation of wireless voice ARPU declines as a result of, among other factors, substitution to messaging and OTT applications; substitution to increasingly available Wi-Fi services from wireless services; and disruptive technologies such as OTT Internet protocol (IP) services that may displace our services including TV and entertainment services, and impact revenue.
- **Technology** including: subscriber demand for data that may challenge wireless networks and spectrum capacity levels in the future; our reliance on legacy systems and information technology; technology options, evolution paths and roll-out plans for wireless and wireline networks (including broadband initiatives, such as fibre to the premises (FTTP), wireless small-cell deployment, 5G wireless and availability of resources and ability to build out adequate broadband capacity); our reliance on wireless network access agreements; choice of suppliers and those suppliers’ ability to maintain and service their product lines; supplier concentration and market power for network equipment, TELUS TV[®] and wireless handsets; the performance of wireless technology; our expected long-term need to acquire additional spectrum capacity through future spectrum auctions and from third parties to address increasing demand for data; deployment and operation of new wireless networks and success of new products, new services and supporting systems, including the Internet of Things (IoT) services for Internet-connected devices; deployment and operation of new wireline broadband networks at a reasonable cost and availability, and success of new products and services to be rolled out on such networks; network reliability and change management; timing of decommissioning of certain legacy wireline networks, systems and services to reduce operating costs; and success of upgrades and evolution of TELUS TV technology, which depend on third-party suppliers.
- **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.** Initiatives include: our operating efficiency and effectiveness program to drive improvements in earnings before interest, income taxes, depreciation and amortization (EBITDA); business integrations; business process outsourcing; offshoring and reorganizations, including any FTE employee reduction programs; procurement initiatives; and real estate rationalization. Additional revenue and cost efficiency and effectiveness initiatives will continue to be assessed and implemented, as required.
- **Economic growth and fluctuations** including: the state of the economy in Canada, which may be influenced by economic and other developments outside of Canada; future interest rates; inflation; unemployment levels; effects of low oil prices; effects of low business spending (such as reducing investments and cost structure); pension investment returns, funding and discount rates; and Canadian/U.S. dollar exchange rates.
- **Capital expenditure levels and potential outlays for spectrum licences in spectrum auctions or from third parties**, due to: our broadband initiatives, including connecting more homes and businesses directly to fibre; our ongoing deployment of newer wireless technologies such as 5G; utilizing newly acquired spectrum; investments in network resiliency and reliability; subscriber demand for data; evolving systems and business processes; implementing efficiency initiatives; supporting large complex deals; and future wireless spectrum auctions held by Innovation, Science and Economic Development Canada (ISED). Our capital expenditure levels could be impacted if we do not achieve our targeted operational and financial results.

- Regulatory decisions and developments including: potential of government intervention to further increase wireless competition; the Canadian Radio-television and Telecommunications Commission (CRTC) review of the Wireless Code; the CRTC wireless wholesale services review, in which it was determined that the CRTC will regulate wholesale GSM-based domestic roaming rates and the setting of such rates; future spectrum auctions (including limitations on established wireless providers, spectrum set-aside that favours certain carriers and other advantages provided to new and foreign participants, and the amount and cost of spectrum acquired); restrictions on the purchase, sale and transfer of spectrum licences; the undetermined long-term impact of the CRTC’s wireline wholesale services review; the potential impacts from the CRTC’s decision to require pro-rated refunds when customers terminate their services; the CRTC’s examination of differential pricing practices related to Internet data plans; possible changes to the scope and nature of basic service obligations, including possible regulation on the quality, availability and affordability of residential Internet service and increased subsidy requirements for these services; the impact from the review of Canada’s cultural policies by the Minister of Canadian Heritage; vertical integration in the broadcasting industry resulting in competitors owning broadcast content services and timely and effective enforcement of related regulatory safeguards; and ongoing monitoring and compliance with restrictions on non-Canadian ownership of TELUS Common Shares.
- Ability to sustain our dividend growth program through 2019 and ability to sustain and complete our multi-year share purchase program through 2019. These programs may be affected by factors such as the competitive environment, economic performance in Canada, our earnings and free cash flow, our levels of capital expenditures and spectrum licence purchases, and regulatory decisions and developments. Quarterly dividend decisions are subject to assessment and determination by our Board of Directors (Board) based on the Company’s financial position and outlook. The share purchase program may be affected by a change in our intention to purchase shares, and the assessment and determination of our Board from time to time, based on the Company’s financial position and outlook, and the market price of TELUS shares. Consequently, there can be no assurance that these programs will be maintained through 2019.
- Financing and debt requirements including our ability to carry out financing activities and our ability to maintain investment grade credit ratings in the range of BBB+ or the equivalent.
- Process risks including: our reliance on legacy systems and ability to implement and support new products and services and business operations; our ability to implement effective change management for system replacements and upgrades, process redesigns and business integrations; implementation of complex large enterprise deals that may be adversely impacted by available resources, system limitations and degree of co-operation from other service providers; our ability to successfully manage operations in foreign jurisdictions; information security and privacy breaches, including data loss or theft of data; intentional threats to our infrastructure and business operations; and real estate joint venture re-development risks.
- Litigation and legal matters including: our ability to defend successfully against investigations, regulatory proceedings, claims and lawsuits, including intellectual property infringement claims and class actions pending against us, as well as possible proceedings, intellectual property infringement claims and class actions based on consumer claims, data, privacy or security breaches and secondary market liability; and the complexity of legal compliance in domestic and foreign jurisdictions.
- Human resource matters including: recruitment, retention and appropriate training in a highly competitive industry; the results of the ratification vote currently under way (result expected prior to November 20, 2016) for the renewal agreement between TELUS and the Telecommunications Workers Union, United Steel Workers Local Union 1944 (TWU); expected negotiations for the expiry of two smaller agreements with the Syndicat des agents de maîtrise de TELUS (SAMT) expiring in March 2017 and with the Syndicat québécois des employés de TELUS (SQET) expiring in December 2017; and the level of employee engagement.
- Taxation matters including: complex tax laws that may be subject to interpretation by the tax authorities that may differ from our interpretations; changes in tax laws, including tax rates; elimination of income tax deferrals through the use of different tax year-ends for operating partnerships and corporate partners; and international tax complexity and compliance.
- Business continuity events including: our ability to maintain customer service and operate our networks in the event of human error or human-caused threats, such as cyber attacks and equipment failures that could cause various degrees of network outages; supply chain disruptions; natural disaster threats; epidemics; pandemics; and the completeness and effectiveness of business continuity and disaster recovery plans and responses.
- Partnerships, acquisitions or divestitures including: our ability to conclude the transaction with BCE to acquire a portion of MTS’ wireless customers and dealers, including obtaining the necessary regulatory approvals, and to successfully migrate the customers and dealers, and more generally, our ability to successfully integrate acquisitions, complete divestitures or establish partnerships in a timely manner, and realize expected strategic benefits.
- Health, safety and environmental developments and other risk factors discussed herein and listed from time to time in our reports and public disclosure documents, including our annual report, annual information form, and other filings with securities commissions or similar regulatory authorities in Canada (on SEDAR at sedar.com) and in our filings with the Securities and Exchange Commission (SEC) in the United States, including Form 40-F (on EDGAR at sec.gov). *Section 10 Risks and risk management* in our 2015 annual MD&A, our 2016 Q1 MD&A, our 2016 Q2 MD&A and this MD&A are incorporated by reference in this cautionary statement.

Management’s discussion and analysis

November 4, 2016

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1. Introduction

Our discussion in this section is qualified in its entirety 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 the consolidated financial position and financial performance of TELUS for the three-month and nine-month periods ended September 30, 2016, and should be read together with TELUS’ September 30, 2016, unaudited condensed interim consolidated financial statements (subsequently referred to as the interim consolidated financial statements). The generally accepted accounting principles (GAAP) we use are the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). Our interim consolidated financial statements comply with IFRS-IASB and Canadian GAAP and have been prepared in accordance with International Accounting Standard 34, *Interim Financial Reporting*. Our use of the term IFRS in this MD&A is a reference to these standards. In our discussion, we also use certain non-GAAP financial measures, such as earnings before interest, income taxes, depreciation and amortization (EBITDA), 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 in *Section 11.1*. All amounts are in Canadian dollars, unless otherwise specified.

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 interim consolidated financial statements were reviewed by TELUS’ Audit Committee and authorized by the Board of Directors for issuance on November 4, 2016.

In this MD&A, unless otherwise indicated, results for the third quarter and nine-month periods of 2016 are compared with results from the third quarter and nine-month periods of 2015.

1.2 The environment in which we operate

Economic growth

We have updated our assumptions since our 2016 Q2 MD&A. We now estimate that economic growth in Canada will be slightly slower at approximately 1.2% in 2016 (previously 1.3%) and in the range of 1.8 to 2.2% in 2017, based on a composite of estimates from Canadian banks and other sources. For our incumbent local exchange carrier (ILEC) provinces in Western Canada, we now estimate that economic growth in British Columbia will be approximately 2.8% in 2016 (previously 2.9%) and within a slightly wider range of 2.2% to 2.8% in 2017, and that economic contraction in Alberta will now be approximately (2.2)% in 2016 (previously (2.0)% in part due to the Fort McMurray wildfires and lower oil prices in 2016. We expect growth in Alberta to be within a wider range of 1.4 to 2.3% in 2017. The Bank of Canada’s October 2016 Monetary Policy Report estimated economic growth for Canada will be 1.1% in 2016 and 2% in 2017. In respect of the national unemployment rate, Statistics Canada’s Labour Force Survey reported a rate of 7.0% for September 2016 (7.1% reported for both December 2015 and September 2015).

1.3 Consolidated highlights

Collective bargaining and transformative change for 2017 to 2019 compensation

In 2015, we commenced collective bargaining with the Telecommunications Workers Union, United Steel Workers Local Union 1944 (TWU), to renew a collective agreement that expired on December 31, 2015; the expired contract covered approximately 40% of our Canadian workforce as at September 30, 2016. Throughout the third quarter, negotiations between TELUS and the TWU continued. On October 3, 2016, the TWU and TELUS announced that the two parties had reached a tentative agreement, a five-year deal that would be submitted to the TWU members for ratification. The ratification vote process is to be completed no later than November 20, 2016.

Subsequent to September 30, 2016, we made commitments to pay, lump-sum amounts totaling approximately \$300 million (inclusive of amounts proposed in an unratified tentative agreement), in respect of immediately-vesting, transformative compensation expense to the majority of our existing unionized and non-unionized Canadian-sited workforces; a portion of the net-of-tax amount for certain lump-sum recipients will be paid in Common Shares purchased in the market. If the tentative agreement is ratified, there will be a one-time payment to these unionized members in the fourth quarter of 2016. This payment represents increases that would have been otherwise awarded July 1, 2016, 2017 and 2018 (a period of 30 months) and compensation in consideration of collective agreement concessions that underpin future productivity improvements. A similar approach with respect to salary increases has been adopted for management employees. For most of our current Canadian-sited management employees, there will be a one-time payment in the fourth quarter of 2016 in lieu of general salary increases for 2017 and 2018 (a period of 24 months). The next salary increases will be awarded in 2019.

Long-term debt issue

In September 2016, we successfully completed a public issue of U.S.\$600 million of senior unsecured notes at 2.80%, due February 16, 2027. As of the date of this MD&A, the proceeds were used to repay U.S.\$453 million of commercial paper, with the balance to be used for general corporate purposes. We have fully hedged the principal and interest obligations of the notes against fluctuations in the Canadian dollar foreign exchange rate for the entire term of the notes. We have entered into a foreign exchange derivative (a cross currency interest rate exchange agreement) that effectively converted the principal payments and interest obligations to Canadian dollar obligations with an effective fixed interest rate of 2.95% and an effective issued and outstanding amount of \$792 million (reflecting a fixed exchange rate of \$1.3205). Our average term to maturity of long-term debt (excluding commercial paper and the revolving component of the TELUS International (Cda.) Inc. (TI) credit facility) has increased to approximately 10.7 years at September 30, 2016, from approximately 10.6 years at September 30, 2015. Additionally, our weighted average cost of long-term debt (excluding commercial paper and the revolving component of the TI credit facility) decreased to 4.23% at September 30, 2016, as compared to 4.32% at June 30, 2016 and 4.42% at September 30, 2015.

Normal course issuer bid (NCIB)

Our 2016 NCIB began on September 15, 2015 and concluded on September 14, 2016. Under the 2016 NCIB, we purchased and cancelled 9,691,400 of our Common Shares for approximately \$379 million, reflecting an average share purchase price of \$39.14.

In September 2016, we received approval from the Toronto Stock Exchange (TSX) for a new 2017 NCIB to purchase and cancel up to 8 million TELUS Common Shares for consideration of up to a maximum of \$250 million over a 12-month period, commencing September 30, 2016. In lieu of purchasing and cancelling shares, subject to regulatory approval, an Employee Benefit Plan Trust may purchase up to 25% of the approved normal course issuer bid amount for the benefit of non-executive employees pursuant to partial payment of the immediately-vesting, transformative compensation expense.

Share purchases under the 2017 NCIB represent up to an additional 1.4% of outstanding TELUS Common Shares as of September 16, 2016. See *Section 4.3* for additional details. There can be no assurance that we will complete our 2017 NCIB, as the decisions to purchase shares depend on the assessment and determination of our Board from time to time on the basis of the Company’s financial position and outlook, and the market price of TELUS shares. (See *Caution regarding forward-looking statements – Ability to sustain and complete multi-year share purchase program through 2019.*)

Consolidated highlights

(\$ millions, unless otherwise noted)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Consolidated statements of income						
Operating revenues	3,238	3,155	2.6 %	9,494	9,285	2.3 %
Operating income	616	597	3.1 %	1,946	1,893	2.8 %
Income before income taxes	487	491	(0.8)%	1,560	1,560	— %
Net income	355	365	(2.7)%	1,149	1,121	2.6 %
Net income attributable to Common Shares	348	365	(4.7)%	1,142	1,121	1.9 %
Net income per Common Share (\$):						
Basic earnings per share (basic EPS)	0.59	0.61	(3.3)%	1.93	1.85	4.3 %
Adjusted basic EPS ¹	0.65	0.66	(1.5)%	2.05	2.03	1.0 %
Diluted	0.59	0.61	(3.3)%	1.93	1.85	4.3 %
Dividends declared per Common Share (\$)	0.46	0.42	9.5 %	1.36	1.24	9.7 %
Basic weighted-average Common Shares outstanding (millions)	592	601	(1.6)%	593	605	(2.0)%
Consolidated statements of cash flows						
Cash provided by operating activities	1,032	1,025	0.7 %	2,487	2,686	(7.4)%
Cash used by investing activities	(680)	(549)	(23.9)%	(2,075)	(3,852)	46.1 %
Capital expenditures (excluding spectrum licences) ²	(787)	(623)	(26.3)%	(2,174)	(1,922)	(13.1)%
Payments for wireless spectrum licences	—	(12)	100.0 %	(145)	(2,002)	92.8 %
Cash provided (used) by financing activities	(370)	(412)	10.2 %	(225)	1,247	n/m
Other highlights						
Subscriber connections ³ (thousands)				12,577	12,436	1.1 %
EBITDA ¹	1,131	1,068	5.8 %	3,460	3,284	5.3 %
EBITDA – excluding restructuring and other costs ¹	1,191	1,119	6.4 %	3,591	3,411	5.3 %
Adjusted EBITDA ^{1,4}	1,181	1,119	5.5 %	3,557	3,411	4.3 %
Adjusted EBITDA margin ⁵	36.5	35.5	1.0 pts.	37.5	36.7	0.8 pts.
Free cash flow ¹	98	310	(68.4)%	332	881	(62.3)%
Net debt to EBITDA – excluding restructuring and other costs ¹ (times)				2.62	2.64	(0.02)

Notations used in MD&A: n/m – Not meaningful; pts. – Percentage points.

1. Non-GAAP and other financial measures. (See *Section 11.1*.)
2. Capital expenditures (excluding spectrum licences) include assets purchased, but not yet paid for, and consequently differ from Cash payments for capital assets, excluding spectrum licences, as reported on the condensed interim consolidated statements of cash flows.
3. The sum of active wireless subscribers, residential network access lines (NALs), high-speed Internet access subscribers and TELUS TV subscribers (Optik TV™ and TELUS Satellite TV® subscribers), measured at the end of the respective periods based on information in billing and other systems. On January 1, 2015, our opening reported subscriber balance has been retrospectively adjusted to exclude 1,613,000 business NALs due to its diminishing relevance as a key performance indicator. In addition, subsequent to a review of our subscriber base during the first quarter of 2016, our 2016 opening postpaid wireless subscriber base was reduced by 45,000 and our 2016 opening high-speed Internet subscriber base was increased by 21,000.
4. Adjusted EBITDA for all periods excludes restructuring and other costs (see *Section 11.1* for restructuring and other cost amounts). Adjusted EBITDA for the third quarter of 2016 excludes net gains and equity income of \$10 million, related to real estate joint venture developments. Adjusted EBITDA for the first nine months of 2016 excludes: (i) a \$15 million gain in the second quarter of 2016, from the exchange of wireless spectrum licences; and (ii) net gains and equity income of \$19 million (\$9 million in the second quarter and \$10 million in the third quarter), related to real estate joint venture developments.
5. Adjusted EBITDA margin is adjusted EBITDA divided by Operating revenues, where the calculation of the Operating revenues excludes the net gains and equity income related to real estate joint venture developments, as well as the gain from exchange of wireless spectrum licences.

Operating highlights

- **Consolidated operating revenues** increased by \$83 million in the third quarter of 2016 and \$209 million in the first nine months of 2016.

Service revenues increased by \$111 million in the third quarter of 2016 and \$274 million in the first nine months of 2016, mainly due to growth in wireline data revenue and wireless network revenue, partly offset by the ongoing decline in legacy wireline voice revenue from technological substitution and continued competitive pressures. (See *Section 5.4 Wireless segment* and *Section 5.5 Wireline segment*.)

Equipment revenues decreased by \$27 million in the third quarter of 2016 and \$81 million in the first nine months of 2016 resulting from a combination of higher wireless per-unit subsidies, lower retention volumes, and lower wireline equipment sales activity in the business market, in part due to the economic slowdown. (See *Section 5.4 Wireless segment* and *Section 5.5 Wireline segment*.)

Other operating income decreased slightly in the third quarter of 2016 and increased by \$16 million in the first nine months of 2016. The year-to-date increase includes a gain in the second quarter of 2016 on exchange of wireless spectrum licences, and net gains and equity income in 2016 related to real estate joint venture developments, partly offset by certain business acquisition-related provisions and a decrease in amounts recognized from the regulatory price cap deferral account. (See *Section 5.4 Wireless segment* and *Section 5.5 Wireline segment*.)

- During the 12-month period ended September 30, 2016, our total **subscriber connections** increased by 141,000. This reflects a 12-month increase in wireless postpaid subscribers of 2.4%, TELUS TV subscribers of 6.4% and high-speed Internet subscribers of 5.6%, partly offset by a 7.7% decline in wireless prepaid subscribers and a 6.4% decline in residential NALs.

Our postpaid wireless subscriber net additions were 87,000 in the third quarter of 2016 and 156,000 in the first nine months of 2016, representing an increase of 18,000 in the quarter and a decrease of 26,000 in the nine-month period. The increase for the third quarter reflects higher gross additions due to the success of targeted promotions and a lower postpaid churn rate. The decrease for the nine-month period reflects flat gross additions due to the economic slowdown, particularly in Alberta, increased competitive intensity and the effect of higher handset prices (including the effect of higher supplier costs due to the decline in the Canadian dollar exchange rate vs. the U.S. dollar over the last two years) on customer demand, as well as an increase in our postpaid subscriber churn rate. Our monthly postpaid subscriber churn rate was 0.94% in the third quarter of 2016 and 0.93% in the first nine months of 2016, as compared to 0.97% in the third quarter of 2015 and 0.91% in the first nine months of 2015. (See *Section 5.4 Wireless segment* for additional details.)

Net additions of high-speed Internet subscribers were 14,000 in the third quarter of 2016 and 44,000 in the first nine months of 2016, down 10,000 in the quarter and 25,000 in the nine-month period. The decreases resulted from the effects of heightened competitive intensity and the impact of the economic slowdown, resulting in lower gross additions and increased churn, partly offset by the continued expansion of our high-speed broadband footprint, including fibre to the premises (FTTP), as well as the pull-through impact from the continued adoption of Optik TV. Net additions of TELUS TV subscribers were 14,000 in the third quarter of 2016 and 38,000 in the first nine months of 2016, down 12,000 in the quarter and 26,000 in the nine-month period. The decreases reflect lower gross additions, a higher customer churn rate and a decline in satellite-TV subscribers, as the effects of heightened competitive intensity including OTT services, slower market growth for TV services, the economic slowdown, and a high rate of market penetration for TV services. These pressures were partly offset by the ongoing expansion of our addressable Optik TV footprint and increasing broadband speeds that increase the attractiveness of our bundled offering. (See *Section 5.5 Wireline segment* for additional details.)

- **Operating income** increased by \$19 million in the third quarter of 2016 and \$53 million in the first nine months of 2016, reflecting growth in **EBITDA**, partly offset by increases in total depreciation and amortization expenses resulting from the impact of our continuing program of asset life studies and increased expenditures associated with capital assets.

EBITDA includes restructuring and other costs, as well as net gains and equity income related to real estate joint venture developments recorded in the second and third quarters of 2016, and a gain from the exchange of wireless spectrum licences recorded in the second quarter of 2016. EBITDA increased by \$63 million in the third quarter of 2016 and \$176 million in the first nine months of 2016, reflecting the growth in wireline data revenues and wireless network revenues; improvements in Internet, business process outsourcing, TELUS TV and TELUS Health margins; growth in other operating income noted above; and the execution of our operational efficiency and effectiveness initiatives. This growth was partly offset by higher wireless acquisition and retention costs, increased restructuring costs, continued declines in legacy wireline voice revenues, certain business acquisition-related provisions, and for the nine-month period, approximately \$5 million of costs and revenue impacts, predominately in the wireline segment, related to the severe wildfires in northern Alberta.

Adjusted EBITDA, which excludes restructuring and other costs, and real estate net gains and equity income noted above, increased by \$62 million in the third quarter and \$146 million in the first nine months of 2016. (See *Section 5.4 Wireless segment* and *Section 5.5 Wireline segment* for additional details.)

- **Income before income taxes** decreased by \$4 million in the third quarter of 2016 and was unchanged in the first nine months of 2016, as increased operating income was offset by higher financing costs. The increase in financing costs resulted from higher average long-term debt outstanding (which arose mainly from the purchase of spectrum licences in 2015), higher foreign exchange losses and a decrease in interest income for the nine-month period which resulted primarily from the recognition of \$20 million interest income in the second quarter of 2015 related to the settlement of prior years’ income tax-related items. These were partly offset by a lower weighted average cost of long-term debt and, for the nine-month period, by higher capitalized long-term debt interest costs for spectrum licences not yet able to be deployed.
- **Income taxes** increased by \$6 million in the third quarter of 2016 and decreased by \$28 million in the first nine months of 2016. The increase for the quarter primarily reflects an increase in non-deductible expenses in 2016, as well as adjustments recognized in 2015 from the settlements of prior years’ income tax-related matters. The decrease for the nine-month period reflects a \$48 million non-cash adjustment in the second quarter of 2015 to revalue deferred income tax liabilities as a result of an increase to the Alberta provincial corporate income tax rate, partly offset by a \$23 million recovery in 2015 from the settlement of prior years’ income tax-related matters. (See *Section 5.3 Consolidated operations.*)
- **Net income attributable to Common Shares** decreased by \$17 million in the third quarter of 2016 and increased by \$21 million in the first nine months of 2016. For the quarter, higher operating income was more than offset by increased financing costs and income taxes, while for the nine-month period, higher operating income and lower income taxes were partly offset by increased financing costs. Excluding net gains and equity income from the real estate joint venture developments in 2016, restructuring and other costs, income tax-related adjustments, and, for the nine-month period, the effects of the gain on the exchange of wireless spectrum licences in 2016 and the asset retirement from the closure of Black’s Photography retail stores in 2015, net income decreased by \$15 million or 3.8% in the third quarter of 2016 and \$18 million or 1.5% in the first nine months of 2016.

Analysis of Net income

(\$)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Net income attributable to Common Shares	348	365	(17)	1,142	1,121	21
Add back (deduct):						
Gain on the exchange of wireless spectrum licences, after income taxes	—	—	—	(13)	—	(13)
Net gains and equity income from real estate joint venture developments, after income taxes	(6)	—	(6)	(11)	—	(11)
Restructuring and other costs, after income taxes	44	38	6	96	93	3
Unfavourable (favourable) income tax-related adjustments	(3)	(5)	2	(2)	10	(12)
Asset retirement from planned closure of Black’s, after income taxes	—	—	—	—	6	(6)
Adjusted net income	383	398	(15)	1,212	1,230	(18)

- **Basic earnings per share (basic EPS)** decreased by \$0.02 in the third quarter of 2016 and increased by \$0.08 in the first nine months of 2016. The reduction in the number of shares outstanding, as a result of our NCIB program, net of share option exercises, contributed positively to basic EPS by approximately \$0.01 and \$0.04, respectively, in the third quarter and first nine months of 2016. Excluding net gains and equity income from the real estate joint venture developments in 2016, restructuring and other costs, income tax-related adjustments, and, for the nine-month period, the effects of the gain on the exchange of wireless spectrum licences in 2016 and the asset retirement from the closure of Black’s Photography retail stores in 2015, basic EPS decreased by \$0.01 in the third quarter of 2016 and increased by \$0.02 in the first nine months of 2016.

Analysis of basic EPS

(\$)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Basic EPS	0.59	0.61	(0.02)	1.93	1.85	0.08
Add back (deduct):						
Gain on the exchange of wireless spectrum licences, after income taxes, per share	—	—	—	(0.02)	—	(0.02)
Net gains and equity income from real estate joint venture developments, after income taxes, per share	(0.01)	—	(0.01)	(0.02)	—	(0.02)
Restructuring and other costs, after income taxes, per share	0.08	0.06	0.02	0.16	0.15	0.01
Unfavourable (favourable) income tax-related adjustments, per share	(0.01)	(0.01)	—	—	0.02	(0.02)
Asset retirement from planned closure of Black’s, after income taxes, per share	—	—	—	—	0.01	(0.01)
Adjusted basic EPS	0.65	0.66	(0.01)	2.05	2.03	0.02

- **Dividends declared per Common Share** were \$0.46 in the third quarter of 2016 and \$1.36 in the first nine months of 2016, reflecting increases of 9.5% from the third quarter of 2015 and 9.7% from the first nine months of 2015. This is consistent with our announced intention of sustained dividend growth of circa 10% per annum through 2016. On November 3, 2016, the Board declared a fourth quarter dividend of \$0.48 per share on the issued and outstanding Common Shares, payable on January 3, 2017, to shareholders of record at the close of business on December 9, 2016. The fourth quarter dividend reflects a cumulative increase of \$0.04 per share or 9.1% from the \$0.44 per share dividend declared one year earlier.

Liquidity and capital resource highlights

- **Net debt to EBITDA – excluding restructuring and other costs** was 2.62 times at September 30, 2016, down from 2.64 at September 30, 2015, as the increase in net debt was offset by growth in EBITDA – excluding restructuring and other costs. (See *Section 4.3 Liquidity and capital resources* and *Section 7.5 Liquidity and capital resource measures*.)
- **Cash provided by operating activities** increased by \$7 million in the third quarter of 2016 and decreased by \$199 million in the first nine months of 2016. The increase for the quarter resulted primarily from higher EBITDA and working capital changes, net of increases in income taxes paid and interest paid. The decrease for the nine-month period resulted from increases in income taxes paid, interest paid and restructuring disbursements, partly offset by EBITDA growth and lower share-based compensation payments. (See *Section 7.2 Cash provided by operating activities*.)
- **Cash used by investing activities** increased by more than \$131 million in the third quarter of 2016 and decreased by nearly \$1.8 billion in the first nine months of 2016. The increase for the quarter mainly reflects higher capital expenditures – excluding spectrum licences. The decrease for the nine-month period mainly reflects cash payments for spectrum licences of \$2 billion made in 2015. **Capital expenditures – excluding spectrum licences** increased by \$164 million in the third quarter and \$252 million in the first nine months, mainly due to the higher generational capital investments in wireless and wireline broadband infrastructure, including connecting more homes and businesses directly to our fibre-optic network and deploying wireless spectrum licences. (See *Section 7.3 Cash used by investing activities*.)
- In the third quarter of 2016, **Cash used by financing activities** decreased by \$42 million, mainly due to lower purchases of shares under the NCIB program, offset by net repayments of long-term debt in the third quarter of 2016, as compared to net issues of debt in the same period in 2015. For the nine-month period, comparative net cash used by financing activities increased by nearly \$1.5 billion mainly due to lower net issues of long-term debt in 2016. (See *Section 7.4 Cash provided (used) by financing activities*.)
- **Free cash flow** decreased by \$212 million in the third quarter of 2016 and \$549 million in the first nine months of 2016, resulting from increases in income taxes paid, increases in capital expenditures – excluding spectrum licences and increases in interest paid, partly offset by adjusted EBITDA growth. In addition, for the nine-month period, the decrease reflected higher restructuring disbursements, partly offset by lower share-based compensation payments. (See *Section 11.1*.)

2. Core business and strategy

Our discussion in this section is qualified in its entirety by the *Caution regarding forward-looking statements* at the beginning of this MD&A.

Our core business was described in our 2015 annual MD&A. The following are business updates grouped under the applicable strategic imperatives.

Focusing relentlessly on growth markets of data, IP and wireless

External wireless revenues and wireline data revenues totalled \$8.3 billion in the first nine months of 2016, up by \$340 million or 4.3%, while wireline voice and other revenues and wireline Other operating income totalled \$1.2 billion in the first nine months of 2016, down \$131 million or 9.8%. Wireless revenues and wireline data revenues in total represented 87% of TELUS’ consolidated revenues for the first nine months of 2016, as compared to 86% in the same period in 2015.

Providing integrated solutions that differentiate TELUS from our competitors

TELUS introduced its advanced 150 Mbps Internet plan, which uniquely offers symmetrical download and upload speeds of up to 150 Mbps to consumer and business customers on the TELUS PureFibre™ fibre-optic network. The symmetrical upload speed of 150 Mbps is not currently offered by cable-TV competitors. TELUS believes that symmetrical uploads are a requirement of home monitoring, IoT and consumer-based cloud services.

Building national capabilities across data, IP, voice and wireless

During 2016, in accordance with an asset transfer agreement with Bell Mobility Inc. (Bell) and consistent with our network optimization strategy, we exchanged certain wireless telecommunication tower sites. The exchange entailed the assignment of existing lease agreements for each tower site, as well as the transfer of all rights, titles and interests on the construction on the leased premises, including tower structures, antennae and cabling. The exchange benefits both parties as the location of the tower sites are well positioned for utilization within each party’s respective 4G long-term evolution (LTE) network footprints. It is expected that additional transfers of assets will occur in multiple tranches throughout 2016 and subsequent periods.

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

In June 2016, we submitted a notification and advance ruling request to the Competition Bureau regarding our previously announced agreement with BCE Inc., pursuant to which we intend to acquire approximately one-third of Manitoba Telecom Services Inc.’s (MTS) postpaid wireless subscribers and be assigned one-third of MTS’ dealer locations in Manitoba, dependent on the successful completion of BCE Inc.’s acquisition of MTS. Our total price of the transaction with BCE Inc. will vary depending upon the actual number of qualifying postpaid wireless subscribers acquired. On June 23, 2016, Manitoba Telecom Services Inc. (MTS) announced that a significant majority of its shareholders had approved the previously announced agreement in which BCE Inc. will acquire all issued and outstanding common shares of MTS. On June 29, 2016, the Manitoba Court of Queen’s Bench approved the transaction. The transaction is still subject to regulatory approvals and other customary closing conditions, and is expected to close in late 2016 or early 2017.

In September 2016, TELUS acquired the Canadian business operations of Nightingale Informatix Corp., including its proprietary electronic medical record (EMR) software and customers. The acquisition is complementary to our existing lines of business and is consistent with our corporate priority of advancing TELUS’ leadership position in healthcare information management.

We partnered with Huawei Canada for trials of 5G wireless technology, which is anticipated to begin deployment by 2020. These trials were successful, having achieved wireless download speeds of 29.3 Gbps. Additionally, we upgraded several 4G LTE wireless sites with LTE-Advanced-Pro technologies and have successfully tested download speeds that are approaching 1Gbps, approximately 10 times faster speeds than those currently available through our LTE advanced networks. We believe that devices that can take advantage of these technologies may be available as early as 2017. Our advancement towards 5G technology builds on our fibre-optic investments, and advances us further towards converged and more efficient networks.

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

As part of our strategy of building national capabilities, we have formed the TELUS Manitoba Community Board, which will launch in early 2017 and will provide funding to local registered charities that support youth and families and focus on at least one of three key areas: health, education and the environment.

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

Through our transformative changes for 2017 to 2019 compensation, we expect to realize savings in 2017, 2018 and over the coming years through avoidance of the compounding effect of two years of salary increases and the resulting impact on bonuses and benefits. See *Collective bargaining and transformative change for 2017 to 2019 compensation in Section 1.3*.

3. Corporate priorities for 2016

Our corporate priorities for 2016 were listed in our 2015 annual MD&A.

4. Capabilities

Our discussion in this section is qualified in its entirety by the *Caution regarding forward-looking statements* at the beginning of this MD&A.

4.1 Principal markets addressed and competition

For a discussion of our principal markets and an overview of competition, please refer to Section 4.1 of our 2015 annual MD&A and updates in our 2016 Q1 MD&A and 2016 Q2 MD&A.

4.2 Operational resources

For a discussion of our operational resources, please refer to Section 4.2 of our 2015 annual MD&A and updates in our 2016 Q1 MD&A and 2016 Q2 MD&A.

Wireless segment

In the third quarter of 2016, we continued to deliver leading blended customer churn on a national basis. Our monthly postpaid churn rate was 0.94% in the third quarter of 2016, representing the 12th quarter in the past 13 quarters that our postpaid churn rate was below 1%, despite economic pressures that have resulted in customers purchasing fewer handsets. Our monthly blended churn rate of 1.18% in the third quarter of 2016 is among our lowest quarterly churn rates since we became a national carrier 16 years ago. This further exemplifies the success of our differentiated “customers first” culture, our ongoing focus on delivering an outstanding customer experience, combined with attractive new products and services, and our retention programs.

During the first nine months of 2016, we continued our deployment of 700 MHz and 2500 MHz wireless spectrum licences acquired during Innovation, Science and Economic Development Canada’s (ISED) wireless spectrum auctions, which we have begun to operationalize for the benefit of our customers. Since mid-2013, we have invested more than \$3.6 billion to acquire wireless spectrum licences in spectrum auctions and other transactions, which has more than doubled our national spectrum holdings, in support of our top corporate priority of putting customers first. Wireless data consumption has been increasing rapidly and we have responded by investing to extend the capacity of our network to support the additional data consumption and growth in our wireless customer base.

As at September 30, 2016, our 4G LTE network covered 97% of Canada’s population, up from 95% at September 30, 2015. Furthermore, we continue to invest in our LTE advanced network roll-out, which covered more than 61% of Canada’s population at September 30, 2016. Outside of LTE advanced and LTE coverage areas, and for voice services, the LTE devices we offer also operate on our HSPA+ network, which covered 99% of Canada’s population at September 30, 2016.

Wireline segment

We continue to invest in urban and rural communities with commitments to deliver broadband network capabilities to as many Canadians as possible. We are expanding our fibre footprint by connecting more homes and businesses directly to fibre. Throughout 2015 and 2016, we have made announcements regarding investments to bring our fibre-optic network to cities across B.C., Alberta and Eastern Quebec. We have also increased broadband Internet speeds, expanded our IP TV video-on-demand library and high-definition content, including the launch of 4K TV, and enhanced marketing of data products and bundles.

As at September 30, 2016, our high-speed broadband coverage reached more than 2.9 million households and businesses in B.C., Alberta and Eastern Quebec, including approximately 0.95 million homes and businesses covered by fibre-optic cable, up from 0.83 million homes and businesses in the second quarter of 2016, which now provides these premises with immediate access to our gigabit-capable fibre-optic network.

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 the management of capital and in its definition, we include Common Share equity (excluding Accumulated other comprehensive income), Long-term debt (including long-term credit facilities, commercial paper backstopped by long-term credit facilities and any associated hedging assets or liabilities, net of amounts recognized in Accumulated other comprehensive income), Cash and temporary investments, and 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 telecommunications infrastructure. To maintain or adjust our capital structure, we may adjust the amount of dividends paid to holders of Common Shares, purchase shares for cancellation pursuant to our normal course issuer bids (NCIBs), issue new 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 by utilizing a number of measures, including the net debt to EBITDA – excluding restructuring and other costs ratio and the dividend payout ratios. (See definitions in *Section 11.1*.)

Financing and capital structure management plans

Report on financing and capital structure management plans

Pay dividends to the holders of Common Shares under our multi-year dividend growth program

- In May 2016, we announced an intention to target ongoing semi-annual dividend increases, with the annual increase in the range of 7 to 10% from 2017 through to the end of 2019, 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 dividend payout ratio guideline is 65 to 75% of prospective net earnings per share. There can be no assurance that we will maintain a dividend growth program through 2019. (See *Caution regarding forward-looking statements – Ability to sustain our dividend growth program per annum through 2019*.)
- On November 3, 2016, a fourth quarter dividend of \$0.48 per share was declared on our issued and outstanding Common Shares, payable on January 3, 2017, to shareholders of record at the close of business on December 9, 2016. The fourth quarter dividend for 2016 reflects a cumulative increase of \$0.04 per share or 9.1% from the \$0.44 per share dividend paid in January 2016.

Purchase Common Shares under our multi-year NCIB

- On May 5, 2016, we announced our intention to renew our NCIB program in each of the next three years in order to permit purchases for up to \$250 million in each calendar year. In September 2016, we received approval from the Toronto Stock Exchange (TSX) for a new 2017 NCIB to purchase and cancel up to 8 million TELUS Common Shares for consideration of up to \$250 million over a 12-month period, commencing September 30, 2016. In lieu of purchasing and cancelling shares, subject to regulatory approval, an Employee Benefit Plan Trust may purchase up to 25% of the approved normal course issuer bid amount for the benefit of non-executive employees pursuant to partial payment of the immediately-vesting, transformative compensation expense.
- Share purchases under the 2017 NCIB represent up to 1.4% of outstanding TELUS Common Shares as of September 16, 2016. Such purchases may be made through the facilities of the TSX, the New York Stock Exchange (NYSE) and alternative trading platforms as may be permitted by applicable securities laws and regulations. Shares will be purchased only when and if we consider it advisable. There can be no assurance that we will complete our 2017 NCIB or that we will renew and complete our NCIB program in each of the next two years, as the decisions to purchase shares depend on the assessment and determination of our Board from time to time on the basis of the Company’s financial position and outlook, and the market price of TELUS shares. (See *Caution regarding forward-looking statements – Ability to sustain and complete multi-year share purchase program through 2019*.)
- Under the 2016 NCIB, which came into effect on September 15, 2015 and concluded on September 14, 2016, we purchased and cancelled 9,691,400 of our Common Shares for approximately \$379 million, reflecting an average share purchase price was \$39.14. The purchased and cancelled shares represent 1.6% of the shares outstanding prior to commencement of the 2016 NCIB.
- We have also entered into an automatic share purchase plan (ASPP) with a broker for the purpose of permitting us to purchase our Common Shares under our NCIB program 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 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.

Report on financing and capital structure management plans

Use proceeds from securitized trade receivables (Short-term borrowings), bank facilities, commercial paper and cash retained through dividend reinvestment, as needed, to supplement free cash flow and meet other cash requirements

- Our issued and outstanding commercial paper was \$137 million at September 30, 2016, all of which was denominated in U.S. dollars (U.S.\$104 million), compared to \$256 million (U.S.\$185 million) at December 31, 2015 and \$787 million (U.S.\$589 million) at September 30, 2015.
- Proceeds from securitized trade receivables were \$100 million at September 30, 2016, September 30, 2015 and December 31, 2015.

Maintain compliance with financial objectives

- Maintain investment grade credit ratings in the range of BBB+ or the equivalent – On November 4, 2016, 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 2.00 to 2.50 times – As measured at September 30, 2016, the ratio was 2.62 times, outside of the range primarily due to the funding of spectrum licences acquired in ISED’s wireless spectrum auctions during 2014 and 2015. We will endeavour to return the ratio to within this objective range in the medium term, as we believe that this range is supportive of our long-term strategy. (See *Section 7.5 Liquidity and capital resource measures.*)
- Dividend payout ratio of 65 to 75% of net earnings per share on a prospective basis – The disclosed dividend payout ratio is a historical measure utilizing the last four quarters of dividends declared and earnings per share, and is presented for illustrative purposes in evaluating our target guideline. We estimate that we are within our target guideline on a prospective dividend payout ratio basis. As at September 30, 2016, the historical ratio of 76% exceeded the desired range. (See *Section 7.5 Liquidity and capital resource measures.*)
- Generally maintain a minimum \$1 billion in unutilized liquidity – As at September 30, 2016, our unutilized liquidity was greater than \$1 billion. (See *Section 7.6 Credit facilities.*)

4.4 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.

5. Discussion of operations

Our discussion in this section is qualified in its entirety by the *Caution regarding forward-looking statements* at the beginning of this MD&A.

5.1 General

Our operating segments and reportable segments are currently wireless and wireline. Segmented information in *Note 5* of the interim consolidated financial statements is regularly reported to our Chief Executive Officer (CEO) (the chief operating decision-maker).

5.2 Summary of consolidated quarterly results and trends

Summary of quarterly results

(\$ millions, except per share amounts)	2016 Q3	2016 Q2	2016 Q1	2015 Q4	2015 Q3	2015 Q2	2015 Q1	2014 Q4
Operating revenues	3,238	3,148	3,108	3,217	3,155	3,102	3,028	3,128
Operating expenses								
Goods and services purchased ¹	1,426	1,331	1,300	1,482	1,394	1,372	1,284	1,476
Employee benefits expense ¹	681	628	668	757	693	649	609	651
Depreciation and amortization	515	499	500	518	471	464	456	468
Total operating expenses	2,622	2,458	2,468	2,757	2,558	2,485	2,349	2,595
Operating income	616	690	640	460	597	617	679	533
Financing costs	129	134	123	114	106	110	117	115
Income before income taxes	487	556	517	346	491	507	562	418
Income taxes	132	140	139	85	126	166	147	106
Net income	355	416	378	261	365	341	415	312
Net income attributable to Common Shares	348	416	378	261	365	341	415	312
Net income per Common Share:								
Basic earnings per share (Basic EPS)	0.59	0.70	0.64	0.44	0.61	0.56	0.68	0.51
Adjusted basic EPS ²	0.65	0.70	0.70	0.54	0.66	0.66	0.70	0.53
Diluted	0.59	0.70	0.64	0.44	0.61	0.56	0.68	0.51
Dividends declared per Common Share	0.46	0.46	0.44	0.44	0.42	0.42	0.40	0.40
Additional information:								
EBITDA ²	1,131	1,189	1,140	978	1,068	1,081	1,135	1,001
Restructuring and other costs ²	60	23	48	99	51	59	17	26
EBITDA – excluding restructuring and other costs ²	1,191	1,212	1,188	1,077	1,119	1,140	1,152	1,027
Cash provided by operating activities	1,032	892	563	863	1,018	943	718	917
Free cash flow ²	98	126	108	197	310	300	271	337

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

2. See Section 11.1 Non-GAAP and other financial measures.

Trends

The consolidated revenue trend reflects increases in: (i) wireline data revenues, driven by business process outsourcing, Internet, enhanced data services and TELUS TV services; and (ii) wireless network revenues generated from growth in both our average revenue per subscriber unit per month (ARPU) and subscriber base. This growth was partially offset by: (i) the continued declines in wireline voice revenues due to technological substitution and greater use of inclusive long distance and lower wholesale volumes; and (ii) the decline in wireless equipment revenue, reflecting lower retention volumes, partly offset by higher-value smartphones in the sales mix. Retention volumes declined due to (i) the effects on contract renewals of higher handset prices (including the effect of higher supplier costs due to the decline in the Canadian dollar exchange rate vs. the U.S. dollar over the last two years), as well as an increasing number of clients on month-to-month service; and (ii) and economic pressures resulting in customers purchasing fewer handsets.

The trend of increasing wireline data revenue reflects growth in high-speed Internet and enhanced data services reflecting a larger high-speed Internet subscriber base (up 5.6% in the 12-month period ended September 30, 2016), continued expansion of our broadband footprint, including fibre-optic cable, and increased pricing; growth in business process outsourcing; and the continuing but moderating expansion of our TELUS TV subscriber base (up 6.4% in the 12-month period ended September 30, 2016) and increased pricing. A general trend of declining wireline voice revenues is due to competition from voice over IP (VoIP) service providers (including cable-TV competitors) and resellers, as well as

technological substitution to wireless and IP-based services and applications, continuing increased competition in the small and medium-sized business market, and the impact of the economic slowdown.

The high-speed Internet subscriber growth has declined during the first nine months of 2016, primarily from the impact of the economic slowdown and competitive intensity, however, we expect the subscriber growth to gradually improve as the economy recovers and as we continue our investments in expanding our fibre-optic network. The TELUS TV subscriber base growth is moderating due to the effects of slower subscriber growth for paid TV services, the economic slowdown, the high rate of market penetration and increased competition, including from over-the-top (OTT) services. Residential network access line (NAL) losses continue to reflect the economic slowdown and the ongoing trend of substitution to wireless and Internet-based services, as noted above.

The wireless subscriber base growth trend has moderated due to the impacts of the economic slowdown, particularly in Alberta, heightened intensity and the effects of higher handset prices, partly offset by our customers first initiatives and retention programs. The wireless ARPU growth trend has increased slightly in the past three quarters due to higher mix of share plans and increased mix of higher-rate plans including the newly launched premium plus plans, influenced by competitive pressures driving larger allotments of data provided in rate plans, including data sharing and international data roaming features and plans, consumer response to increased frequency of customer data usage notifications and offloading of data traffic to increasingly available Wi-Fi hotspots. ARPU is expected to continue to increase modestly over time, as a result of the continued growth in data usage and the ongoing shift in our subscriber base towards higher-value postpaid customers, as seen in the third quarter of 2016. However, the level of ARPU is highly dependent on competition, the economic environment, consumer behaviour, the regulatory environment, device selection and other factors, and, as a consequence, there cannot be any assurance that ARPU growth will continue to materialize.

Retention spending as a percentage of network revenue has increased from 12.8% in the first nine months of 2015 to 13.7% in the first nine months of 2016, mainly from an increase in the sales mix of higher-subsidy smartphones. In addition, due to the coterminous expiration of two-year and three-year contracts beginning on June 3, 2015, there are a greater number of customers renewing contracts at any given time, which has impacted acquisition and retention trends. We have generally experienced a higher volume of contract renewals than previously experienced prior to 2015. We expect this trend to continue. We also expect to experience continuing pressure on our postpaid subscriber churn if competitive intensity continues, in part due to an increase in customers on expired contracts, as well as customers bringing their own devices and therefore not entering into term contracts. Accordingly, our wireless segment historical operating results and trends prior to the coterminous expiration of two-year and three-year contracts may not be reflective of results and trends for future periods.

Historically, there has been significant third and fourth quarter seasonal effects reflected in higher wireless subscriber additions, an increase in related acquisition costs and equipment sales, and higher retention costs due to contract renewals in those quarters. These impacts can be more pronounced around popular device launches and seasonal events such as back to school, Black Friday and Christmas. The costs associated with higher seasonal loading volumes have typically resulted in sequential decreases in wireless EBITDA from the second quarter through to the fourth quarter, typically followed by sequential increases in wireless EBITDA from the fourth quarter through to the second quarter. Subscriber additions have generally been lowest in the first quarter. Historically, wireless ARPU has experienced seasonal sequential increases in the second and third quarters, reflecting higher levels of usage and roaming in the spring and summer, followed by seasonal sequential declines in the fourth and first quarters. This seasonal effect on ARPU is expected to diminish in the future, as unlimited nationwide voice plans become more prevalent and chargeable voice and data usage and long distance spikes become less pronounced.

The trend in Goods and services purchased expense generally reflects increasing wireless equipment expenses associated with higher-value smartphones in the sales mix and increased handset costs (as described above); increasing wireless customer service, administrative, external labour and distribution channel expenses to support moderating growth in our subscriber base; increased wireline TV costs of sales; and higher non-labour restructuring and other costs in 2015 mainly from real estate rationalization. These were partly offset by lower transit and termination costs and wireline equipment costs.

The trend in Employee benefits expense reflects moderating wages and salaries, as growth in the number of TELUS International employees to support increased business process outsourcing revenue growth, inflationary compensation increases and higher labour restructuring costs from efficiency initiatives were offset by lower defined benefit pension plan and share-based compensation expenses, and a decrease in the number of full-time equivalent (FTE) domestic employees. We expect to record significant transformative compensation expenses in the fourth quarter of 2016. See *Collective bargaining and transformative change for 2017 to 2019 compensation* in *Section 1.3 Consolidated highlights*.

The general trend in Depreciation and amortization reflects increases due to the impact of our continuing program of asset life studies, as well as growth in capital assets supporting the expansion of our broadband footprint and enhanced

long-term evolution (LTE) network coverage. The investments in our fibre-optic network also support our small-cell technology strategy to improve coverage and prepare for a more efficient and timely evolution to 5G.

The general trend in Financing costs reflects an increase in long-term debt outstanding, mainly associated with significant investments in wireless spectrum licences acquired during wireless spectrum licence auctions in 2014 and 2015 and our generational investments in fibre to the home. Financing costs also include the Employee defined benefit plans net interest expense that has decreased for 2016, primarily due to the decrease in the defined benefit plan deficit at December 31, 2015, as compared to one year earlier, partly offset by an increase in the discount rate. Moreover, Financing costs are net of capitalized interest related to spectrum licences acquired during the wireless spectrum licence auctions, which we expect to deploy into our existing network in future periods (capitalized long-term debt interest was \$40 million in the first nine months of 2016, as compared to \$27 million in the first nine months of 2015 and \$45 million during fiscal year 2015). Capitalization of long-term debt interest will moderate, as cell sites become ready to utilize the spectrum frequencies. Financing costs for the eight periods shown included varying amounts of foreign exchange gains or losses and varying amounts of interest income, including \$20 million of interest income in the second quarter of 2015 resulting from the settlement of prior years’ income tax-related matters.

The trend in Net income reflects the items noted above, as well as non-cash adjustments arising from legislated income tax changes and adjustments recognized in the current period for income tax of prior periods, including any related after-tax interest on reassessments. The trend in basic EPS is impacted by the share purchases under our normal course issuer bid (NCIB) program.

The trend in Cash provided by operating activities reflects generally higher income tax payments and increased interest payments and higher restructuring and other disbursements, partly offset by growth in consolidated EBITDA. The trend in free cash flow reflects the factors affecting Cash provided by operating activities, as well as increases in capital expenditures (excluding spectrum licences).

5.3 Consolidated operations

The following is a discussion of our consolidated financial performance. Segmented information in *Note 5* of the interim consolidated financial statements is regularly reported to our CEO (the chief operating decision-maker). We discuss the performance of our segments in *Section 5.4 Wireless segment*, *Section 5.5 Wireline segment* and in capital expenditures in *Section 7.3 Cash used by investing activities*.

Operating revenues

(\$ millions)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Service	3,045	2,934	3.8 %	8,921	8,647	3.2 %
Equipment	180	207	(13.0)%	516	597	(13.6)%
Revenues arising from contracts with customers	3,225	3,141	2.7 %	9,437	9,244	2.1 %
Other operating income	13	14	(7.1)%	57	41	39.0 %
	3,238	3,155	2.6 %	9,494	9,285	2.3 %

- **Service revenue** increased by \$111 million in the third quarter of 2016 and \$274 million in the first nine months of 2016. The increases primarily reflect growth in wireline data services and wireless network revenues, partly offset by continuing declines in wireline voice revenues, as well as the impacts of the economic slowdown, particularly in Alberta. Wireless network revenue reflects growth in blended ARPU and the wireless subscriber base. Wireline data service revenue reflects increased wireline business process outsourcing revenue, higher wireline Internet, enhanced data and TELUS TV revenue due to subscriber growth and higher revenue per customer, and continued, but moderating, expansion of our subscriber base.
- **Equipment revenue** decreased by \$27 million in the third quarter of 2016 and \$81 million in the first nine months of 2016. The decrease reflects a decline in wireless equipment revenue of \$25 million for the third quarter and \$60 million for the first nine months from a combination of higher per-unit subsidies, lower retention volumes, and discontinuance of Black’s Photography revenue from the closure of stores in August 2015, partly offset by higher-value smartphones in the sales mix. Also reflected is lower wireline equipment revenue of \$2 million for the third quarter and \$21 million for the nine-month period, primarily from lower sales activity in the business market in part from the economic slowdown and a focus on providing managed services rather than equipment-only sales.

- **Other operating income** decreased slightly in the third quarter of 2016 and increased by \$16 million in the first nine months of 2016. In the third quarter and nine-month period, gains in 2016 from the sale of property, plant and equipment and net gains and equity income in 2016 related to real estate joint venture developments were offset by certain business acquisition-related provisions and a decrease in amounts recognized from the regulatory price cap deferral account for provisioning broadband Internet services to eligible rural and remote communities. The year-to-date increase also reflects a gain in the second quarter of 2016 from the exchange of wireless spectrum licences.

Operating expenses

(\$ millions)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Goods and services purchased	1,426	1,394	2.3 %	4,057	4,050	0.2 %
Employee benefits expense	681	693	(1.7)%	1,977	1,951	1.3 %
Depreciation	388	361	7.5 %	1,158	1,069	8.3 %
Amortization of intangible assets	127	110	15.5 %	356	322	10.6 %
	2,622	2,558	2.5 %	7,548	7,392	2.1 %

- **Goods and services purchased** increased by \$32 million in the third quarter of 2016 and \$7 million in the first nine months of 2016. The increases were due to higher wireless acquisition and retention spending (including the effect of higher supplier cost of handsets due to the decline in the Canadian dollar exchange rate vs. the U.S. dollar over the last two years) and higher wireline network operating and administrative costs to support our growing subscriber base, and higher advertising and promotional expenses in support of bundled wireline offerings and in response to heightened competitive intensity, as well as higher TV costs of sales, partly offset by lower wireline transit and termination costs, ongoing operational efficiency and effectiveness initiatives, and lower wireline equipment costs related to the decline in equipment revenue.
- **Employee benefits expense** decreased by \$12 million in the third quarter of 2016, mainly from lower wages and salaries resulting from a decrease in employee compensation from ongoing operational efficiency and effectiveness initiatives, a lower defined benefit pension plan expense and lower share-based compensation. These decreases were partly offset by an increase in wages and salaries from growth in the number of TELUS International employees to support increased business process outsourcing revenue and inflationary compensation increases.

For the nine-month period, employee benefits expense increased by \$26 million, primarily due to higher wages and salaries, resulting from an increase in employee compensation to support increased business process outsourcing revenue, and higher labour-related restructuring costs from ongoing operational efficiency and effectiveness initiatives. These increases were partially offset by lower wages and salaries resulting from the decrease in the number of domestic FTE employees, as noted above, and lower defined benefit pension plan and share-based compensation expenses.

- **Depreciation** increased by \$27 million in the third quarter of 2016 and \$89 million in the first nine months of 2016, due to the impact of our continuing program of asset life studies and increased expenditures associated with capital assets (such as the broadband network and the wireless LTE network), partly offset by asset retirements of \$9 million in 2015 relating to the closure of Black’s Photography retail stores.
- **Amortization of intangible assets** increased by \$17 million in the third quarter of 2016 and \$34 million in the first nine months of 2016, reflecting increased expenditures associated with the intangible asset base, partially offset by software asset life adjustments arising from our continuing program of asset life studies.

Operating income

(\$ millions)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Wireless EBITDA (See Section 5.4)	759	715	6.2 %	2,308	2,178	6.0 %
Wireline EBITDA (See Section 5.5)	372	353	5.1 %	1,152	1,106	4.1 %
Depreciation and amortization (discussed above)	(515)	(471)	(9.3)%	(1,514)	(1,391)	(8.8)%
	616	597	3.1 %	1,946	1,893	2.8 %

Operating income increased by \$19 million in the third quarter of 2016 and \$53 million in the first nine months of 2016, as growth in EBITDA was partly offset by increased Depreciation and amortization expenses.

Financing costs

(\$ millions)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Gross interest expenses	137	133	3.0 %	412	382	7.9 %
Capitalized long-term debt interest	(12)	(18)	33.3 %	(40)	(27)	(48.1)%
Employee defined benefit plans net interest	1	7	(85.7)%	3	20	(85.0)%
Interest (income)	—	—	—%	(1)	(21)	95.2 %
Foreign exchange losses (gains)	3	(16)	n/m	12	(21)	n/m
	129	106	21.7 %	386	333	15.9 %

- **Gross interest expenses**, prior to capitalization of long-term debt interest, increased by \$4 million in the third quarter of 2016 and \$30 million in the first nine months of 2016, primarily due to the increase in average long-term debt balances outstanding, which arose mainly from the purchase of spectrum licences, partly offset by a reduction in the effective interest rate. Our weighted average interest rate on long-term debt (excluding commercial paper and the revolving component of the TELUS International (Cda.) Inc. credit facility) was 4.23% at September 30, 2016, as compared to 4.42% one year earlier. (See *Long-term debt issues and repayments* in Section 7.4.)
- **Capitalized long-term debt interest** is in respect of debt incurred for the purchase of spectrum licences during spectrum auctions held by Innovation, Science and Economic Development Canada (ISED), which we expect to deploy in our existing network in future periods. Capitalization of long-term debt interest will continue until substantially all of the activities necessary to prepare the spectrum for its intended use are complete; effectively when cell sites that can utilize the spectrum are ready to be put into service.
- **Employee defined benefit plans net interest** decreased by \$6 million in the third quarter of 2016 and \$17 million in the first nine months of 2016, mainly from the decrease in the defined benefit plan deficit at December 31, 2015, to \$53 million from \$598 million one year earlier, partly offset by a higher discount rate.
- **Interest income** in the first nine months of 2015 was derived primarily from \$20 million interest income related to the settlement of prior years’ income-tax related matters.
- **Foreign exchange losses (gains)** fluctuate from period to period as a result of increased application of hedge accounting.

Income taxes

(\$ millions, except tax rates)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Income tax computed at applicable statutory rates	129	130	(0.8)%	414	412	0.5 %
Revaluation of deferred income tax liability to reflect future statutory income tax rates	—	—	— %	1	48	(97.9)%
Adjustments recognized in the current period for income taxes of prior periods	(3)	(4)	25.0 %	(3)	(23)	87.0 %
Other	6	—	n/m	(1)	2	n/m
Income taxes	132	126	4.8 %	411	439	(6.4)%
Income taxes computed at applicable statutory rates (%)	26.6	26.5	0.1 pts.	26.5	26.4	0.1 pts.
Effective tax rate (%)	27.1	25.7	1.4 pts.	26.3	28.1	(1.8) pts.

Total income tax expense increased by \$6 million in the third quarter of 2016 and decreased by \$28 million in the first nine months of 2016. The increase for the quarter was primarily due to an increase in non-deductible expenses in 2016, as well as adjustments recognized in 2015 from the settlements of prior years’ income tax-related matters. The decrease for the nine-month period was primarily due to a \$48 million non-cash adjustment in the second quarter of 2015 to revalue deferred income tax liabilities arising from an increase in the Alberta provincial corporate tax rate, and a \$23 million recovery recorded in 2015 related to the settlement of prior years’ income tax-related matters (excluding related interest income).

Comprehensive income

(\$ millions)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Net income	355	365	(2.7)%	1,149	1,121	2.5 %
Other comprehensive income (loss) (net of income taxes):						
Items that may be subsequently reclassified to income	—	14	(100.0)%	(10)	14	n/m
Item never subsequently reclassified to income						
– Employee defined benefit plans re-measurements	150	(156)	n/m	167	(41)	n/m
Comprehensive income	505	223	126.5 %	1,306	1,094	19.4 %

Comprehensive income increased by \$282 million in the third quarter of 2016 and \$212 million in the first nine months of 2016, primarily due to increases in employee defined benefit plan re-measurement amounts due to returns on pension plan assets. Items that may be subsequently reclassified to income are composed of changes in the unrealized fair value of derivatives designated as cash flow hedges, foreign currency translation adjustments arising from translating financial statements of foreign operations, and changes in the unrealized fair value of available-for-sale investments.

5.4 Wireless segment
Wireless operating indicators

As at September 30	2016	2015	Change			
Subscribers (000s):						
Postpaid ¹	7,463	7,290	2.4 %			
Prepaid	1,044	1,131	(7.7)%			
Total	8,507	8,421	1.0 %			
Postpaid proportion of subscriber base (%)	87.7	86.6	1.1 pts.			
HSPA+ population coverage ² (millions)	35.7	35.7	— %			
LTE population coverage ² (millions)	35.1	34.3	2.3 %			
	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Subscriber gross additions (000s):						
Postpaid	283	269	5.2 %	742	741	0.1 %
Prepaid	96	121	(20.7)%	259	331	(21.8)%
Total	379	390	(2.8)%	1,001	1,072	(6.6)%
Subscriber net additions (losses) (000s):						
Postpaid	87	69	26.1 %	156	182	(14.3)%
Prepaid	(7)	—	n/m	(61)	(42)	(45.2)%
Total	80	69	15.9 %	95	140	(32.1)%
Blended ARPU, per month ³ (\$)	66.67	64.22	3.8 %	64.72	63.35	2.2 %
Churn, per month³ (%)						
Blended	1.18	1.28	(0.10) pts.	1.20	1.24	(0.04) pts.
Postpaid	0.94	0.97	(0.03) pts.	0.93	0.91	0.02 pts.
Cost of acquisition (COA) per gross subscriber addition ³ (\$)	435	400	8.8 %	437	399	9.5 %
Retention spend to network revenue ³ (%)	14.6	14.3	0.3 pts.	13.7	12.8	0.9 pts.

1. Subsequent to a review of our subscriber base during the first quarter of 2016, our 2016 opening postpaid subscriber base was reduced by 45,000.
2. Including network access agreements with other Canadian carriers.
3. These are industry measures useful in assessing operating performance of a wireless company, but are not measures defined under IFRS. (See Section 11.2 Operating indicators.)

Operating revenues – Wireless segment

(\$ millions, except ratios)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Network revenues	1,679	1,600	4.9 %	4,860	4,703	3.3 %
Equipment and other services	135	165	(18.2)%	382	456	(16.2)%
Revenues arising from contracts with customers	1,814	1,765	2.8 %	5,242	5,159	1.6 %
Other operating income	4	2	100.0 %	32	2	n/m
External operating revenues	1,818	1,767	2.9 %	5,274	5,161	2.2 %
Intersegment network revenue	15	16	(6.3)%	43	44	(2.3)%
Total operating revenues	1,833	1,783	2.8 %	5,317	5,205	2.2 %

Total wireless operating revenues increased by \$50 million in the third quarter of 2016 and \$112 million in the first nine months of 2016.

Network revenues from external customers increased by \$79 million in the third quarter of 2016 and \$157 million in the first nine months of 2016. Data network revenue increased by 10.6% in the third quarter of 2016 and 8.8% in the first nine months of 2016, reflecting: (i) a larger proportion of higher-rate two-year plans in the revenue mix; (ii) increased adoption of larger data buckets; (iii) growth in the subscriber base; (iv) a higher postpaid subscriber mix; and (v) increasing data usage from data-intensive devices. Voice network revenue decreased by 2.4% in the third quarter of 2016 and 3.3% in the first nine months of 2016 due to the increased adoption of unlimited nationwide voice plans and continued but moderating substitution to data services, partly offset by growth in the subscriber base.

- **Monthly blended ARPU** was \$66.67 in the third quarter and \$64.72 in the first nine months of 2016, reflecting increases of \$2.45 or 3.8% for the quarter and \$1.37 or 2.2% for the nine-month period. The increases were primarily driven by effects of higher data network revenue (as described above), partly offset by continued declines in voice revenue.
- **Gross subscriber additions** decreased by 11,000 in the third quarter of 2016 and 71,000 for the nine-month period of 2016. Postpaid gross additions increased by 14,000 in the third quarter of 2016 and 1,000 for the first nine months of 2016. The increases in postpaid gross additions were due to the success of targeted promotions and our focused marketing efforts on higher-value postpaid loading, partly offset by competitive intensity and the effects of the economic slowdown, particularly in Alberta. Prepaid gross additions decreased by 25,000 in the third quarter of 2016 and 72,000 in the first nine months of 2016, mainly from competitive intensity and our focused marketing efforts on higher-value postpaid loading.
- Our **average monthly postpaid subscriber churn rate** was 0.94% in the third quarter of 2016 and 0.93% in the first nine months of 2016, as compared to 0.97% and 0.91%, respectively, in the same periods in 2015. The continuing low postpaid subscriber churn rates during the third quarter and nine-month period of 2016 reflect our focus on executing on customers first initiatives, and retention programs, partly offset by competitive intensity and the effects of the economic slowdown, particularly in Alberta, and for the nine-month period, the simultaneous expiration of two-year and three-year customer contracts starting in June 2015. Our blended monthly subscriber churn rate was 1.18% in the third quarter of 2016 and 1.20% in the first nine months of 2016, as compared to 1.28% and 1.24%, respectively, in the same periods in 2015. The improvement in our blended subscriber churn rate during the third quarter and nine-month period of 2016 reflect the changes in the postpaid churn rate as described above, as well as improvements in the prepaid churn rate as well as increase in mix of postpaid subscribers.
- **Net subscriber additions** increased by 11,000 in the third quarter of 2016 due to an improvement in our blended monthly churn rate. In the first nine months of 2016, net subscriber additions declined 45,000 due to lower gross additions, partly offset by an improvement in blended monthly churn rate. Postpaid net additions increased by 18,000 in the third quarter of 2016 and decreased by 26,000 in the first nine months of 2016, due to the factors affecting gross subscriber additions and postpaid churn described above. Prepaid subscribers decreased by 7,000 in the third quarter of 2016 and 61,000 in the first nine months of 2016, as compared to no change and a decrease of 42,000, respectively, in the same periods in 2015. Prepaid losses reflect conversions to postpaid services (due to our marketing efforts focused on higher-value postpaid loading) and increased competition for prepaid services.

Equipment and other services decreased by \$30 million in the third quarter of 2016 and \$74 million in the first nine months of 2016, resulting from a combination of higher per-unit subsidies, lower retention volumes, competitive intensity and the discontinuance of Black’s Photography revenue from the closure of stores in August 2015, partly offset by increased postpaid gross additions in the quarter and higher-value smartphones in the sales mix.

Other operating income increased by \$2 million in the third quarter of 2016 and \$30 million in the first nine months of 2016, mainly due to net gains and equity income related to real estate joint venture developments, gains from the sale of property, plant and equipment, as well as the gain from the exchange of wireless spectrum licences in the second quarter of 2016.

Intersegment network revenue in the wireless segment represents network services provided to the wireline segment. Such revenues are eliminated upon consolidation along with the associated expenses in wireline.

Operating expenses – Wireless segment

(\$ millions)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Goods and services purchased:						
Equipment sales expenses	437	425	2.8 %	1,171	1,143	2.4 %
Network operating expenses	200	197	1.5 %	573	569	0.7 %
Marketing expenses	101	113	(10.6)%	289	307	(5.9)%
Other ¹	170	151	12.6 %	486	487	(0.2)%
Employee benefits expense ¹	166	182	(8.8)%	490	521	(6.0)%
Total operating expenses	1,074	1,068	0.6 %	3,009	3,027	(0.6)%

1 Includes restructuring and other costs. (See Section 11.1 Non-GAAP and other financial measures.)

Total wireless operating expenses increased by \$6 million in the third quarter of 2016 and decreased by \$18 million in the first nine months of 2016.

Equipment sales expenses increased by \$12 million in the third quarter of 2016 and \$28 million in the first nine months of 2016, reflecting an increase in higher-value smartphones in the sales mix and increasing handset costs (including the effect of higher supplier costs due to the decline in the Canadian dollar exchange rate vs. the U.S. dollar over the last two years) and increased postpaid gross additions in the quarter, partly offset by lower retention volumes, lower prepaid gross additions, and by lower cost of sales from the closure of Black’s Photography stores in August 2015.

- **Retention costs as a percentage of network revenue** were 14.6% in the third quarter of 2016 and 13.7% in the first nine months of 2016, compared to 14.3% and 12.8%, respectively, in the same periods in 2015. The increases were driven by higher per-unit subsidy costs reflecting the factors noted in Equipment sales expense above, partly offset by lower retention volumes.
- **COA per gross subscriber addition** was \$435 in the third quarter of 2016 and \$437 in the first nine months of 2016, reflecting increases of \$35 and \$38, respectively, in the same periods in 2015. These increases reflect the factors noted in Equipment sales expense above, partly offset by lower advertising and promotional costs.

Network operating expenses increased by \$3 million in the third quarter of 2016 and \$4 million in the first nine months of 2016, mainly from higher roaming costs from increased roaming volumes partly offset by lower maintenance costs.

Marketing expenses declined by \$12 million in the third quarter of 2016 and \$18 million in the first nine months of 2016, primarily due to lower advertising and promotions expenses, as well as lower commission expenses driven by lower gross additions and retention volumes.

Other goods and services purchased increased by \$19 million in the third quarter of 2016, primarily due to increases in external labour, higher non-labour restructuring and other costs, as well as higher bad debt provisions to support the growing subscriber base. Other goods and services purchased were relatively flat in the first nine months of 2016, as lower non-labour restructuring and other costs mainly from provisions for the closure of Black’s Photography retail stores during the third quarter of 2015 were offset by higher external labour and other administrative costs and an increase in bad debt provisions.

Employee benefits expense decreased by \$16 million in the third quarter of 2016 and \$31 million in the first nine months of 2016, reflecting lower salaries and wages driven by a reduction in FTEs from our ongoing operational efficiency and effectiveness initiatives, lower share-based compensation expenses, and lower labour-related restructuring costs, partly offset by inflationary compensation increases.

EBITDA – Wireless segment

(\$ millions, except margins)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
EBITDA	759	715	6.2 %	2,308	2,178	6.0 %
Add back restructuring and other costs	18	14	28.6 %	36	56	(35.7)%
EBITDA – excluding restructuring and other costs	777	729	6.6 %	2,344	2,234	4.9 %
Deduct gain on the exchange of wireless spectrum licences	—	—	n/m	(15)	—	n/m
Deduct net gains and equity income from real estate joint venture developments	(4)	—	n/m	(8)	—	n/m
Adjusted EBITDA	773	729	6.1 %	2,321	2,234	3.9 %
EBITDA margin (%)	41.4	40.1	1.3 pts.	43.4	41.8	1.6 pts.
Adjusted EBITDA margin ¹ (%)	42.3	40.9	1.4 pts.	43.8	42.9	0.9 pts.

1 The calculation of the adjusted EBITDA margin excludes the net gains and equity income from real estate joint venture developments, as well as the gain on the exchange of wireless spectrum licences from both EBITDA and Operating revenues, and excludes restructuring and other costs from EBITDA.

Wireless EBITDA increased by \$44 million in the third quarter of 2016 and \$130 million in the first nine months of 2016, including gains, as detailed in the table above. Wireless adjusted EBITDA increased by \$44 million in the third quarter of 2016 and \$87 million in the first nine months of 2016, reflecting network revenue growth driven by higher ARPU and a larger customer base, as well as ongoing operational efficiency and effectiveness initiatives, partly offset by higher acquisition and retention spending.

5.5 Wireline segment

Wireline operating indicators

At September 30 (000s)	2016		2015	Change		
Subscriber connections:						
High-speed Internet subscribers ¹	1,631		1,544	5.6 %		
TELUS TV subscribers	1,043		980	6.4 %		
Residential NALs	1,396		1,491	(6.4)%		
Total wireline subscriber connections¹	4,070		4,015	1.4 %		
	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Subscriber net additions (losses):						
High-speed Internet	14	24	(41.7)%	44	69	(36.2)%
TELUS TV	14	26	(46.2)%	38	64	(40.6)%
Residential NALs	(25)	(25)	— %	(71)	(65)	(9.2)%
Total wireline subscriber connections net additions (losses)	3	25	(88.0)%	11	68	(83.8)%

1 Effective December 31, 2015, business NALs have been removed from the reported subscriber base due to the measure’s diminishing relevance as a key performance indicator and, as such, our January 1, 2015 opening reported subscriber balance has been retrospectively adjusted to exclude 1,613,000 business NALs. In addition, subsequent to a review of our subscriber base during the first quarter of 2016, our 2016 opening high-speed Internet subscriber base was increased by 21,000.

Operating revenues – Wireline segment

(\$ millions)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Data service and equipment	1,025	950	7.9 %	3,008	2,781	8.2 %
Voice service	335	373	(10.2)%	1,023	1,138	(10.1)%
Other services and equipment	51	53	(3.8)%	164	166	(1.2)%
Revenues arising from contracts with customers	1,411	1,376	2.5 %	4,195	4,085	2.7 %
Other operating income	9	12	(25.0)%	25	39	(35.9)%
External operating revenues	1,420	1,388	2.3 %	4,220	4,124	2.3 %
Intersegment revenue	48	44	9.1 %	143	130	10.0 %
Total operating revenues	1,468	1,432	2.5 %	4,363	4,254	2.6 %

Total wireline operating revenues increased by \$36 million in the third quarter of 2016 and \$109 million in the first nine months of 2016.

- **Data service and equipment revenues** increased by \$75 million in the third quarter of 2016 and \$227 million in the first nine months of 2016, primarily due to: (i) growth in business process outsourcing revenues; (ii) increased Internet and enhanced data service revenues resulting from a 5.6% increase in our high-speed Internet subscribers over 12 months, higher revenue per customer from upgrades to faster Internet speeds and larger usage Internet rate plans, subscribers coming off of promotional offers, the phased-in introduction of usage-based billing in 2015 and certain rate increases; and (iii) increased TELUS TV revenues resulting from a 6.4% subscriber growth over 12 months and higher revenue per customer including certain rate increases, as well as promotional offers. This growth was partly offset by a decline in data equipment revenues in the business market related to the economic slowdown, particularly in Alberta.
- **Voice service revenues** decreased by \$38 million in the third quarter of 2016 and \$115 million in the first nine months of 2016. The decreases reflect the ongoing decline in legacy revenues from technological substitution, the economic slowdown, increased competition, greater use of inclusive long distance plans and lower long distance minutes of use including lower wholesale volumes, partially offset by certain rate increases. We experienced a 5.9% decline in residential NALs in the 12-month period ended September 30, 2016.
- **Wireline subscriber connections net additions** were 3,000 in the third quarter of 2016 and 11,000 in the first nine months of 2016, reflecting decreases of 22,000 and 57,000, respectively, over the same periods in 2015.

Net additions of high-speed Internet subscribers declined by 10,000 in the third quarter of 2016 and 25,000 in the first nine months of 2016. The decreases resulted from the effects of heightened competitive intensity and the impact of the economic slowdown, resulting in lower gross additions and increased churn, partly offset by the continued expansion of our high-speed broadband footprint, including fibre to the premises, as well as the pull-through impact from the continued adoption of Optik TV. Net additions of TELUS TV subscribers were down 12,000 in the third quarter of 2016 and 26,000 in the first nine months of 2016. The decreases reflected lower gross additions, a higher customer churn rate and a decline in satellite subscribers due to the effects of heightened competitive intensity including from OTT services, slower subscriber growth for paid TV services, the economic slowdown, and a high rate of market penetration for TV services. These were partly offset by the ongoing expansion of our addressable high-speed broadband footprint and increasing broadband speeds. Continued focus on expanding our addressable high-speed Internet and Optik TV footprint, connecting more homes and business directly to fibre, and bundling these services together, resulted in combined Internet and TV subscriber growth of 150,000 or 5.9% over the last 12 months.

Residential NAL losses were 25,000 in the third quarter of 2016 and 71,000 in the first nine months of 2016, as compared to NAL losses of 25,000 and 65,000, respectively, for the same periods in 2015. The residential NAL losses continue to reflect the economic slowdown, the ongoing trend of substitution to wireless and Internet-based services, and increased competition, partially mitigated by the success of our bundled service offerings and our customers first initiatives.

- **Other services and equipment** decreased by \$2 million in the third quarter and first nine months of 2016, mainly due to declines in voice equipment sales.

Other operating income decreased by \$3 million in the third quarter of 2016 and \$14 million in the first nine months of 2016, mainly due to a decrease in amounts recognized from the regulatory price cap deferral account for provisioning broadband Internet services to eligible rural and remote communities, as well as certain business acquisition-related provisions. Partly offsetting this decline was net gains and equity income on real estate joint venture developments.

Intersegment revenue represents services provided to the wireless segment. Such revenue is eliminated upon consolidation along with the associated expenses in wireless.

Operating expenses – Wireline segment

(\$ millions)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Goods and services purchased ¹	581	568	2.3 %	1,724	1,718	0.3 %
Employee benefits expense ¹	515	511	0.8 %	1,487	1,430	4.0 %
Total operating expenses	1,096	1,079	1.6 %	3,211	3,148	2.0 %

¹ Includes restructuring and other costs. (See Section 11.1 Non-GAAP and other financial measures.)

Total wireline operating expenses increased by \$17 million in the third quarter of 2016 and \$63 million in the first nine months of 2016.

- **Goods and services purchased** increased by \$13 million in the third quarter of 2016 and \$6 million in the first nine months of 2016, due to increased network operating and administrative costs to support our growing subscriber base, and higher advertising and promotional expenses related to bundled offerings and in response to heightened competitive intensity, as well as higher TELUS TV costs of sales, partly offset by lower transit and termination costs and lower equipment costs related to declining equipment revenue.
- **Employee benefits expense** increased slightly by \$4 million in the third quarter of 2016 and \$57 million in the first nine months of 2016, primarily due to increases in wages and salaries, mainly due to growth in the number of TELUS International employees to support increased business process outsourcing revenue growth, as well as inflationary compensation increases and higher labour restructuring costs from ongoing operational efficiency and effectiveness initiatives. These were partly offset by lower defined benefit pension plan and share-based compensation expenses, and lower compensation and benefits costs resulting from a decrease in the number of domestic FTE employees.

EBITDA – Wireline segment

(\$ millions, except margins)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
EBITDA	372	353	5.1 %	1,152	1,106	4.1 %
Add back restructuring and other costs	42	37	13.5 %	95	71	33.8 %
EBITDA – excluding restructuring and other costs	414	390	6.2 %	1,247	1,177	5.9 %
Deduct net gains and equity income from real estate joint venture developments	(6)	—	n/m	(11)	—	n/m
Adjusted EBITDA	408	390	4.2 %	1,236	1,177	5.0 %
EBITDA margin (%)	25.3	24.7	0.6 pts.	26.4	26.0	0.4 pts.
Adjusted EBITDA margin ¹ (%)	27.8	27.3	0.5 pts.	28.3	27.7	0.6 pts.

1 The calculation of the Adjusted EBITDA margin excludes the net gains and equity income on real estate joint venture developments from both EBITDA and Operating revenues, and excludes restructuring and other costs from EBITDA.

Wireline EBITDA increased by \$19 million in the third quarter of 2016, primarily from growth in the data service margin, as well as net revenue impacts from the real estate joint venture developments, partly offset by continued declines in legacy voice services, higher restructuring and other costs, and the impact of the economic slowdown on the business market, particularly in Alberta. In the first nine months of 2016, wireline EBITDA increased by \$46 million due to similar factors as noted for the third quarter, and was negatively impacted by year-to-date costs and revenue impacts of \$3 million related to the wildfires in northern Alberta. Wireline adjusted EBITDA increased by 4.2% and 5.0%, respectively, in the third quarter and nine-month period, as compared to operating revenue increases of 2.1% and 2.3%, respectively, excluding the net revenue impacts from the real estate joint venture developments. This reflects our execution on cost efficiency programs, as well as improving margins in data services, including Internet, business process outsourcing services, TELUS TV and TELUS Health services.

6. Changes in financial position

Financial position at: (\$ millions)	Sept. 30 2016	Dec. 31 2015	Change		Change includes:
Current assets					
Cash and temporary investments, net	410	223	187	84 %	See <i>Section 7 Liquidity and capital resources</i>
Accounts receivable	1,422	1,428	(6)	— %	n/m
Income and other taxes receivable	85	1	84	n/m	An increase due to the timing of tax instalments in excess of current income tax expense
Inventories	262	360	(98)	(27)%	A decrease in wireless handset inventory due to a lower volume of handsets on hand at the end of the third quarter
Prepaid expenses	307	213	94	44 %	Prepaid expenses increased due to the annual prepayment of statutory employee benefits, maintenance contracts, property taxes and annual wireless spectrum licence fees, net of amortization
Real estate joint venture advances	—	66	(66)	(100)%	Repayment of construction credit facility concurrent with commencement of closing of residential condominium unit sales
Current derivative assets	11	40	(29)	(73)%	A decrease in U.S. currency hedging items.
Current liabilities					
Short-term borrowings	100	100	—	— %	See <i>Section 7.7 Sale of trade receivables</i>
Accounts payable and accrued liabilities	2,181	1,990	191	10 %	An increase in payables associated with higher capital expenditures, partly offset by lower payroll and employee-related liabilities
Income and other taxes payable	37	108	(71)	(66)%	Decreased primarily due to the final tax payment for the 2015 taxation year made in the first quarter of 2016
Dividends payable	272	263	9	3 %	n/m
Advance billings and customer deposits	747	760	(13)	(2)%	A decrease in advance billings arising from a lower number of wireless handsets shipped to external distribution channels, as well as a decrease in the regulatory price cap deferral account resulting from recognition of amounts for provisioning broadband Internet services to eligible rural and remote communities
Provisions	170	197	(27)	(14)%	Amounts paid out under restructuring initiatives exceeded new restructuring provisions
Current maturities of long-term debt	850	856	(6)	(1)%	A decrease of \$119 million in outstanding commercial paper, as well as amounts reclassified from long-term debt relating to upcoming maturity of \$700 million of our 4.95% Notes, Series CD in March 2017, offset by the maturation of \$600 million of our 3.65% Notes, Series CI in May 2016
Current derivative liabilities	12	2	10	n/m	An increase in U.S. currency hedging items.
Working capital (Current assets subtracting Current liabilities)	(1,872)	(1,945)	73	4 %	Current assets increased by \$166 million, while Current liabilities increased by \$93 million. TELUS historically has had a negative working capital position. See <i>Capital structure management policies</i> in <i>Section 4.3</i> of this MD&A and the <i>Liquidity risk</i> discussion in <i>Section 7.9</i> of our 2015 annual MD&A.

Financial position at: (\$ millions)	Sept. 30 2016	Dec. 31 2015	Change		Change includes:
Non-current assets					
Property, plant and equipment, net	10,297	9,736	561	6 %	See <i>Capital expenditures</i> in <i>Section 7.3 Cash used by investing activities</i> and <i>Depreciation</i> in <i>Section 5.3</i>
Intangible assets, net	10,292	9,985	307	3 %	See <i>Capital expenditures</i> in <i>Section 7.3 Cash used by investing activities</i> and <i>Amortization of intangible assets</i> in <i>Section 5.3</i>
Goodwill, net	3,776	3,761	15	— %	An increase from minor acquisitions.
Other long-term assets	830	593	237	40 %	Pension and post-retirement assets increased due to positive returns earned on plan assets.
Non-current liabilities					
Provisions	432	433	(1)	— %	n/m
Long-term debt	11,604	11,182	422	4 %	See <i>Section 7.4 Cash provided (used) by financing activities</i>
Other long-term liabilities	731	688	43	6 %	Primarily an increase in the accrual for share-based compensation.
Deferred income taxes	2,263	2,155	108	5 %	Primarily relates to returns on pension plan assets, as well as deferred income tax expense.
Owners' equity					
Common equity	8,281	7,672	609	8 %	Includes Net income of \$1,142 million, Other comprehensive income of \$156 million, impact on contributed surplus arising from subsidiary issuance of shares to non-controlling interest of \$236 million, net of dividend declarations of \$807 million, and share purchase activity under our normal course issuer bid program of \$118 million (see <i>Section 7.4 Cash provided (used) by financing activities</i>)
Non-controlling interest	12	—	12	n/m	Impact arising from the 35% non-controlling interest in TELUS International (Cda) Inc.

7. Liquidity and capital resources

Our discussion in this section is qualified in its entirety by the *Caution regarding forward-looking statements* at the beginning of this MD&A.

7.1 Overview

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

Cash flows

(\$ millions)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Cash provided by operating activities	1,032	1,025	0.7 %	2,487	2,686	(7.4)%
Cash used by investing activities	(680)	(549)	(23.9)%	(2,075)	(3,852)	46.1 %
Cash provided (used) by financing activities	(370)	(412)	10.2 %	(225)	1,247	n/m
Increase (decrease) in Cash and temporary investments, net	(18)	64	n/m	187	81	130.9 %
Cash and temporary investments, net, beginning of period	428	77	n/m	223	60	n/m
Cash and temporary investments, net, end of period	410	141	n/m	410	141	n/m

7.2 Cash provided by operating activities

Cash provided by operating activities increased by \$7 million in the third quarter of 2016 and decreased by \$199 million in the first nine months of 2016.

Analysis of changes in cash provided by operating activities

(\$ millions)	Third quarter	Nine-month period
Cash provided by operating activities, three-month and nine-month periods ended September 30, 2015	1,025	2,686
Changes:		
Higher EBITDA (See <i>Section 5.4 Wireless segment</i> and <i>Section 5.5 Wireline segment</i>)	63	176
(Higher) lower share-based compensation cash outflows, net of expense	(11)	25
Lower employer contributions to defined benefits plans, net of expense	2	1
Lower (higher) restructuring disbursements, net of restructuring expenses	6	(68)
Higher interest paid, net of interest received	(17)	(60)
Higher income taxes paid, net of recoveries received	(77)	(322)
Other operating working capital changes	41	49
Cash provided by operating activities, three-month and nine-month periods ended September 30, 2016	1,032	2,487

- Restructuring disbursements, net of expenses, for the first nine months of 2016 increased as a result of various operational efficiency and effectiveness initiatives in 2015 and 2016, including the reduction of full-time equivalent (FTE) positions announced in November 2015.
- Income taxes paid, net of refunds received, increased in the third quarter and the first nine months of 2016. The increase in the quarter reflects higher required instalment payments, as well as higher refunds received in the comparative period in 2015. The increase for the nine-month period also includes a larger final income tax payment in the first quarter of 2016 in respect of the 2015 income tax year than was required in the first quarter of 2015 in respect of the 2014 income tax year, mainly due to the use of Public Mobile losses in 2014.

7.3 Cash used by investing activities

Cash used by investing activities increased by \$131 million in the third quarter of 2016 and decreased by nearly \$1.8 billion in the first nine months of 2016. The changes included the following:

- An increase of \$95 million in Cash payments for capital assets (excluding spectrum licences) in the third quarter of 2016 and \$68 million in the first nine months of 2016. These increases were composed of:
 - An increase of \$164 million in capital expenditures in the third quarter of 2016 and \$252 million in the first nine months of 2016 (see *Capital expenditure measures* table and discussion below)

- Lower capital expenditure payments with respect to payment timing differences, as associated Accounts payable and accrued liabilities increased by \$69 million in the third quarter of 2016 and \$184 million in the first nine months of 2016.
- Cash payments for spectrum licences were \$NIL in the third quarter of 2016 and \$145 million in the first nine months of 2016. Comparatively, we paid \$12 million in the third quarter of 2015 and \$2 billion in the first nine months of 2015 for the AWS-3 and 2500 MHz spectrum licences acquired in Innovation, Science and Economic Development Canada’s (ISED) wireless spectrum auctions.
- Cash payments for acquisitions complementary to our existing lines of business were \$14 million in the third quarter and \$16 million in the first nine months of 2016.
- Receipts from real estate joint ventures, net of advances and contributions, were in the amount of \$45 million in the third quarter of 2016 and \$63 million in the first nine months of 2016, mainly from repayment of construction financing from the TELUS Garden real estate joint venture. For the comparable periods in 2015, receipts from the real estate joint ventures, net of advances and contributions, were \$81 million and \$59 million, respectively, resulting mainly from a \$95 million repayment of construction financing from the TELUS Garden real estate joint venture pursuant to its bond issuance for the office tower in July 2015.

Capital expenditure measures

(\$ millions, except capital intensity)	Third quarters ended September 30			Nine-month periods ended Sept. 30		
	2016	2015	Change	2016	2015	Change
Capital expenditures excluding spectrum licences¹						
Wireless segment	295	209	41.1 %	733	684	7.2 %
Wireline segment	492	414	18.8 %	1,441	1,238	16.4 %
Consolidated	787	623	26.3 %	2,174	1,922	13.1 %
Wireless segment capital intensity (%)	16	12	4 pts.	14	13	1 pt.
Wireline segment capital intensity (%)	34	29	5 pts.	33	29	4 pts.
Consolidated capital intensity ² (%)	24	20	4 pts.	23	21	2 pts.

1 Capital expenditures include assets purchased, but not yet paid for, and therefore differ from Cash payments for capital assets, as presented on the interim consolidated statements of cash flows.

2 See Section 11.1 Non-GAAP and other financial measures.

Wireless segment capital expenditures increased in 2016 by \$86 million in the third quarter and \$49 million year to date. The increases were primarily due to continued investments in our fibre-optic network to support our small-cell technology strategy to improve coverage and prepare for a more efficient and timely evolution to 5G, as well as increased spending on the deployment of 700 MHz and 2500 MHz spectrum licences. We also continued to invest in system and network resiliency and reliability in support of our ongoing customers first initiatives and to ready the network and systems for future retirement of legacy assets.

Wireline segment capital expenditures increased in 2016 by \$78 million in the third quarter and \$203 million year to date. The increases were primarily due to continuing investments in our broadband infrastructure, including connecting more homes and businesses directly to our fibre-optic network. This investment supports our high-speed Internet and Optik TV subscriber growth, as well as our customers’ demand for faster Internet speeds, and extends the reach and functionality of our business and healthcare solutions. We also continued to make investments in system and network resiliency and reliability.

7.4 Cash provided (used) by financing activities

Net cash used by financing activities was \$370 million in the third quarter of 2016, as compared to \$412 million net cash used by financing activities in the third quarter of 2015. Net cash used by financing activities was \$225 million in the first nine months of 2016, as compared to net cash provided by financing activities of \$1.25 billion in the first nine months of 2015. Financing activities included the following:

Dividends paid to the holders of Common Shares

Dividends paid to the holders of Common Shares totalled \$274 million in the third quarter of 2016, an increase of \$21 million from the third quarter of 2015. Dividends paid for the first nine months of 2016 were \$798 million, an increase of \$58 million from the first nine months of 2015. The increases reflect higher dividend rates under our dividend growth program (see Section 4.3), partially offset by lower outstanding shares resulting from shares purchased and cancelled under our normal course issuer bid (NCIB) program. Subsequent to September 30, 2016, we paid dividends of \$272 million to the holders of Common Shares in October 2016. Dividends paid to our shareholders in 2016 totalled \$1,070 million.

Purchase of Common Shares for cancellation

Under our 2016 NCIB, we purchased 441,700 shares for \$19 million in the third quarter of 2016 and purchased approximately 3 million shares for \$130 million in the first nine months of 2016. Our 2016 NCIB concluded on September 14, 2016. Our 2017 NCIB commenced September 30, 2016. See *Section 4.3* for details of our planned multi-year share purchase program.

Normal course issuer bid purchases in 2016

Period	Common Shares purchased and cancelled (millions)	Average purchase price per share (\$)	Purchase costs (\$ millions)	Increase (decrease) in Accounts payable (\$ millions)	Cash outflow (\$ millions)
First quarter	1	37.77	50	(10)	60
Second quarter	2	38.43	61	—	61
Third quarter	—	42.92	19	—	19
Total	3	38.76	130	(10)	140

Short-term borrowings

Short-term borrowings are composed primarily of amounts advanced to us from an arm's-length securitization trust pursuant to the transfer of receivables securitization transactions (see *Section 7.7 Sale of trade receivables*). Such proceeds were \$100 million at September 30, 2016, unchanged since September 30, 2015. In the comparative periods, such proceeds had increased from \$100 million at March 31, 2015, to \$500 million at June 30, 2015, and subsequently decreased to \$100 million at September 30, 2015.

Long-term debt issues and repayments

For the third quarter of 2016, long-term debt repayments, net of issues, were \$67 million, primarily composed of:

- A reduction in commercial paper to a balance of \$137 million (U.S.\$104 million) at September 30, 2016, from \$975 million (U.S.\$755 million) at June 30, 2016.
- The September 2016 public issue of U.S.\$600 million of senior unsecured notes at 2.80%, due February 16, 2027. As of the date of this MD&A, the proceeds were used to repay U.S.\$453 million of commercial paper, with the balance to be used for general corporate purposes. We have entered into a foreign exchange derivative (a cross currency interest rate exchange agreement) which effectively converted the principal payments and interest obligations to Canadian dollar obligations with an effective fixed interest rate of 2.95% and an effective issued and outstanding amount of \$792 million (reflecting a fixed exchange rate of \$1.3205). For additional information on these notes, please refer to *Note 21(b)* of the interim consolidated financial statements.

For the first nine months of 2016, long-term debt issues net of repayments were \$437 million, resulting primarily from the September debt issue, a \$119 million (U.S.\$81 million) net decrease in commercial paper from \$256 million (U.S.\$185 million) at December 31, 2015, and \$361 million, net, drawn on the TELUS International (Cda) Inc. (TI) credit facility as at September 30, 2016, net of the \$600 million repayment of Series CI Notes in May 2016.

In comparison, long-term debt issues, net of repayments, were \$380 million in the third quarter of 2015 and \$2.4 billion in the first nine months of 2015, and were primarily composed of:

- A March 24, 2015, public issue of \$1.75 billion in senior unsecured notes in three series: a \$250 million offering at 1.50% due March 27, 2018, a \$1.0 billion offering at 2.35% due March 28, 2022, and a \$500 million offering at 4.40% due January 29, 2046. The net proceeds were used to fund a portion of the \$1.5 billion purchase price of the AWS-3 wireless spectrum licences and the remainder was used for general corporate purposes.
- An increase in commercial paper during the third quarter of 2015 from \$NIL at June 30, 2015, to \$787 million at September 30, 2015, all of which was denominated in U.S. dollars (U.S.\$589 million). For the first nine months of 2015, commercial paper increased by a net \$657 million.
- A decrease in amounts drawn on our five-year revolving credit facility during the third quarter of 2015 from \$400 million at June 30, 2015, to \$NIL at September 30, 2015 (\$NIL at December 31, 2014).

Our average term to maturity of long-term debt (excluding commercial paper and the revolving component of the TI credit facility) has increased to approximately 10.7 years at September 30, 2016, compared to approximately 10.6 years at September 30, 2015. Additionally, our weighted average cost of long-term debt (excluding commercial paper and the revolving component of the TI credit facility) was 4.23% at September 30, 2016, as compared to 4.32% at June 30, 2016 and 4.42% at September 30, 2015.

Issue of shares by subsidiary to non-controlling interest

In June 2016, a subsidiary issued shares to Baring Private Equity Asia for it to acquire a 35% non-controlling interest in TI. Cash proceeds net of issue costs currently paid were \$291 million as at September 30, 2016.

7.5 Liquidity and capital resource measures

Net debt was \$12.2 billion at September 30, 2016, an increase of \$0.5 billion from one year earlier, resulting mainly from the U.S.\$600 million Note issue in September 2016.

Fixed-rate debt as a proportion of total indebtedness was 95% at September 30, 2016, up from 92% one year earlier, mainly due to the U.S. dollar Note issue and a decrease in commercial paper, which emulates floating-rate debt, partially offset by the amounts drawn on the TI credit facility.

Net debt to EBITDA – excluding restructuring and other costs ratio was 2.62 times, as measured at September 30, 2016, down slightly from one year earlier. Our long-term objective for this measure is within a range of 2.00 to 2.50 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 September 30, 2016, this ratio remains outside of the long-term objective range due to prior issuance of incremental debt primarily for the acquisition in 2014 and 2015 of spectrum licences for approximately \$3.6 billion, which were auctioned in unprecedented amounts and in atypical concentrations during those years, offset by growth in EBITDA – excluding restructuring and other costs. These acquired licences have more than doubled 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 wireless customer base. We will endeavour to return this ratio to within the objective range in the medium term, as we believe that this range is supportive of 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 net debt to operating cash flow ratio to exceed 4.00:1.00 (see *Section 7.6 Credit facilities*).

Liquidity and capital resource measures

As at, or 12-month periods ended, September 30	2016	2015	Change
Components of debt and coverage ratios¹ (\$ millions)			
Net debt	12,217	11,713	504
EBITDA – excluding restructuring and other costs	4,668	4,438	230
Net interest cost	548	454	94
Debt ratios			
Fixed-rate debt as a proportion of total indebtedness (%)	95	92	3 pts.
Average term to maturity of long-term debt (excluding commercial paper) (years)	10.7	10.6	0.1
Net debt to EBITDA – excluding restructuring and other costs ¹ (times)	2.62	2.64	(0.02)
Coverage ratios¹ (times)			
Earnings coverage	4.6	5.1	(0.5)
EBITDA – excluding restructuring and other costs interest coverage	8.5	9.8	(1.3)
Other measures¹ (%)			
Dividend payout ratio of adjusted net earnings	77	69	8 pts.
Dividend payout ratio	76	69	7 pts.

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

Earnings coverage ratio measured for the 12-month period ended September 30, 2016, was 4.6 times, down from 5.1 times one year earlier. Higher borrowing costs reduced the ratio by 0.4, while lower income before borrowing costs and income taxes reduced the ratio by 0.1.

EBITDA – excluding restructuring and other costs interest coverage ratio measured for the 12-month period ended September 30, 2016, was 8.5 times, down from 9.8 times one year earlier as a result of the increase in net interest costs, partially offset by growth in EBITDA – excluding restructuring and other costs.

Dividend payout ratios: Actual dividend payout decisions will continue to be subject to our Board’s assessment and the determination of our financial position and outlook, as well as our long-term dividend payout ratio guideline of 65 to 75% of prospective net earnings per share. The disclosed basic and adjusted dividend payout ratios are historical measures utilizing the last four quarters of dividends declared and earnings per share. We estimate that we are within our target guideline on a prospective dividend payout ratio basis. These historical measures for the 12-month period ended September 30, 2016 are presented for illustrative purposes in evaluating our target guideline and both exceeded the objective range.

7.6 Credit facilities

At September 30, 2016, we had available liquidity of more than \$2.1 billion from unutilized credit facilities, including approximately \$72 million available liquidity from the TI credit facility, and \$133 million available from uncommitted letters of credit facilities, as well as \$400 million available under our trade receivables securitization program (see *Section 7.7 Sale of trade receivables*). This adheres to our objective of generally maintaining at least \$1.0 billion of available liquidity.

TELUS revolving credit facility

We have a \$2.25 billion (or U.S. dollar equivalent) revolving credit facility with a syndicate of 15 financial institutions that was renewed in the second quarter of 2016 and expires on May 31, 2021. The revolving credit facility is used for general corporate purposes, including the backstop of commercial paper, as required.

TELUS revolving credit facility at September 30, 2016

(\$ millions)	Expiry	Size	Drawn	Outstanding undrawn letters of credit	Backstop for commercial paper program	Available liquidity
Five-year revolving facility ¹	May 31, 2021	2,250	—	—	137	2,113
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 4.00 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. Our consolidated leverage ratio was approximately 2.62 to 1.00 as at September 30, 2016, and our consolidated coverage ratio was approximately 8.52 to 1.00 as at September 30, 2016. These ratios are expected to remain well above 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 of \$1.4 billion at September 30, 2016, including a U.S. dollar denominated commercial paper program for up to U.S.\$1.0 billion within this maximum aggregate amount. 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 Canada and the U.S. is dependent on our credit ratings (see *Section 7.8 Credit ratings*).

TELUS International (Cda) Inc. credit facilities

As at September 30, 2016, TI had a U.S.\$330 million bank credit facility, secured by its assets, expiring on May 31, 2021, with a syndicate of financial institutions. The credit facility comprises a revolving U.S.\$115 million component and a U.S.\$215 million term loan component. The credit facility is non-recourse to TELUS Corporation. As at September 30, 2016, \$361 million (\$352 million net of unamortized issue costs) was outstanding, all of which was denominated in U.S. dollars (U.S.\$275 million), with a weighted average interest rate of 2.66%.

Other letter of credit facilities

At September 30, 2016, we had \$208 million of letters of credit outstanding (December 31, 2015 - \$202 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. Available liquidity under various uncommitted letters of credit facilities was \$133 million at September 30, 2016.

7.7 Sale of trade receivables

TELUS Communications Inc., 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 able to sell an interest in certain trade receivables for an amount up to a maximum of \$500 million. The agreement is in effect until December 31, 2018, and available liquidity was \$400 million as at September 30, 2016. (See *Note 19* of the interim 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.

TELUS Communications Inc. is required to maintain at least a BB credit rating by DBRS Ltd. or the securitization trust may require the sale program to be wound down prior to the end of the term. The necessary credit rating was exceeded as of November 4, 2016.

7.8 Credit ratings

There were no changes to our investment grade credit ratings as of November 4, 2016.

7.9 Financial instruments, commitments and contingent liabilities

Financial instruments

Our financial instruments and the nature of certain risks that they may be subject to were described in *Section 7.9* of our 2015 MD&A.

Liquidity risk

As a component of our capital structure financial policies, discussed in *Section 4.3 Liquidity and capital resources*, we manage liquidity risk and, therefore, our ability to meet current and future working capital requirements 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 bilateral bank facilities and a syndicated credit facility; maintaining an agreement to sell trade receivables to an arm’s-length securitization trust; 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 of the date of this MD&A, we can offer up to \$2.2 billion of long-term debt or equity securities pursuant to a shelf prospectus that is effective until April 2018.

At September 30, 2016, we had available liquidity of more than \$1.2 billion from unutilized credit facilities and \$133 million from uncommitted letters of credit facilities (see *Section 7.6 Credit facilities*), as well as \$400 million available under our trade receivables securitization program (see *Section 7.7 Sale of trade receivables*). We also had \$410 million in cash and temporary investments at September 30, 2016. 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.

Currency risk

Our foreign exchange risk management includes the use of foreign currency forward contracts and currency options to fix the exchange rates on short-term U.S. dollar denominated transactions, commitments and commercial paper. We are also exposed to currency risks in that the fair value or future cash flows of our U.S. dollar notes could fluctuate because of changes in foreign exchange rates. A currency hedging relationship has been established for the related semi-annual interest payments and principal payment at maturity.

Commitments and contingent liabilities

Purchase obligations

As at September 30, 2016, our contractual commitments related to the acquisition of property, plant and equipment were \$507 million through to December 31, 2018, as compared to \$326 million over a period ending December 31, 2017, reported in our 2015 annual report, primarily driven by the increase in commitments related to broadband expansion.

Indemnification obligations

At September 30, 2016, we had no liability recorded in respect of indemnification obligations.

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, numerous other wireless 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.

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, 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, when it is determined in respect of a particular claim that payments to claimants are probable, we accrue an estimate of the liability.

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 23(a)* of the interim consolidated financial statements.

7.10 Outstanding share information

Outstanding shares (millions)	September 30, 2016	October 31, 2016
Common Shares	591	591
Common Share options – all exercisable	2	1

7.11 Transactions between related parties

Investments in significant controlled entities

As at September 30, 2016, TELUS Corporation controlled 100% of the equity of TELUS Communications Inc., which, in turn, ultimately controlled 100% of the equity of TELUS Communications Company and TELE-MOBILE COMPANY. This is unchanged from December 31, 2015.

Transactions with key management personnel

Our key management personnel have authority and responsibility for overseeing, planning, directing and controlling our activities. They consist of our Board of Directors and our Executive Leadership Team. Total compensation expense amounts for key management personnel were \$15 million and \$40 million, respectively, in the third quarter and first nine months of 2016, as compared to \$32 million and \$56 million, respectively, in the comparable periods of 2015. See *Note 24(a)* of the interim consolidated financial statements for additional detail.

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 ventures

In the first nine months of 2016, we had transactions with real estate joint ventures, which are related parties to us, as set out in *Note 18* of our interim consolidated financial statements. In regard to the TELUS Garden real estate joint venture, commitments and contingent liabilities include construction-related contractual commitments through to 2017 (approximately \$9 million at September 30, 2016). The TELUS Garden real estate joint venture had a credit agreement with two Canadian financial institutions (as 50% lender) and TELUS Corporation (as 50% lender) to provide \$136 million of construction financing for the residential project as at December 31, 2015; as at September 30, 2016, all outstanding amounts had been repaid. As at September 30, 2016, the proportion of space leased in the TELUS Garden office tower was approximately 98%. The sale of the TELUS Garden residential condominium units continued in the third quarter of 2016 and the sale of the remaining residential condominium units are expected to be substantially completed by the end of 2016.

For the TELUS Sky™ real estate joint venture, commitments and contingent liabilities include construction-related contractual commitments through to 2018 (approximately \$136 million at September 30, 2016) and construction credit facilities (\$342 million with three Canadian financial institutions as 66 2/3% lender and TELUS as 33 1/3% lender).

8. Accounting matters

8.1 Critical accounting estimates

Our significant accounting policies are described in *Note 1* of the Consolidated financial statements dated December 31, 2015. Our critical accounting estimates and significant judgments are described in *Section 8.1* of our 2015 annual MD&A, which is hereby incorporated by reference. The preparation of financial statements in conformity with IFRS requires us to make estimates, assumptions and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses 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.

8.2 Accounting policy developments

Our accounting policy developments were discussed in *Section 8.2 Accounting policy developments* of our 2015 annual MD&A, and updated in *Section 8.2* of our 2016 Q1 MD&A, and are hereby incorporated by reference. See *Note 2* of the interim consolidated financial statements for additional details.

9. Update to assumptions

Our discussion in this section is qualified in its entirety by the *Caution regarding forward-looking statements* at the beginning of this MD&A.

The assumptions for our 2016 outlook were described in *Section 9 General trends, outlook and assumptions* of our 2015 annual MD&A. Assumptions were updated in *Section 9 Update to assumptions* of our 2016 Q1 MD&A and 2016 Q2 MD&A. These documents are hereby incorporated by reference. Such assumptions remain the same, except as updated below.

- We now estimate that economic growth in Canada will be slightly slower at approximately 1.2% in 2016 (previously 1.3%), based on a composite of estimates from Canadian banks and other sources. For our incumbent local exchange carrier (ILEC) provinces in Western Canada, we now estimate that economic growth in British Columbia will be approximately 2.8% in 2016 (previously 2.9%), and that economic contraction in Alberta will now be approximately (2.2)% in 2016 (previously (2.0)%).

10. Risks and risk management

Our discussion in this section is qualified in its entirety by the *Caution regarding forward-looking statements* at the beginning of this MD&A. Our principal risks and uncertainties that could affect our future business results and our associated risk mitigation activities were described in our 2015 annual MD&A, and updated in our 2016 Q1 MD&A and 2016 Q2 MD&A, each of which is hereby incorporated by reference. Certain additional updates follow.

10.1 Regulatory matters

Our telecommunications, broadcasting and radiocommunication services are regulated under federal laws by various authorities including the Canadian Radio-television and Telecommunications Commission (CRTC), the Minister of Innovation, Science and Economic Development Canada (ISED) and the Minister of Canadian Heritage. These laws and accompanying regulations relate to, 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 outcome of regulatory proceedings, reviews, appeals, policy announcements, court cases and other developments could have a material impact on our operating procedures and profitability.

Regulatory and federal government reviews

The CRTC has recently initiated public proceedings to review, among other issues, differential pricing practices related to Internet data plans that could affect TELUS’ business results. The CRTC is also conducting further followup related to past proceedings on wireline wholesale services (including the appropriateness of mandating competitor access to our fibre-to-the-premises (FTTP) facilities) and wireless wholesale services that could also impact TELUS. The CRTC’s decision to require pro-rated refunds, the recently concluded basic telecommunications services proceeding and the CRTC’s future review of TELUS’ broadcasting licences are also reviewed below, as is the federal government’s ongoing cultural policy review.

Review of wireless code

On July 28, 2016, the CRTC launched a proceeding to review the Wireless Code which was originally launched in 2013. This proceeding was planned because the CRTC had indicated that it would review the Wireless Code three years after it was put into force. The Commission has asked parties to comment on the effectiveness of the Wireless Code and whether any provisions should be updated. There is a hearing scheduled for this proceeding in February 2017. TELUS has filed its intervention in this proceeding, asking for, among other things, changes to allow for more flexibility in how early cancellation fees are calculated, to allow for more offers to be made to customers, to clarify how data caps are to be managed and to make the default version of the permanent copy of a contract to be electronic. These are amendments that will increase customer choice and are consistent with customer preferences. The decision in this proceeding is not expected to have a material impact on TELUS.

Examination of differential pricing practices related to Internet data plans

On May 18, 2016, the CRTC issued *Examination of differential pricing practices related to Internet data plans*, Telecom Notice of Consultation CRTC 2016-192 in which it announced its intention to examine differential pricing practices for Internet data plans, following a complaint concerning Videotron’s pricing practices when offering its unlimited music service to its mobile wireless customers. In general terms, differential pricing occurs when the same or a similar product or service is sold to customers at different prices. Differential pricing is a normal feature of competitive markets, including telecommunications markets. Examples of differential pricing practices include zero-rating (when an Internet service provider (ISP) exempts data traffic from a particular application or a set of applications from a monthly data plan, which is often sold to consumers at a fixed monthly price) and sponsored data (where companies sponsor the data usage for specific content allowing an ISP’s customers to access this content with no impact to monthly data plan allowances). The CRTC’s stated objective in this proceeding is to develop an overall approach to differential pricing for Internet data plans, as opposed to adjudicating complaints on a case-by-case basis. A public hearing commenced on October 31, 2016. The decision in this proceeding is not expected to have a material impact on TELUS.

CRTC decision to require pro-rated refunds

On May 5, 2016, the CRTC issued *TELUS Communications Company – Prohibition of 30-day cancellation policies – Application regarding liquidated damages*, Telecom Decision CRTC 2016-170, in which the CRTC, among other things, mandated that all service providers are to provide pro-rated refunds to customers who cancel telecommunications and broadcasting services. This decision was unexpected in that it is contradicted by guidance that TELUS and third parties had received from CRTC staff following a 2014 CRTC decision regarding prohibition of notice period for cancellation of services and in light of past decisions on the Wireless Code and notice of cancellation policies which had not required pro-rated refunds. The decision has major impacts on billing systems with no transition period provided to implement the required changes. On July 4, 2016, TELUS filed an application with the CRTC seeking guidance and clarification that the

decision does not apply with respect to wireless services with a subsidized device, usage-based services and local telephone service in non-forborne exchanges. TELUS also requested an extension of time to implement the decision. The CRTC has yet to issue a decision on this matter. Pending resolution of TELUS’ application, the potential impact of this decision is not expected to be material.

Wireless wholesale services review

On May 5, 2015, the CRTC issued its decision at the conclusion of its wireless wholesale services review. The main determination was that the CRTC will regulate the wholesale GSM-based domestic roaming rates that TELUS, Rogers and Bell charge other wireless carriers. Proposed final tariff rates were filed by TELUS, Rogers and Bell on November 23, 2015, based on the CRTC’s Phase II costing approach. The CRTC is in the process of reviewing these tariff filings, with the announcement of the final rates expected in the first half of 2017. While TELUS does not currently expect that the decision will have a negative material impact, the impact will be assessed once the final wholesale roaming rates have been approved.

Basic telecommunications services

On April 9, 2015, the CRTC issued *Review of basic telecommunications services*, Telecom Notice of Consultation CRTC 2015-134, announcing a two-phase proceeding to determine what telecommunications services (e.g. voice and broadband) are required by all Canadians in order to participate in the digital economy. In the first phase of the review, the CRTC gathered information to better understand which telecommunications services are being offered across Canada and whether any areas are underserved or unserved. In the second phase of the review, the CRTC conducted consultations to collect comments from Canadians regarding the issues identified. Following the second phase, a public hearing was held in April 2016. Among other things, the CRTC reviewed whether broadband Internet service should be a basic telecommunications service and whether there should be changes to the National Contribution Fund from which subsidies are provided for voice service in high-cost serving areas (and video relay service). While supportive of the inclusion of broadband service as a part of basic telecommunications service at a 5 Mbps download and 1 Mbps upload speed, TELUS opposed any new regulatory requirements pertaining to the provision or mandating of new minimum data allowances and quality of service indicators for retail broadband service, and any new subsidies for broadband from the National Contribution Fund. We expect the CRTC to issue a decision as a result of this proceeding by the end of the fourth quarter of 2016. It is too early to determine what impact the outcome of this proceeding will have on TELUS.

Wireline wholesale services review

On July 22, 2015, the CRTC released *Review of wholesale wireline services and associated policies*, Telecom Regulatory Policy CRTC 2015-326. This decision updates the CRTC’s framework for the provision of regulated wireline wholesale services and will remain in place for a minimum of five years. The decision substantially preserves the status quo established in the CRTC’s 2008 wireline wholesale services framework, with two key exceptions. First, the CRTC has ordered the introduction of a disaggregated wholesale high-speed Internet access service for ISP competitors. This will include access to FTTP facilities. This requirement is being phased in geographically beginning in the largest markets in Ontario and Quebec (*i.e.*, in the serving territories of Bell Aliant, Bell Canada, Cogeco, Rogers and Videotron). The Commission initiated a followup proceeding to determine the technical configurations, appropriate costs and wholesale cost-based rates in those regions. Second, the Commission determined that the provision of access to unbundled local loops to competitors will no longer be mandated and will be phased out over a three-year transition period. Unbundled local loops are the copper lines connecting homes and businesses to the central offices in TELUS’ network. Competitors use these lines to provide voice services or low-speed Internet services to their retail customers.

The FTTP follow-up activities directed in Telecom Policy CRTC 2015-326 remain ongoing. In *Follow-up to Telecom Regulatory Policy 2015-326 – Implementation of a disaggregated wholesale high-speed access service, including over fibre-to-the premises access facilities*, Telecom Decision CRTC 2016-379, the Commission rendered its decision on the first phase of the follow-up process for the disaggregated FTTP wholesale services for Bell, Rogers, Videotron and Cogeco by ruling on the technical configurations for their respective services. The associated tariff and cost study reviews have now begun, for these companies who will be filing their proposed cost studies and tariffs in the fourth quarter of 2016. For the second phase, which involves FTTP wholesale services for the rest of Canada (including TELUS’ serving territories), a technical configuration proceeding is expected to commence in the fourth quarter of 2016. The associated cost study and tariff review will follow, which is expected to take place during the second quarter of 2017.

TELUS anticipates no material adverse impact in the short term from the CRTC’s decision. Given the phased implementation of the mandated wholesale provision of access to our FTTP networks, it is too early to determine the ultimate impact this decision will have on TELUS in the longer term. The determination that the provision of access to unbundled local loops to competitors will no longer be mandated and will be phased out over a three-year transition period is not expected to have a material impact on TELUS.

Disconnection practices between telecommunications service providers

On August 18, 2016, the CRTC issued *Call for comments: Disconnection practices between telecommunications service providers*, Telecom Notice of Consultation CRTC 2016-333 in which it sought industry comments with respect to the practices associated with the disconnection of one telecommunication service provider by another telecommunications service provider, and specifically whether any regulatory measures should be introduced, including mandatory notification requirements. A decision is expected by the first quarter of 2017 and is not expected to have a material adverse impact on TELUS.

TELUS broadcasting licence renewals

TELUS’ national licence to operate a video-on-demand undertaking was granted an administrative renewal, which extends the licence term to August 31, 2017 (Broadcasting Decision CRTC 2016-7 issued on January 12, 2016). This licence-term extension enables the CRTC to conduct a consultation on the standard conditions of licence of all video-on-demand licences (Broadcasting Notice of Consultation CRTC 2016-195 issued on May 20, 2016). Also, TELUS’ regional licences to operate broadcasting distribution undertakings in Alberta and British Columbia were granted an administrative renewal, which extends the licence term to August 31, 2017. TELUS’ regional broadcasting distribution licence to serve Quebec expires in 2018.

In consultations launched in Broadcasting Notice of Consultation CRTC 2016-147 and Broadcasting Notice of Consultation CRTC 2016-225 issued on April 21, 2016 and June 21, 2016, respectively, the CRTC is considering the renewal of broadcasting licences held by the large television ownership groups and large broadcasting distribution undertakings. TELUS’ broadcasting distribution undertaking licences to serve British Columbia and Alberta are being reviewed as part of these consultations. It is expected that the CRTC will use these licence renewal consultations to further entrench the consumer-friendly policies announced in its Let’s Talk TV decisions issued in March 2015.

Review of Canada’s cultural policies

On April 22, 2016, the Minister of Canadian Heritage announced a broad review of Canada’s cultural policies that is intended to strengthen the “creation, discovery and export of Canadian content in a digital world.” Amendments to the *Broadcasting Act*, *Telecommunications Act* and *Copyright Act*, changes to the mandates of institutions and agencies, such as the CRTC and the CBC, and the potential introduction of new laws and establishment of new agencies are being included for consideration by the Minister.

The first phase of the public consultation was a pre-consultation by way of an online poll, which closed May 20, 2016. A panel of experts has been appointed to act as a “sounding board” to the Minister. A Consultation Paper was released on September 15, 2016 in which the federal government sets out its intention to adapt its approach on how to support culture and move Canada forward as a hub for creativity and innovation. The Minister has announced that she will host round table discussions with stakeholders across the country over the next few months and Canadians are also invited to share their views via social media. It is unknown at this time whether there will be a material impact resulting from this Consultation.

Government of Quebec Bill C-74 – Blocking of certain websites associated with online gambling

Bill 74 was adopted on May 17, 2016, and assented to on May 18, 2016, by the National Assembly of Quebec. The provisions of this legislation, which will allow the Government of Quebec to require ISPs and wireless service providers operating in Quebec to block access to a prescribed list of gambling websites, are not yet in force (anticipated to occur in 2018). On July 8, 2016, the Public Interest Advocacy Centre (PIAC) filed an application with the CRTC seeking a declaration that: Bill 74 is unconstitutional; a declaration that any application by a carrier, to the CRTC, for website blocking pursuant to this legislation will be denied; and an interim injunction enjoining ISPs and wireless service providers operating in Quebec from actually blocking websites or taking steps preparatory to the implementation of Bill 74. It is too early to determine what impact this legislation may have on TELUS. In July 2016, the Canadian Wireless Telecommunications Association filed a constitutional challenge to Bill 74 in Quebec Superior Court. On September 1, 2016, the CRTC issued a letter asking for comments on its preliminary view that the PIAC application should be suspended pending the disposition of the constitutional challenge before the Quebec Superior Court. On September 16, 2016, TELUS filed a letter where it supported the position that the PIAC application before the CRTC should be suspended. The constitutional challenge to Bill C74 is now scheduled to be heard in the Quebec Superior Court in April 2017.

Review of tariffs for aggregated wholesale high-speed access services

The CRTC is conducting a review of cost studies and rates associated with aggregated wholesale high-speed access services, which are services provided by incumbent local exchange carriers (ILECs) and cable companies on their respective DSL and cable facilities to ISPs to resell high-speed Internet services. In March 2016, the CRTC ordered all rates for aggregated wholesale high-speed access services to be interim rates and asked ILECs and cable companies to file cost studies and proposed rates for these services. While this review remains ongoing, on October 6, 2016, the Commission issued *Tariff notice applications concerning aggregated wholesale high-speed access services – Revised*

interim rates, Telecom Order 2016-396, where it reduced many of the interim rates for ILECs and cable companies, including TELUS. The Commission ordered the reduction for TELUS because it found that TELUS had filed insufficient evidence to support its cost studies. This review remains ongoing, and TELUS will have an opportunity to file further evidence to substantiate its costs and proposed rates. It is not expected that the outcome of this review will have a material impact on TELUS.

Risk mitigation: TELUS participates in various CRTC proceedings and has advocated the following positions in its participation:

- Amendments under the Wireless Code to benefit customer choice and customer preferences.
- That differential pricing of Internet data plans is generally pro-competitive, pro-consumer and a normal feature of competitive markets, including telecommunications markets, while differential pricing by vertically integrated communications companies for their affiliated broadcasting services might raise concerns that can be dealt with by the CRTC pursuant to its powers under the *Broadcasting Act*.
- The basic telecommunications services review, opposing any new industry-funded subsidies for broadband or other services.
- The follow-up proceedings for the implementation of the new disaggregated wholesale high-speed Internet access service for ISP competitors in Ontario and Quebec (including issues related to service configuration) in order to influence the implementation of the service in our serving territories, when the service is phased-in.
- The disconnection practices proceeding supporting a notification period of thirty days prior to disconnection which TELUS already provides, and to advocate for no further intervention by the CRTC.
- Filing applications for broadcasting distribution licences to serve markets in British Columbia and Alberta and also intervening in the proceeding to consider the licence renewals of the vertically integrated broadcasting service providers.
- Ensuring favourable changes in the broadcasting system.
- Supporting the CRTC’s preliminary view that it should suspend consideration of an application filed by the Public Interest Advocacy Centre seeking a declaration that the Government of Quebec’s Bill C-74 (as described above) is unconstitutional pending the disposition of the constitutional challenge of Bill C-74 before the Quebec Superior Court *Blocking of certain websites associated with online gambling*.
- Filing further supporting evidence with the CRTC’s *Review of tariffs for aggregated wholesale high-speed access services* to substantiate TELUS’s cost and proposed rates for its wholesale aggregated high-speed access services.

11. Definitions and reconciliations

11.1 Non-GAAP and other financial measures

We have issued guidance on and report certain non-GAAP measures that are used to evaluate the performance of TELUS and its segments, 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. Securities regulations require such measures to be clearly defined, qualified and reconciled with their nearest GAAP measure.

Adjusted net income and adjusted basic earnings per share: These measures are used to evaluate performance at a consolidated level and exclude items that may distort the underlying trends in business performance. These measures should not be considered alternatives to net income or basic earnings per share in measuring TELUS’ performance. Items that may, in management’s view, obscure the underlying trends in business performance include significant gains or losses associated with real estate development partnerships, restructuring and other costs, long-term debt prepayment premiums (when applicable), income-tax related adjustments and asset retirements related to restructuring activities. (See *Analysis of net income* and *Analysis of basic EPS* in *Section 1.3*.)

Capital intensity: This measure is calculated as capital expenditures (excluding spectrum licences) divided by total operating revenues. This measure provides a basis for comparing the level of capital expenditures to those of other companies of varying size within the same industry.

Dividend payout ratio: This ratio is a historical measure calculated as the sum of the last four quarterly dividends declared per Common Share, as reported in the financial statements, divided by the sum of basic earnings per share for the most recent four quarters for interim reporting periods. For fiscal years, the denominator is annual basic earnings per share. Our policy guideline for the annual dividend payout ratio is on a prospective basis, rather than on a trailing basis, and is 65 to 75% of net earnings per share on a prospective basis. (See *Section 7.5 Liquidity and capital resource measures*.)

Calculation of Dividend payout ratio

Twelve-month periods ended September 30 (\$)	2016	2015
Numerator – Sum of the last four quarterly dividends declared per Common Share	1.80	1.64
Denominator – Basic earnings per share	2.37	2.36
Ratio (%)	76	69

Dividend payout ratio of adjusted net earnings: This ratio is a historical measure calculated as the sum of the last four quarterly dividends declared per Common Share, as reported in the financial statements, divided by adjusted net earnings per share. Adjusted net earnings per share is basic earnings per share, as used in the **Dividend payout ratio**, adjusted to exclude the gain on the exchange of wireless spectrum licences, net gains and equity income from real estate joint venture developments, business acquisition-related provisions, transformative compensation adjustments, long-term debt prepayment premium (when applicable) and income tax-related adjustments.

Calculation of Dividend payout ratio of adjusted net earnings

Twelve-month periods ended September 30 (\$)	2016	2015
Numerator – Sum of the last four quarterly dividends declared per Common Share	1.80	1.64
Adjusted net earnings (\$ millions):		
Net income attributable to Common Shares	1,403	1,433
Deduct gain on the exchange of wireless spectrum licences, after income taxes	(13)	—
Deduct net gains and equity income from real estate joint venture developments, after income taxes	(11)	—
Add back business acquisition-related provisions, after income taxes	10	—
Add back net unfavourable (deduct net favourable) income tax-related adjustments	(11)	6
	1,378	1,439
Denominator – Adjusted net earnings per share	2.33	2.37
Adjusted ratio (%)	77	69

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

Twelve-month periods ended September 30 (\$ millions, except ratio)	2016	2015
Net income attributable to Common Shares	1,403	1,433
Income taxes (attributable to Common Shares)	493	545
Borrowing costs (attributable to Common Shares) ¹	532	488
Numerator	2,428	2,466
Denominator – Borrowing costs (from above)	532	488
Ratio (times)	4.6	5.1

1 Interest on Long-term debt plus Interest on short-term borrowings and other plus long-term debt prepayment premium, adding back capitalized interest and deducting borrowing costs attributable to non-controlling interests.

EBITDA (earnings before interest, income taxes, depreciation and amortization): We report EBITDA because it is a key measure used to evaluate performance at a consolidated level and the contribution of our two segments. 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 an alternative to Net income in measuring TELUS’ performance, nor should it be used as an exclusive measure of cash flow. EBITDA as calculated by TELUS is equivalent to Operating revenues 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 may also calculate an 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 valuation metric or that should not be included in an assessment of our ability to service or incur debt.

EBITDA reconciliation

(\$ millions)	Third quarters ended September 30		Nine-month periods ended September 30	
	2016	2015	2016	2015
Net income	355	365	1,149	1,121
Financing costs	129	106	386	333
Income taxes	132	126	411	439
Depreciation	388	361	1,158	1,069
Amortization of intangible assets	127	110	356	322
EBITDA	1,131	1,068	3,460	3,284
Add back restructuring and other costs	60	51	131	127
EBITDA – excluding restructuring and other costs	1,191	1,119	3,591	3,411
Deduct gain on the exchange of wireless spectrum licences	—	—	(15)	—
Deduct net gains and equity income from real estate joint venture developments	(10)	—	(19)	—
Adjusted EBITDA	1,181	1,119	3,557	3,411

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. This measure is similar to the coverage ratio covenant in our credit facilities, as described in *Section 7.6 Credit facilities*.

Free cash flow: We report this measure as a supplementary indicator of our operating performance. It should not be considered an alternative to the measures in the condensed interim 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 condensed interim 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. Free cash flow may be supplemented from time to time by proceeds from divested assets or financing activities.

Free cash flow calculation

(\$ millions)	Third quarters ended September 30		Nine-month periods ended September 30	
	2016	2015	2016	2015
EBITDA	1,131	1,068	3,460	3,284
Deduct gain on the exchange of wireless spectrum licences	—	—	(15)	—
Deduct net gains and equity income from real estate joint venture developments	(10)	—	(19)	—
Gains from the sale of property, plant and equipment	(4)	—	(15)	—
Restructuring costs net of disbursements	12	6	(27)	41
Items from the interim consolidated statements of cash flows:				
Share-based compensation expense, net	27	38	65	40
Net employee defined benefit plans expense	23	27	67	81
Employer contributions to employee defined benefit plans	(14)	(20)	(53)	(68)
Interest paid	(132)	(115)	(387)	(329)
Interest received	—	—	1	3
Capital expenditures (excluding spectrum licences)	(787)	(623)	(2,174)	(1,922)
Free cash flow before income taxes	246	381	903	1,130
Income taxes paid, net of refunds	(148)	(71)	(571)	(249)
Free cash flow	98	310	332	881

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)	Third quarters ended September 30		Nine-month periods ended September 30	
	2016	2015	2016	2015
Free cash flow	98	310	332	881
Add (deduct):				
Capital expenditures (excluding spectrum licences)	787	623	2,174	1,922
Adjustments to reconcile to Cash provided by operating activities	147	92	(19)	(117)
Cash provided by operating activities	1,032	1,025	2,487	2,686

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.

Calculation of Net debt

At September 30 (\$ millions)	2016	2015
Long-term debt including current maturities	12,454	11,712
Debt issuance costs netted against long-term debt	67	48
Derivative liabilities (assets), net	24	(7)
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)	(18)	—
Cash and temporary investments	(410)	(141)
Short-term borrowings	100	101
Net debt	12,217	11,713

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. Our long-term policy guideline for this ratio is from 2.00 to 2.50 times. (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.*

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. No recoveries on redemption and repayment of debt were recorded in 2016 and 2015. Expenses recorded for the long-term debt prepayment premium, if any, are included in net interest cost. Net interest cost was \$548 million in the 12-month period ended September 30, 2016, and \$454 million in the 12-month period ended September 30, 2015.

Restructuring and other costs: With the objective of reducing ongoing costs, we incur associated incremental, non-recurring restructuring costs. We may also incur atypical charges when undertaking major or transformational changes to our business or operating models. We include incremental external costs incurred in connection with business acquisition or disposition activity, as well as litigation costs, in the context of significant losses and settlements, in other costs.

Subsequent to September 30, 2016, we made commitments to pay, in the fourth quarter of 2016, lump-sum amounts totaling approximately \$300 million (inclusive of amounts proposed in an unratified tentative agreement), in respect of immediately-vesting, transformative compensation expense to the majority of our existing unionized and non-unionized Canadian-sited workforces; a portion of the net-of-tax amount for certain lump-sum recipients will be paid in Common Shares purchased in the market. (See *Note 23(b)* of the interim consolidated financial statements.)

Restructuring and other costs composition

(\$ millions)	Third quarters ended September 30		Nine-month periods ended September 30	
	2016	2015	2016	2015
Goods and services purchased	23	17	39	59
Employee benefits expense	37	34	92	68
Restructuring and other costs included in EBITDA	60	51	131	127

11.2 Operating indicators

The following measures are industry metrics that are useful in assessing the operating performance of a wireless and wireline telecommunications entity, but do not have a standardized meaning under IFRS.

Average revenue per subscriber unit per month (ARPU) for wireless subscribers is calculated as network revenue divided by the average number of subscriber units on the network during the period and is expressed as a rate per month.

Churn per month is calculated as the number of subscriber units deactivated during a given period divided by the average number of subscriber units on the network during the period and is expressed as a rate per month. A TELUS, Koodo or Public Mobile brand prepaid subscriber is deactivated when the subscriber has no usage for 90 days following expiry of the prepaid credits.

Cost of acquisition (COA) consists of the total of the device subsidy (the device cost to TELUS less the initial charge to the customer), commissions, and advertising and promotion expenses related to the initial subscriber acquisition during a given period. As defined, COA excludes costs to retain existing subscribers (retention spend).

COA per gross subscriber addition is calculated as the cost of acquisition divided by the gross subscriber activations during the period.

Retention spend to network revenue represents direct costs associated with marketing and promotional efforts (including device subsidies and commissions) aimed at the retention of the existing subscriber base, divided by network revenue.

Retention volume represents the number of subscriber units retained in the period through marketing and promotional efforts that result in client upgrades or contract renewals.

Wireless subscriber unit (subscriber) is defined as an active recurring mobile revenue-generating unit (e.g. mobile phone, tablet or mobile Internet key) with a unique subscriber identifier (SIM or IMEI number). In addition, TELUS has a direct billing or support relationship with the user of each device. Subscriber units exclude machine-to-machine (M2M) devices (a subset of the Internet of Things), such as those used for asset tracking, remote control monitoring and meter readings, vending machines and wireless automated teller machines.

Wireline subscriber connection is defined as an active recurring revenue-generating unit that has access to stand-alone services, including Internet access, TELUS TV and residential network access lines (NALs). In addition, TELUS has a direct billing or support relationship with the user of each service. Reported subscriber units exclude business NALs as the impact of migrating from voice lines to IP services has led to business NAL losses without a similar decline in revenue, thus diminishing its relevance as a key performance indicator.