



2017 Annual Report
www.tdsinc.com



DEAR SHAREHOLDERS,

We embraced a number of opportunities and challenges in 2017. It is an exciting time to be expanding our communications business with leading-edge wireless and broadband technology. Our strong rural and suburban footprint and modest size enable us to be nimble and better understand evolving customer and business needs.

U.S. Cellular Offering high-quality and reliable national wireless service in the Middle of Anywhere™ enables us to achieve our first priority: to attract new customers and retain our loyal customer base. While revenue declined in 2017 due to competitive pricing pressures, our strategic focus on cost reductions helped us to achieve a modest increase in profitability.

In 2017, we introduced Total Plans, which include an unlimited data option. Leveraging strong customer adoption of our Total Plans, we increased postpaid handset connections during the past year and achieved historically low postpaid handset churn.

We completed our first commercial deployment of Voice over LTE, or VoLTE, in Iowa. It provides customers with an even higher quality network experience, and expands our roaming opportunities. We continue to deploy VoLTE in some of our largest markets. Our low-frequency spectrum has long been a competitive network advantage, providing exceptional coverage in the suburban and rural markets we serve. In the 600 MHz auction in 2017, we secured 188 new licenses covering the vast majority of our footprint.

TDS Telecom In 2017, TDS Telecom increased its wireline and cable revenues, while hosted and managed service revenues declined. TDS Telecom, in total, significantly increased its profitability. Our wireline and cable businesses share a common strategy. Our goal is to grow high-margin broadband services, bundled with video and voice services to reduce churn.

In TDS Telecom's wireline business, we continued to focus on driving IPTV connections and bundles with high-speed broadband. We are constantly evaluating opportunities to deploy fiber inside our current footprint and adjacent areas. With funding from the Alternative Connect America Cost Model (A-CAM), we are enhancing broadband services in some of our most rural markets.

Cable is a natural extension of TDS Telecom's wireline business. We've grown residential cable video connections and achieved seven consecutive quarters of double-digit year-over-year cable broadband growth. TDS Telecom completed three small cable acquisitions, which help us solidify our presence in our existing markets. We continue to evaluate additional cable acquisitions.

OneNeck IT Solutions In 2018, OneNeck transitioned to its own business unit within the TDS family of companies, better positioning the company to leverage TDS corporate IT resources. In this hosted and managed services business, we seek to grow recurring revenues in high-margin IT services for mid-market clients.

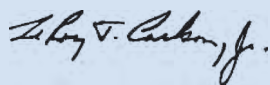
Creating long-term shareholder value Our TDS corporate capital allocation strategy calls for investing available cash resources into the business and returning value to shareholders. TDS has increased its dividend every year for the past 43 years and announced another increase for 2018.

2018 We are focused on our strategic imperatives at each business unit. U.S. Cellular is working diligently to attract new customers and protect its customer base, increase revenues, reduce costs and invest in our future. TDS Telecom is deploying more fiber where economically sound, increasing broadband penetration and evaluating potential cable acquisitions. OneNeck is working to grow recurring service revenues, to add new customers and to improve and standardize its processes.

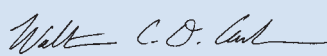
Video message We have created a video to accompany this annual report that provides more information about our progress in 2017 and plans for 2018. Please visit investors.tdsinc.com.

Thank you We are grateful to the associates and employees of TDS companies, for their dedication and innovation in providing outstanding experiences for our customers. Thank you to our shareholders and debt holders for your continuing support of our long-term plans and strategies.

Very truly yours,



LeRoy T. Carlson, Jr.
President and Chief Executive Officer



Walter C. D. Carlson
Chairman of the Board

TELEPHONE AND DATA SYSTEMS, INC.

ANNUAL REPORT TO SHAREHOLDERS FOR THE YEAR ENDED DECEMBER 31, 2017
Pursuant to SEC Rule 14a-3

The following audited financial statements and certain other financial information for the year ended December 31, 2017, represent Telephone and Data Systems' annual report to shareholders as required by the rules and regulations of the Security and Exchange Commission (SEC).

The following information was filed with the SEC on February 26, 2018, as Exhibit 13 to Telephone and Data Systems' Annual Report on Form 10-K for the year ended December 31, 2017. Such information has not been updated or revised since the date it was originally filed with the SEC. Accordingly, you are encouraged to review such information together with any subsequent information that we have filed with the SEC and other publicly available information.

Telephone and Data Systems, Inc.

Exhibit 13

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EXECUTIVE OVERVIEW

The following Management's Discussion and Analysis (MD&A) should be read in conjunction with Telephone and Data Systems, Inc.'s (TDS) audited consolidated financial statements and notes for the year ended December 31, 2017, and with the description of TDS' business included herein. Certain numbers included herein are rounded to millions for ease of presentation; however, calculated amounts and percentages are determined using the unrounded numbers.

This report contains statements that are not based on historical facts, including the words "believes," "anticipates," "estimates," "expects," "plans," "intends," "projects" and similar expressions. These statements constitute and represent "forward looking statements" as this term is defined in the Private Securities Litigation Reform Act of 1995. Such forward looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, events or developments to be significantly different from any future results, events or developments expressed or implied by such forward looking statements. See Private Securities Litigation Reform Act of 1995 Safe Harbor Cautionary Statement for additional information.

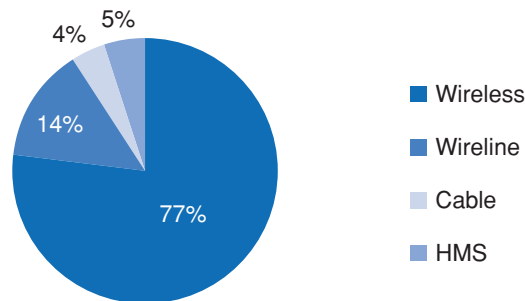
TDS uses certain "non-GAAP financial measures" and each such measure is identified in the MD&A. A discussion of the reason TDS determines these metrics to be useful and a reconciliation of these measures to their most directly comparable measures determined in accordance with accounting principles generally accepted in the United States of America (GAAP) are included in the Supplemental Information Relating to Non-GAAP Financial Measures section within the MD&A of this Form 10-K Report.

General

TDS is a diversified telecommunications company that provides high-quality communications services to approximately 6 million connections nationwide. TDS provides wireless services through its 83%-owned subsidiary, United States Cellular Corporation (U.S. Cellular). TDS also provides wireline, cable and hosted and managed services (HMS), through its wholly-owned subsidiary, TDS Telecommunications LLC (TDS Telecom). TDS' segments operate almost entirely in the United States. See Note 18 – Business Segment Information in the Notes to Consolidated Financial Statements for additional information about TDS' segments.

TDS has re-evaluated internal reporting roles with regard to its HMS business unit and, as a result, will be changing its reportable segments. Effective January 1, 2018, HMS will be considered a non-reportable segment and will no longer be reported under TDS Telecom. See Note 21 – Subsequent Events in the Notes to Consolidated Financial Statements for additional information.

2017 Operating Revenues by Segment



TDS Mission and Strategy

TDS' mission is to provide outstanding communications services to its customers and meet the needs of its shareholders, its people, and its communities. In pursuing this mission, TDS seeks to grow its businesses, create opportunities for its associates and employees, and build value over the long-term for its shareholders. Across all of its businesses, TDS is focused on providing exceptional customer experiences through best-in-class services and products and superior customer service.

TDS' long-term strategy calls for the majority of its capital to be reinvested in its operating businesses to strengthen their competitive positions and financial performance, while also returning value to TDS shareholders through the payment of a regular quarterly cash dividend and share repurchases.

Throughout 2017, TDS focused on investing in the networks that are the backbone of its commitment to provide outstanding communications services to its customers. TDS believes these investments will strengthen its competitive position and improve operating performance. Looking ahead to 2018, TDS will continue to execute on its strategies to build strong, competitive businesses providing high-quality, data-focused services and products.

Invest in the business to improve returns and pursue initiatives that align with long-term strategies

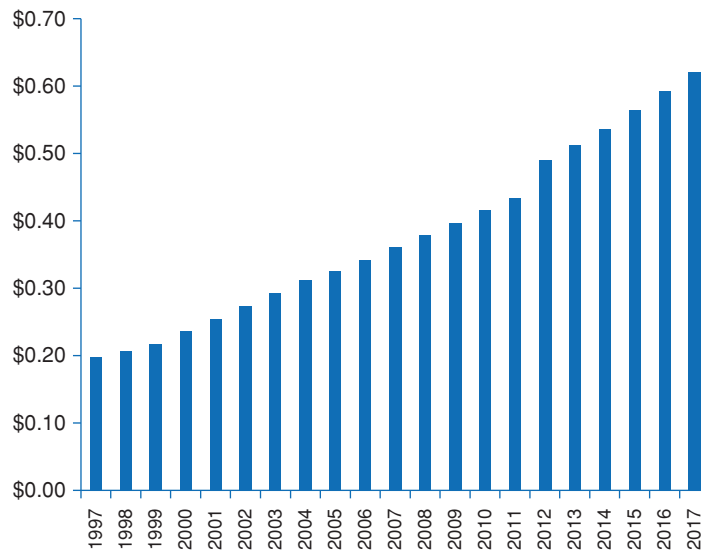
Consistent with its strategy, TDS made significant investments in 2017 to improve the performance of its networks. U.S. Cellular added capacity to its 4G LTE network responding to customers' growing use of data. U.S. Cellular enhanced its service and product offerings by commercially deploying VoLTE technology for the first time in one key market and will continue to build out VoLTE services over the next few years. The next commercial launch is expected to occur in several additional operating markets in early 2018. VoLTE technology allows customers to utilize a 4G LTE network for both voice and data services, and offers enhanced services such as high definition voice, video calling and simultaneous voice and data sessions. In addition, the deployment of VoLTE technology expands U.S. Cellular's ability to offer roaming services to other carriers. U.S. Cellular continued to enhance its spectrum position and monetize non-strategic assets by entering into multiple spectrum exchange and purchase agreements with third parties and participating in Auction 1002.

TDS Telecom's Wireline segment began work on bringing higher broadband speeds to its most rural customers as part of the Connect America Fund. Beginning in 2017, TDS Telecom receives over \$75 million per year for 10 years (with incremental funding for transition in the early years for certain states) for operating and maintaining its network along with the obligation to provide broadband service at various speeds to about 160,000 locations. In 2017, TDS Telecom's Cable segment expanded its footprint by acquiring several small cable companies that complement its market portfolio, services and products.

Return value to shareholders

Since August of 2013, TDS has invested \$611 million, primarily through acquisition of cable companies and returned \$333 million to shareholders through payment of \$282 million in regular quarterly cash dividends and \$51 million of stock repurchases. During 2017, TDS paid \$69 million in regular quarterly cash dividends. TDS increased the dividend per share paid to its investors by 5% in 2017 which marks the 43rd consecutive year of dividend increases and in February 2018, TDS increased its dividend per share from \$0.155 to \$0.16. There were no TDS or U.S. Cellular share repurchases in 2017. As of December 31, 2017, \$199 million was available for share repurchase under the announced TDS stock repurchase program. There is no assurance that TDS will continue to increase the dividend rate or pay dividends and no assurance that TDS or U.S. Cellular will make any significant amount of share repurchases in the future.

Annual Dividends Per TDS Share



Significant Financial and Operating Matters

The following is a summary of certain selected information contained in the comprehensive MD&A that follows. The overview does not contain all of the information that may be important. You should carefully read the entire MD&A and not rely solely on the highlights.

- Net income available to TDS common shareholders was \$153 million in 2017, compared to \$43 million in 2016. Diluted earnings per share was \$1.37 compared to \$0.39 in 2017 and 2016, respectively.
- In 2017, TDS recognized a loss on impairment of goodwill totaling \$262 million (\$188 million, net of tax and noncontrolling interests impacts) bringing the amount of recorded goodwill for the U.S. Cellular and HMS reporting units to zero.
- Due to the enactment on December 22, 2017, of H.R.1, originally known as the Tax Cuts and Jobs Act of 2017, which reduced the U.S. federal statutory corporate income tax rate from 35% to 21%, TDS recognized a deferred tax benefit of \$327 million (\$282 million, net of noncontrolling interests impacts) due to the revaluation of its deferred tax assets and liabilities at the new corporate rate. Refer to Note 4 – Income Taxes in the Notes to Consolidated Financial Statements for further information.

TERMS USED BY TDS

The following is a list of definitions of certain industry terms that are used throughout this document:

- **4G LTE** – fourth generation Long-Term Evolution which is a wireless broadband technology.
- **5G** – fifth generation wireless broadband technology.
- **Account** – represents an individual or business financially responsible for one or multiple associated connections. An account may include a variety of types of connections such as handsets and connected devices.
- **Alternative Connect America Cost Model (A-CAM)** – a USF support mechanism for rate-of-return carriers, which provides revenue support annually for ten years beginning in 2017. This support comes with an obligation to build defined broadband speeds to a certain number of locations.
- **Auction 97** – a Federal Communications Commission (FCC) auction of AWS-3 spectrum licenses that ended in January 2015.
- **Auctions 1000, 1001, and 1002** – Auction 1000 is an FCC auction of 600 MHz spectrum licenses that started in 2016 and concluded in 2017 involving: (1) a “reverse auction” in which broadcast television licensees submitted bids to voluntarily relinquish spectrum usage rights in exchange for payments (referred to as Auction 1001); (2) a “repacking” of the broadcast television bands in order to free up certain broadcast spectrum for other uses; and (3) a “forward auction” of licenses for spectrum cleared through this process to be used for wireless communications (referred to as Auction 1002).
- **Broadband Connections** – refers to the number of Wireline customers provided high-capacity data circuits via various technologies, including DSL and dedicated internet circuit technologies or the Cable billable number of lines into a building for high-speed data services.
- **Churn Rate** – represents the percentage of the connections that disconnect service each month. These rates represent the average monthly churn rate for each respective period.
- **Connected Devices** – non-handset devices that connect directly to the U.S. Cellular network. Connected devices include products such as tablets, modems, and hotspots.
- **EBITDA** – refers to earnings before interest, taxes, depreciation, amortization and accretion and is used in the non-GAAP metric Adjusted EBITDA throughout this document.
- **DOCSIS** – Data Over Cable Service Interface Specification is an international telecommunications standard that permits the addition of high-bandwidth data transfer to an existing cable TV (CATV) system. DOCSIS 3.1 is a system specification that increases data transmission rates.
- **Eligible Telecommunications Carrier (ETC)** – designation by states for providing specified services in “high cost” areas which enables participation in universal service support mechanisms.
- **Free Cash Flow** – non-GAAP metric defined as Cash flows from operating activities less Cash paid for additions to property, plant, and equipment.
- **Gross Additions** – represents the total number of new connections added during the period, without regard to connections that were terminated during that period.
- **IPTV Connections** – represents the number of Wireline customers provided video services using IP networking technology.
- **Machine-to-Machine or M2M** – technology that involves the transmission of data between networked devices, as well as the performance of actions by devices without human intervention. U.S. Cellular sells and supports M2M solutions to customers, provides connectivity for M2M solutions via the U.S. Cellular network, and has agreements with device manufacturers and software developers which offer M2M solutions.
- **ManagedIP Connections** – refers to the number of telephone handsets, data lines and IP trunks providing communications using IP networking technology.

- **Net Additions** – represents the total number of new connections added during the period, net of connections that were terminated during that period.
- **OIBDA** – refers to operating income before depreciation, amortization and accretion and is used in the non-GAAP metric Adjusted OIBDA throughout this document.
- **Postpaid Average Billings per Account (Postpaid ABPA)** – non-GAAP metric which is calculated by dividing total postpaid service revenues plus equipment installment plan billings by the average number of postpaid accounts and by the number of months in the period.
- **Postpaid Average Billings per User (Postpaid ABPU)** – non-GAAP metric which is calculated by dividing total postpaid service revenues plus equipment installment plan billings by the average number of postpaid connections and by the number of months in the period.
- **Postpaid Average Revenue per Account (Postpaid ARPA)** – metric which is calculated by dividing total postpaid service revenues by the average number of postpaid accounts and by the number of months in the period.
- **Postpaid Average Revenue per User (Postpaid ARPU)** – metric which is calculated by dividing total postpaid service revenues by the average number of postpaid connections and by the number of months in the period.
- **Retail Connections** – the sum of U.S. Cellular postpaid connections and U.S. Cellular prepaid connections.
- **Tax Act** – refers to comprehensive federal tax legislation enacted on December 22, 2017, which made broad and complex changes to the U.S. tax code. Now titled H.R.1, the Tax Act was originally identified as the Tax Cuts and Jobs Act of 2017.
- **Universal Service Fund (USF)** – a system of telecommunications collected fees and support payments managed by the FCC intended to promote universal access to telecommunications services in the United States.
- **U.S. Cellular Connections** – individual lines of service associated with each device activated by a customer. This includes smartphones, feature phones, tablets, modems, hotspots and machine-to-machine devices.
- **Video Connections** – generally, a home or business receiving video programming counts as one video connection. In counting bulk residential or commercial connections, such as an apartment building or a hotel, connections are counted based on the number of units/rooms within the building receiving service.
- **Voice Connections** – refers to the individual circuits connecting a customer to Wireline's central office facilities or the Cable billable number of lines into a building for voice services.
- **VoLTE** – Voice over Long-Term Evolution is a technology specification that defines the standards and procedures for delivering voice communications and related services over 4G LTE networks.
- **Wireline Residential Revenue per Connection** – is calculated by dividing total Wireline residential revenue by the average number of Wireline residential connections and by the number of months in the period.

RESULTS OF OPERATIONS — TDS CONSOLIDATED

Year Ended December 31,	2017	2016	2015	2017 vs. 2016	2016 vs. 2015
(Dollars in millions)					
Operating revenues					
U.S. Cellular	\$ 3,890	\$ 3,990	\$ 4,031	(3)%	(1)%
TDS Telecom	1,140	1,151	1,158	(1)%	(1)%
All other ¹	14	14	21	1%	(35)%
Total operating revenues	5,044	5,155	5,210	(2)%	(1)%
Operating expenses					
U.S. Cellular	4,194	3,942	3,684	6%	7%
TDS Telecom	1,077	1,084	1,079	(1)%	1%
All other ^{1 2 3}	(122)	18	16	>(100)%	9%
Total operating expenses	5,149	5,044	4,779	2%	6%
Operating income (loss)					
U.S. Cellular	(304)	48	347	>(100)%	(86)%
TDS Telecom	63	67	79	(7)%	(15)%
All other ^{1 2 3}	136	(4)	5	>100%	>(100)%
Operating income (loss)	(105)	111	431	>(100)%	(74)%
Investment and other income (expense)					
Equity in earnings of unconsolidated entities	137	140	140	(2)%	—
Interest and dividend income	15	11	5	42%	>100%
Interest expense	(170)	(170)	(142)	—	(20)%
Other, net	1	—	1	>100%	(98)%
Total investment and other income (expense)	(17)	(19)	4	12%	>(100)%
Income (loss) before income taxes	(122)	92	435	>(100)%	(79)%
Income tax expense (benefit)	(279)	40	172	>(100)%	(77)%
Net income	157	52	263	>100%	(80)%
Less: Net income attributable to noncontrolling interests, net of tax	4	9	44	(55)%	(79)%
Net income attributable to TDS shareholders	\$ 153	\$ 43	\$ 219	>100%	(80)%
Adjusted OIBDA (Non-GAAP) ⁴	\$ 999	\$ 967	\$ 1,014	3%	(5)%
Adjusted EBITDA (Non-GAAP) ⁴	\$ 1,152	\$ 1,118	\$ 1,160	3%	(4)%
Capital expenditures	\$ 694	\$ 630	\$ 759	10%	(17)%

¹ Consists of corporate and other operations and intercompany eliminations.

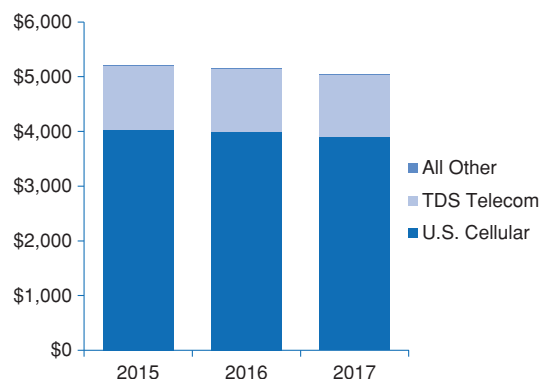
² In 2015, TDS recognized an incremental gain compared to U.S. Cellular of \$12 million on the Tower Sale as a result of lower asset basis in the assets disposed. See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for additional information related to these transactions.

³ During the third quarter of 2017, U.S. Cellular recorded a goodwill impairment of \$370 million while TDS recorded a goodwill impairment of the U.S. Cellular reporting unit of \$227 million. Prior to 2009, TDS accounted for U.S. Cellular's share repurchases as step acquisitions, allocating a portion of the share repurchase value to TDS' Goodwill. Further, goodwill of the U.S. Cellular reporting unit was impaired at the TDS level in 2003 but not at U.S. Cellular. Consequently, U.S. Cellular's goodwill on a stand-alone basis and any resulting impairments of goodwill does not equal the TDS consolidated goodwill related to U.S. Cellular. For further information on the goodwill impairment see Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements for additional information.

⁴ Represents a non-GAAP financial measure. Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

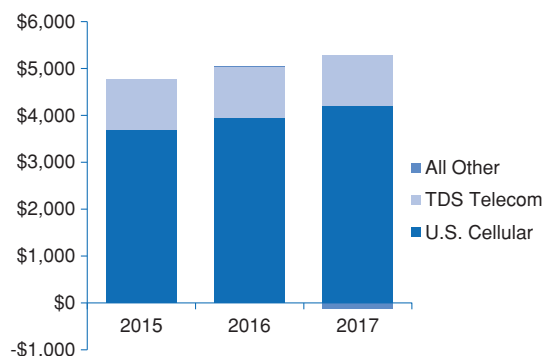
Operating Revenues

(Dollars in millions)



Operating Expenses

(Dollars in millions)



2017-2016 Commentary

TDS' 2% decrease in operating revenues is due primarily to decreases in U.S. Cellular retail service, inbound roaming, and equipment sales revenues primarily driven by industry-wide competition.

2016-2015 Commentary

TDS' 1% decrease in operating revenues is due primarily to decreased Postpaid ARPU, the impact of \$58 million in revenue recognized by U.S. Cellular from expired rewards points in 2015 and a decrease in inbound roaming revenue driven by lower roaming rates. This was partially offset by increased Equipment sales revenues at U.S. Cellular due primarily to an increasing number of customers choosing equipment installment plans.

2017-2016 Commentary

TDS' 2% increase in operating expenses was primarily driven by a loss on impairment of goodwill of \$262 million recognized in the third quarter of 2017. See Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements for additional information. This loss was partially offset by decreases in system operations and selling, general and administrative expenses due to cost savings initiatives at TDS Telecom and U.S. Cellular.

2016-2015 Commentary

TDS' 6% increase in operating expenses was driven by decreased gains on divestiture and exchange transactions. Such gains were \$21 million in 2016 compared to \$283 million in 2015. See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for additional information related to these gains.

Refer to individual segment discussions in this MD&A for additional details on operating revenues and expenses at the segment level.

Equity in earnings of unconsolidated entities

Equity in earnings of unconsolidated entities represents TDS' share of net income from entities in which it has a noncontrolling interest and that are accounted for by the equity method. TDS' investment in the Los Angeles SMSA Limited Partnership (LA Partnership) contributed \$66 million, \$71 million and \$74 million to Equity in earnings of unconsolidated entities in 2017, 2016 and 2015, respectively.

Interest expense

Interest expense increased in 2016 as a result of U.S. Cellular's issuance of \$300 million of 7.25% Senior Notes due 2064 in November 2015 and borrowing of \$225 million on its senior term loan facility that was drawn in July 2015. See Note 11 — Debt in the Notes to Consolidated Financial Statements for further information on TDS' long-term debt.

Income tax expense (benefit)

TDS' effective tax rate on Income (loss) before income taxes for 2017 was not meaningful as discussed below. The rates for 2016 and 2015 were 43.2% and 39.6%, respectively. In December 2017, the Tax Act was signed into law. TDS adjusts for the effects of changes in tax laws and rates in the period of enactment. The major provisions of the Tax Act

impacting TDS are the reduction of the U.S. federal corporate tax rate from 35% to 21% and the bonus depreciation deduction allowing for full expensing of qualified property additions. Income tax expense decreased in 2017 due primarily to a reduction in the Net deferred income tax liability of \$327 million as a result of the impact of the rate decrease on TDS' federal taxable temporary differences.

The disclosed amounts within include provisional estimates, pursuant to SEC Staff Accounting Bulletin No. 118, for current and deferred taxes related to tax depreciation of fixed assets. For property acquired and placed in service after September 27, 2017, the Tax Act provides for full expensing if such property was not subject to a written binding agreement in existence as of September 27, 2017. As of December 31, 2017, TDS has not completed a full analysis of all contracts and agreements related to fixed assets placed in service during 2017, but was able to record a reasonable estimate of the effects of these changes based on capital expenditures made during 2017. TDS expects any final adjustments to the provisional amounts to be recorded by the third quarter of 2018, which could be material to TDS' financial statements. The accounting for all other applicable provisions of the Tax Act was performed based on TDS' current interpretation of the provisions of the law as enacted as of December 31, 2017.

The overall effective tax rate for 2017 is not meaningful due to the effect of the Tax Act combined with the impaired goodwill of the U.S. Cellular and HMS reporting units, since portions of the goodwill balance are not amortizable for income tax purposes. The effective income tax rates for 2016 and 2015 are consistent with a normalized tax rate inclusive of federal and state tax during the periods. Discrete items in these years did not have a significant impact on the effective tax rate. For 2018 and future years, TDS expects its effective tax rate will decrease consistent with the statutory federal rate reduction provided in the Tax Act. However, the effective rate in future years also may be impacted by discrete items and permanent tax adjustments. After considering the bonus depreciation provision of the Tax Act, TDS does not expect to incur a significant current federal income tax liability in 2018. See Note 4 — Income Taxes in the Notes to Consolidated Financial Statements for additional information.

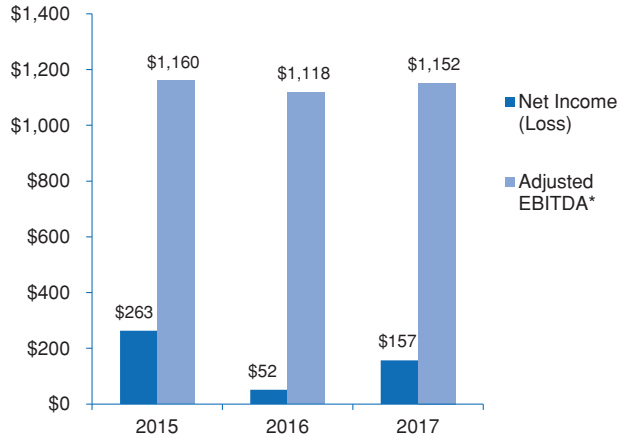
Net income attributable to noncontrolling interests, net of tax

Net income attributable to noncontrolling interests, net of tax includes the noncontrolling public shareholders' share of U.S. Cellular's net income, the noncontrolling shareholders' or partners' share of certain U.S. Cellular subsidiaries' net income and other TDS noncontrolling interests.

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Net income attributable to noncontrolling interests, net of tax			
U.S. Cellular noncontrolling public shareholders'	\$ 2	\$ 8	\$ 38
Noncontrolling shareholders' or partners'	2	1	6
	\$ 4	\$ 9	\$ 44

Earnings

(Dollars in millions)



2017-2016 Commentary

Net income increased from 2016 to 2017 due primarily to the reduction of income tax expense as result of the Tax Act partially offset by a loss on impairment of goodwill at the U.S. Cellular and HMS reporting units. Income tax expense and the loss on impairment of goodwill are added back into Adjusted EBITDA. The increase in Adjusted EBITDA was due primarily to a combination of improved operating results at TDS Telecom driven by the Wireline and Cable segments and cost savings initiatives at U.S. Cellular.

2016-2015 Commentary

Net income (loss) and Adjusted EBITDA decreased due to lower revenues, partially offset by increased Interest and dividend income related to imputed interest income recognized on equipment installment plans. Net income (loss) also decreased due to lower gains from sales and exchanges of businesses and licenses and increased Interest expense in 2016. Such gains and Interest expense are not included as a component of Adjusted EBITDA and, as a result, Adjusted EBITDA did not decrease as much as Net income (loss).

* Represents a non-GAAP financial measure. Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

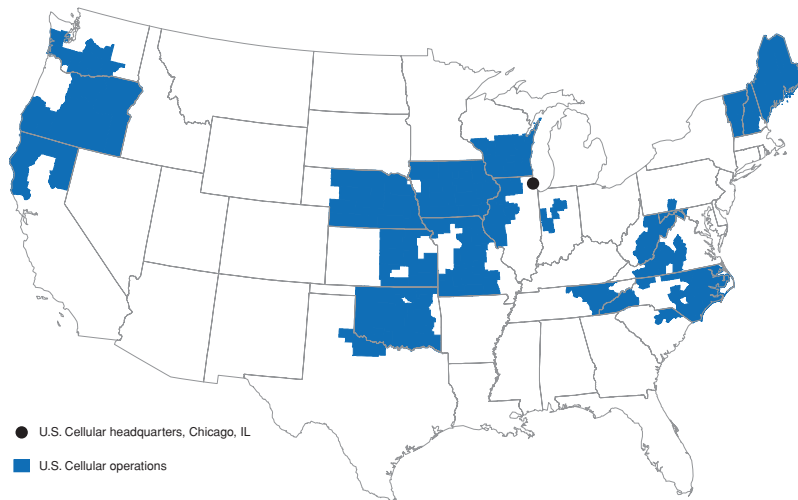


U.S. CELLULAR OPERATIONS

BUSINESS OVERVIEW

U.S. Cellular owns, operates, and invests in wireless markets throughout the United States. U.S. Cellular is an 83%-owned subsidiary of TDS. U.S. Cellular's strategy is to attract and retain wireless customers through a value proposition comprised of a high-quality network, outstanding customer service, and competitive devices, plans, and pricing, all provided with a local focus.

OPERATIONS



- Serves customers with approximately 5.1 million connections including 4.5 million postpaid, 0.5 million prepaid and 0.1 million reseller and other connections
- Operates in 22 states
- Employs approximately 5,900 associates
- 6,460 cell sites including 4,080 owned towers in service

Trends and Developments

U.S. Cellular's mission is to provide exceptional wireless communication services which enhance consumers' lives, increase the competitiveness of local businesses, and improve the efficiency of government operations in the mid-sized and rural markets served.

Network and Technology:

- U.S. Cellular continues to devote efforts to enhance its network capabilities. In 2017, U.S. Cellular commercially deployed VoLTE technology for the first time in one key market and will continue to build out VoLTE services over the next few years. The next commercial launch is expected to occur in several additional operating markets starting in early 2018. VoLTE technology allows customers to utilize a 4G LTE network for both voice and data services, and enables enhanced services such as high definition voice, video calling and simultaneous voice and data sessions. In addition, the deployment of VoLTE technology expands U.S. Cellular's ability to offer roaming services to other carriers.

- U.S. Cellular is committed to continuous innovation to provide customers in the markets it serves with the latest technology that can enhance their lives or businesses. U.S. Cellular successfully tested 5G technology for the first time in 2016 in both indoor and outdoor environments and performed additional tests in 2017. U.S. Cellular remains committed to ongoing tests geared towards understanding the propagation characteristics of the new technology and contributing to the development of 5G standards. When deployed commercially, 5G technology is expected to help address customers' growing demand for data services as well as create opportunities for new services requiring high speed and reliability as well as low latency.

Asset Management:

- U.S. Cellular continues to enhance its spectrum position and monetize non-strategic assets by participating in auctions and entering into agreements with third parties. In 2017, the FCC announced by way of public notice that U.S. Cellular was the winning bidder for 188 licenses for an aggregate purchase price of \$329 million in the Auction 1002. In addition, U.S. Cellular closed on certain license exchange agreements and received \$15 million of cash and recognized gains of \$22 million. See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for additional information related to these transactions.

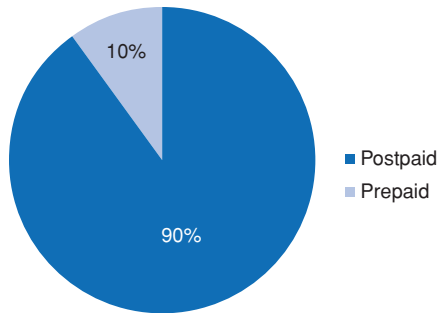
Services and Products:

- U.S. Cellular's customers are able to choose from a variety of national plans with voice, messaging and data usage options and pricing that are designed to fit different customer needs, usage patterns and budgets. In early 2017, U.S. Cellular introduced new Total Plans to postpaid customers that include unlimited offerings and no hidden fees such as overage charges and activation fees.
- U.S. Cellular offers a wide range of accessories, including wireless basics such as cases, screen protectors, chargers, and memory cards as well as an assortment of consumer electronics such as headphones, smart speakers, wearables and home automation products (e.g. cameras, sensors, and thermostats). During the fourth quarter of 2017, U.S. Cellular began to offer accessories for purchase on installment plans. These plans allow new and existing postpaid customers to purchase certain accessories payable over a specified time period.

OPERATIONAL OVERVIEW

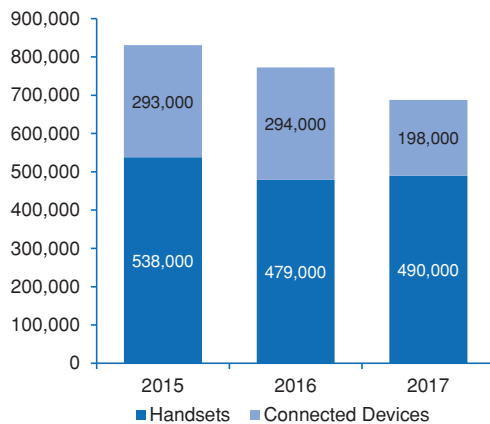
Retail Connection Composition

As of December 31, 2017

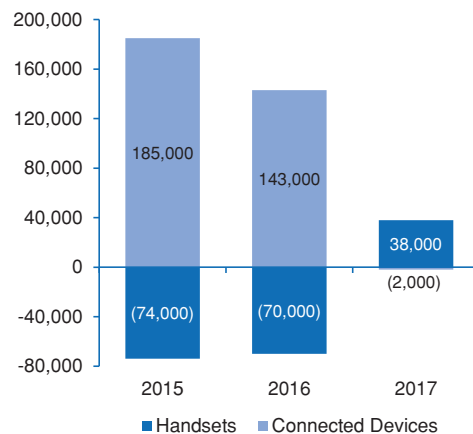


As of December 31,	2017	2016	2015
Retail Connections – End of Period			
Postpaid	4,518,000	4,482,000	4,409,000
Prepaid	519,000	484,000	387,000
Total	5,037,000	4,966,000	4,796,000
Year Ended December 31,			
Postpaid Activity:			
Gross Additions	688,000	773,000	831,000
Net Additions	36,000	73,000	111,000
Churn	1.21%	1.31%	1.39%

Postpaid Gross Additions



Postpaid Net Additions (Losses)



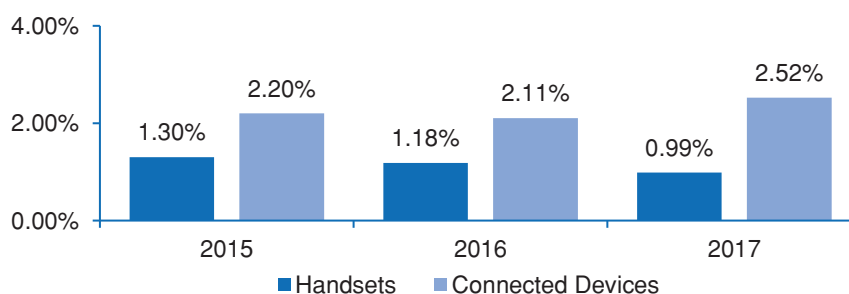
2017-2016 Commentary

Postpaid net additions decreased in 2017 mainly due to lower connected devices net additions which reflected both lower tablet gross additions and an increase in tablet churn. The decline in tablet gross additions reflects industry-wide trends including (i) reduced consumer demand for network-connected tablets, and (ii) carriers including U.S. Cellular have curtailed promotions of heavily discounted tablets designed to stimulate demand due to poor economics. The decrease in connected devices net additions was partially offset by an improvement in handsets net additions driven by both higher gross additions and a decrease in churn.

2016-2015 Commentary

Postpaid net additions decreased in 2016 mainly due to lower handsets gross additions, partially offset by an improvement in postpaid churn.

Postpaid Churn Rates



Postpaid Revenue

Year Ended December 31,	2017	2016	2015
Average Revenue Per User (ARPU) ¹	\$ 44.38	\$ 46.96	\$ 54.50
Average Billings Per User (ABPU) ^{1,2}	\$ 55.60	\$ 56.12	\$ 59.74
Average Revenue Per Account (ARPA) ¹	\$ 118.96	\$ 124.09	\$ 136.90
Average Billings Per Account (ABPA) ^{1,2}	\$ 149.02	\$ 148.29	\$ 150.07

¹ The discontinuation of the loyalty rewards points program had the effect of increasing Postpaid ARPU/ABPU and Postpaid ARPA/ABPA by \$1.12 and \$2.82, respectively, in 2015.

² Postpaid ABPU and Postpaid ABPA are non-GAAP financial measures. Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of these measures.

2017-2016 Commentary

Postpaid ARPU and Postpaid ARPA decreased in 2017 due primarily to industry-wide price competition resulting in overall price reductions on plan offerings.

Equipment installment plans increase equipment sales revenue as customers pay for their wireless devices in installments at a total device price that is generally higher than the device price offered to customers in conjunction with alternative plans that are subject to a service contract. Equipment installment plans also have the impact of reducing service revenues as certain plan offerings provide for reduced monthly access charges. In order to show the trends in total service and equipment revenues received, U.S. Cellular has presented Postpaid ABPU and Postpaid ABPA, which are calculated as Postpaid ARPU and Postpaid ARPA plus average monthly equipment installment plan billings per connection and account, respectively.

Equipment installment plan billings increased in 2017 due to increased penetration of equipment installment plans. Postpaid ABPU decreased in 2017 as the increase in equipment installment plan billings was more than offset by the decline in Postpaid ARPU discussed above. Postpaid ABPA, however, increased slightly in 2017 as the increase in equipment installment plan billings more than offset the decline in Postpaid ARPA discussed above.

2016-2015 Commentary

Postpaid ARPU and Postpaid ARPA decreased in 2016 due primarily to industry-wide price competition, discounts on shared data plans provided to customers on equipment installment plans and those providing their own device at the time of activation or renewal, and the \$58 million impact of the discontinuation of the loyalty rewards points program in 2015. These factors were partially offset by the impact of increased adoption of smartphones and the related increase in service revenues from data usage.

Equipment installment plan billings increased in 2016 due to increased adoption of equipment installment plans by postpaid customers. Postpaid ABPU and ABPA decreased in 2016 as the increase in equipment installment plan billings was more than offset by the decline in Postpaid ARPU and ARPA discussed above.

FINANCIAL OVERVIEW — U.S. CELLULAR

Components of Operating Income (Loss)

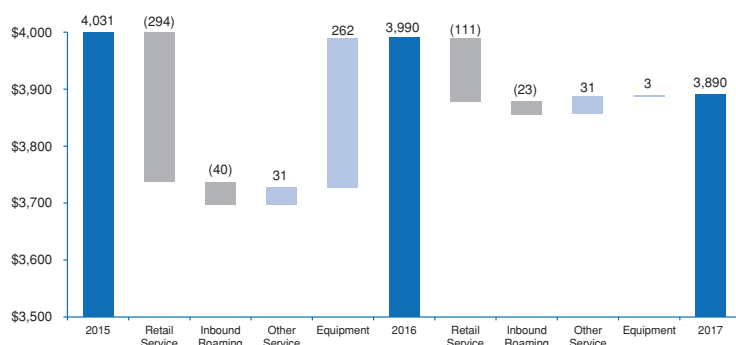
Year Ended December 31,	2017	2016	2015	2017 vs. 2016	2016 vs. 2015
(Dollars in millions)					
Retail service	\$ 2,589	\$ 2,700	\$ 2,994	(4)%	(10)%
Inbound roaming	129	152	192	(15)%	(21)%
Other	260	229	198	13%	16%
Service revenues	2,978	3,081	3,384	(3)%	(9)%
Equipment sales	912	909	647	—	41%
Total operating revenues	3,890	3,990	4,031	(3)%	(1)%
System operations (excluding Depreciation, amortization and accretion reported below)	732	760	775	(4)%	(2)%
Cost of equipment sold	1,071	1,081	1,053	(1)%	3%
Selling, general and administrative	1,412	1,480	1,494	(4)%	(1)%
Depreciation, amortization and accretion	615	618	607	—	2%
Loss on impairment of goodwill	370	—	—	N/M	N/M
(Gain) loss on asset disposals, net	17	22	16	(22)%	36%
(Gain) loss on sale of business and other exit costs, net	(1)	—	(114)	>(100)%	100%
(Gain) loss on license sales and exchanges, net	(22)	(19)	(147)	(17)%	87%
Total operating expenses	4,194	3,942	3,684	6%	7%
Operating income (loss)	\$ (304)	\$ 48	\$ 347	>(100)%	(86)%
Net income	\$ 15	\$ 49	\$ 247	(70)%	(80)%
Adjusted OIBDA (Non-GAAP) ¹	\$ 675	\$ 669	\$ 709	1%	(6)%
Adjusted EBITDA (Non-GAAP) ¹	\$ 820	\$ 816	\$ 852	1%	(4)%
Capital expenditures	\$ 469	\$ 446	\$ 533	5%	(16)%

N/M - Percentage change not meaningful

¹ Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

Operating Revenues

(Dollars in millions)



Service revenues consist of:

- Retail Service — Charges for access, airtime, roaming, recovery of regulatory costs and value added services, including data services and products
- Inbound Roaming — Charges to other wireless carriers whose customers use U.S. Cellular's wireless systems when roaming
- Other Service — Primarily amounts received from the Federal USF, imputed interest recognized on equipment installment plan contracts and tower rental revenues

Equipment revenues consist of:

- Sales of wireless devices and related accessories to new and existing customers, agents, and third-party distributors

Key components of changes in the statement of operations line items were as follows:

2017-2016 Commentary

Total operating revenues

Service revenues decreased as a result of (i) a decrease in retail service revenues driven by industry-wide price competition resulting in overall price reductions on plan offerings; and (ii) a decrease in inbound roaming revenue mainly due to lower roaming rates. Such reductions were partially offset by an increase in imputed interest income due to an increase in the total number of active equipment installment plans.

U.S. Cellular offers certain promotions that provide the customer with future credits for a fixed period of time as long as service is maintained. Such credits are applied against the customer's monthly bill and recognized as a reduction to Retail service revenues when earned by the customer.

Federal USF revenue remained flat year over year at \$92 million. See the Regulatory Matters section in this MD&A for a description of the FCC Mobility Fund Phase II Order (MF2 Order) and its expected impacts on U.S. Cellular's current Federal USF support.

Equipment sales revenues increased by a modest amount year over year reflecting an increase in average revenue per device sold, a mix shift to higher end smartphone devices and, to a lesser extent, an increase in accessories revenues. Such increases were almost entirely offset by a decrease in the number of devices sold, a reduction in guarantee liability amortization for equipment installment contracts as a result of changes in plan offerings, and lower device activation fees.

System operations expenses

System operations expenses decreased in 2017 as a result of (i) a decrease in customer usage expenses driven mainly by decreased circuit costs; and (ii) a decrease in roaming expenses driven primarily by lower roaming rates, partially offset by increased data roaming usage.

Cost of equipment sold

Cost of equipment sold decreased mainly due to a reduction in the number of devices sold partially offset by a mix shift from feature phones and connected devices to higher cost smartphones. Loss on equipment, defined as Equipment sales revenues less Cost of equipment sold, was \$159 million and \$172 million for 2017 and 2016, respectively.

Selling, general and administrative expenses

Selling expenses decreased by \$26 million due to lower advertising expenses, including a decrease in sponsorship expenses related to the termination of a naming rights agreement in 2016. Such reductions were partially offset by an increase in commissions expenses.

General and administrative expenses decreased by \$42 million mainly due to lower expenses for bad debts and phone programs, along with reductions in numerous other general and administrative expense categories.

Loss on impairment of goodwill

In 2017, U.S. Cellular recorded a \$370 million loss on impairment related to goodwill. See Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements for additional information.

(Gain) loss on asset disposals, net

Loss on asset disposals, net decreased primarily as a result of fewer disposals of certain network assets.

(Gain) loss on license sales and exchanges, net

The net gains in 2017 and 2016 were due to license exchange transactions with third parties. See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for additional information.

2016-2015 Commentary**Total operating revenues**

Service revenues decreased as a result of (i) a decrease in retail service revenues and resulting ARPU and ARPA primarily driven by industry-wide price competition and discounts on shared data plans provided to customers on equipment installment plans and those providing their own device at the time of activation or renewal; (ii) the \$58 million of revenue recognized in 2015 from unredeemed rewards points upon termination of U.S. Cellular's rewards program; and (iii) a decrease in inbound roaming revenue driven by lower roaming rates. Such reductions were partially offset by an increase in average connections base and increased adoption of smartphones as well as an increase in imputed interest income recognized on equipment installment plans.

Federal USF revenue remained flat year over year at \$92 million.

Equipment sales revenues increased year over year due primarily to an increase in average revenue per device sold driven by the increase in sales under equipment installment plans, an overall increase in the number of devices sold, and a shift to smartphones. Equipment installment plan sales contributed \$710 million and \$351 million in 2016 and 2015, respectively. Equipment installment plan connections represented 44% and 27% of total postpaid connections as of December 31, 2016 and 2015, respectively.

Cost of equipment sold

Cost of equipment sold increased primarily as the result of a shift to smartphone sales and an overall increase in the number of devices sold, partially offset by a decrease in the average cost per device sold driven by lower cost smartphones and connected devices. Cost of equipment sold in 2016 included \$758 million related to equipment installment plan sales compared to \$449 million in 2015. Loss on equipment was \$172 million and \$406 million for 2016 and 2015, respectively.

(Gain) loss on asset disposals, net

Loss on asset disposals, net increased primarily as a result of more disposals of certain network assets.

(Gain) loss on sale of business and other exit costs, net

The net gain in 2015 was due primarily to a \$108 million gain recognized on the sale of towers and certain related contracts, assets and liabilities. See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for additional information.

(Gain) loss on license sales and exchanges, net

The net gains in 2016 and 2015 were due to license exchange transactions with third parties. See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for additional information.

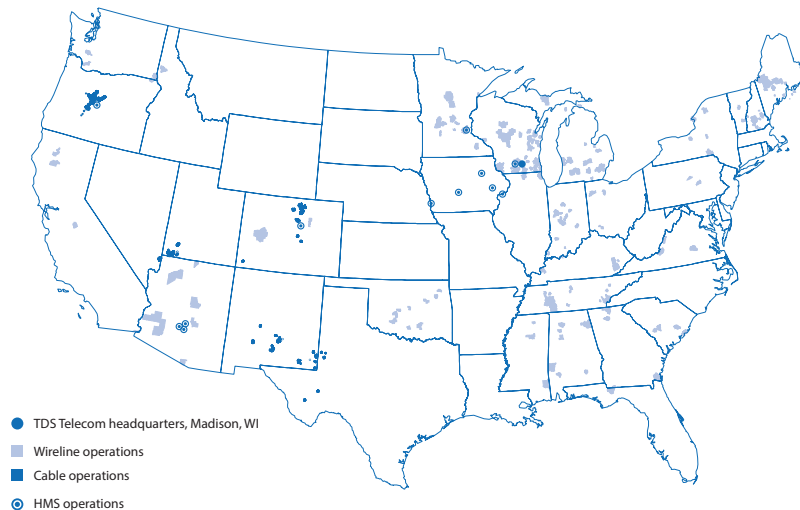


TDS TELECOM OPERATIONS

BUSINESS OVERVIEW

Through December 31, 2017, TDS Telecom operated in three segments: Wireline, Cable and HMS. The overall strategy for the Wireline and Cable businesses is to offer the best broadband connection in the market in order to capitalize on data growth and customers' needs for higher broadband speeds and leverage that growth by bundling services with video and voice. In addition, HMS provides a wide range of Information Technology (IT) services including colocation, cloud and hosting solutions, managed services, application management, and sales of IT-hardware and related maintenance and professional services.

OPERATIONS



- TDS Telecom operates in 34 states and through its Wireline and Cable operations provides broadband, video and voice services to approximately 1.2 million connections.
- Employs approximately 3,300 employees
- Wireline operates incumbent local exchange carriers (ILEC) and competitive local exchange carriers (CLEC) in 27 states.
- Cable operates primarily in Colorado, New Mexico, Texas, Utah and Oregon.
- HMS operates a total of eight data centers. It owns two data centers in Iowa, one each in Minnesota, Wisconsin, Colorado and Oregon and it leases two data centers in Arizona.

Trends and Developments

Acquisition/ Divestiture:

- In 2017 and 2016, TDS Telecom acquired certain cable companies to further grow its markets. These acquisitions collectively represented less than 1% of TDS Telecom's 2017 Total operating revenues. TDS Telecom will continue to pursue cable acquisitions that meet its criteria of having favorable competitive environments, attractive market demographics and the ability to grow broadband penetration.
- In 2017, TDS Telecom acquired the fiber assets of Sun Prairie Utilities which supports its fiber deployment strategy for growth both inside and outside the current footprint of the Wireline business in 2018.

Technology & Support Systems:

- TDS Telecom's Wireline segment continues to upgrade and expand its network to respond to the needs of its customers for greater bandwidth and advanced technologies. At December 31, 2017, fiber has been deployed to approximately 24% of ILEC service addresses. Fiber technology allows broadband speeds of up to 1 Gigabit per second (Gbps). In non-fiber markets, TDS Telecom has deployed copper bonding technology to increase data speeds up to 50 Megabits per second (Mbps) to reach approximately 26% of ILEC service addresses. TDS Telecom continues to utilize federal and state funding mechanisms in order to extend broadband service to unserved and underserved markets.
- TDS Telecom's Cable segment continues to make capacity investments in line with its strategy to increase broadband penetration in its markets. DOCSIS 3.0 technology is deployed to nearly all of Cable's service addresses which allows it to offer enhanced transmission speeds and in 2017 TDS Telecom began enabling a next generation DOCSIS 3.1 broadband network. TDS Telecom's Cable segment is offering 600 Mbps service in its largest markets.
- The HMS segment continues to invest in data center facilities based on customer demand.

Services and Products:

- TDS Telecom's Wireline segment strives to be the preferred broadband provider in its ILEC markets. As such, TDS Telecom continues to invest in its network to offer higher speed data service. As of December 31, 2017, TDS Telecom was able to provide broadband service to 96% of its ILEC physical access lines. At December 31, 2017, 68% of the service addresses in its ILEC markets had 10 Mbps or faster service available and 45% of the service addresses in its ILEC markets had 25 Mbps or faster service available.
- TDS Telecom's Wireline segment offers IPTV, branded as TDS TV, in order to leverage its high-speed network. TDS TV provides customers with connected-home DVRs, video-on-demand (VOD) and TV Everywhere. TDS Telecom offers TDS TV in 29 markets, enabling 210,000 or roughly 28% of its service addresses. Where TDS TV is not available, TDS Telecom partners with a satellite TV provider to allow for triple or double play bundling. TDS Telecom plans additional fiber expansion in 2018.
- TDS Telecom continues to focus its commercial sales on managedIP. TDS managedIP is available in wireline markets that cover 83% of all commercial customers at December 31, 2017, and is also available in certain cable markets.
- TDS Telecom's Cable segment seeks to expand broadband services and leverage that growth by bundling with video and voice services. In addition to providing enhanced broadband speeds through DOCSIS 3.0 technology, TDS Telecom also provides customers with the most up-to-date TV technology through a whole home entertainment solution branded as CatchTV.
- HMS continues to enhance its suite of hybrid-IT solutions including managed services on public clouds, hosted private clouds (its enterprise-class ReliaCloud platform) and customer-owned private clouds in addition to colocation services.

Other Developments

TDS has re-evaluated internal reporting roles with regard to its HMS business unit and, as a result, will be changing its reportable segments. Effective January 1, 2018, HMS will be considered a non-reportable segment and will no longer be reported under TDS Telecom. This change will enable TDS Telecom to continue to successfully execute on the Wireline and Cable segments' shared strategy to be the preferred service provider in its markets. Additionally, HMS will be able to leverage TDS' corporate IT resources, to improve operations and customer service, and better position itself for growth.

FINANCIAL OVERVIEW — TDS TELECOM

Components of Operating Income

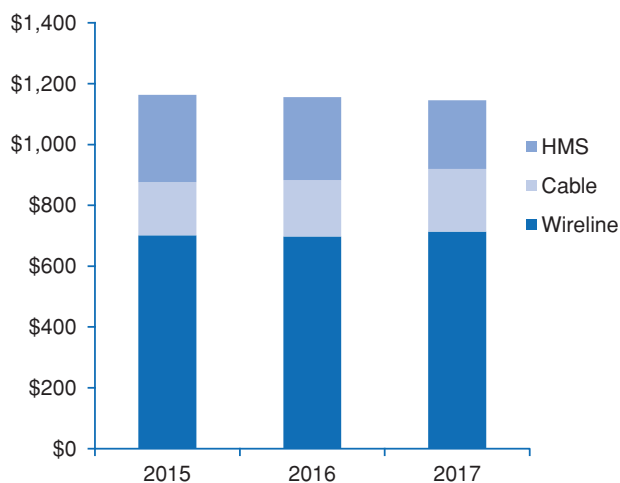
Year Ended December 31,	2017	2016	2015	2017 vs. 2016	2016 vs. 2015
(Dollars in millions)					
Operating revenues					
Wireline	\$ 714	\$ 698	\$ 701	2%	–
Cable	206	185	175	11%	6%
HMS	225	273	287	(18)%	(5)%
Intra-company elimination	(5)	(5)	(5)	(9)%	(1)%
TDS Telecom operating revenues	1,140	1,151	1,158	(1)%	(1)%
Operating expenses					
Wireline	603	618	612	(2)%	1%
Cable	198	183	169	8%	9%
HMS	282	288	302	(2)%	(5)%
Intra-company elimination	(5)	(5)	(5)	(9)%	(1)%
TDS Telecom operating expenses	1,077	1,084	1,079	(1)%	1%
TDS Telecom operating income	\$ 63	\$ 67	\$ 79	(7)%	(15)%
Net income	\$ 88	\$ 42	\$ 46	>100%	(9)%
Adjusted OIBDA (Non-GAAP) ¹	\$ 323	\$ 295	\$ 304	9%	(3)%
Adjusted EBITDA (Non-GAAP) ¹	\$ 329	\$ 298	\$ 306	10%	(3)%
Capital expenditures	\$ 215	\$ 173	\$ 219	25%	(21)%

Numbers may not foot due to rounding.

¹ Refer to supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

Operating Revenues

(Dollars in millions)



2017-2016 Commentary

Operating revenues decreased in 2017 due primarily to a decrease in HMS Equipment and product sales revenues. Increases in Wireline support revenue provided through the A-CAM program and from broadband and IPTV were partially offset by decreases in Commercial revenues. Cable revenues increased due to broadband connection growth and price increases for video and broadband services.

2016-2015 Commentary

Operating revenues decreased in 2016 due to a decrease in HMS equipment and product sales revenues and a decrease in Wireline Commercial and Wholesale revenues. The decreases were partially offset by increases in Wireline revenues from broadband and IPTV and revenues from Cable operations.

Total operating expenses

Operating expenses decreased in 2017 due primarily to a decrease in HMS Equipment cost of goods sold on reduced equipment revenues as well as lower Wireline employee costs and depreciation expense. Partially offsetting the expense decline was a \$35 million Loss on impairment of goodwill related to the HMS segment during the third quarter of 2017 and the growth in Cable operations.

Operating expenses increased in 2016 due to higher video programming costs and employee expenses. HMS equipment cost of goods sold decreased on reduced equipment revenues.



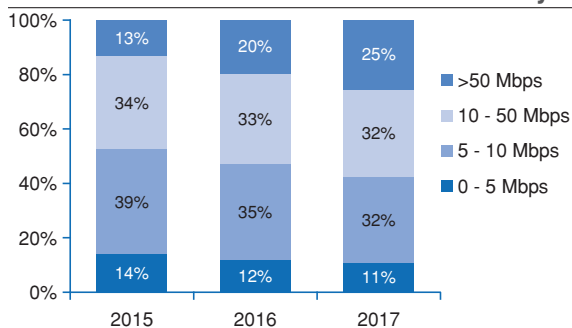
WIRELINE OPERATIONS

BUSINESS OVERVIEW

TDS Telecom's Wireline business provides broadband, video and voice services. These services are provided to residential, commercial, and wholesale customers in a mix of rural, small town and suburban markets, with the largest concentration of its customers in the Upper Midwest and the Southeast. TDS Telecom's strategy is to offer its residential customers broadband, video, and voice services through value-added bundling. In its commercial business, TDS Telecom's focus is on small- to medium-sized businesses and its sales efforts emphasize advanced IP-based voice and data services.

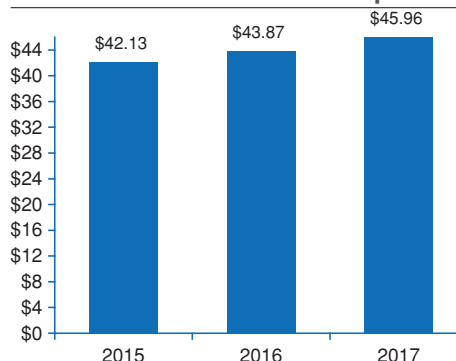
OPERATIONAL OVERVIEW

ILEC Residential Broadband Connections by Speeds



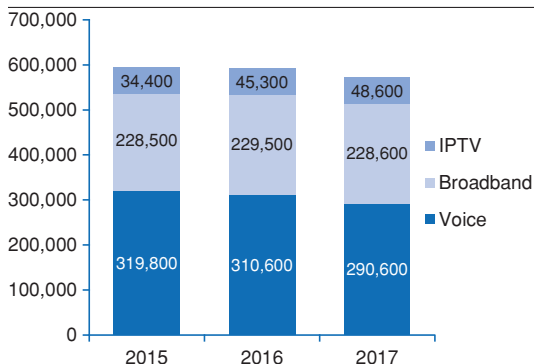
Residential broadband customers are increasingly choosing higher speeds in ILEC markets with 57% choosing speeds of 10 Mbps or greater and 25% choosing speeds of 50 Mbps or greater, driving increases in ARPU.

Wireline Residential Revenue per Connection



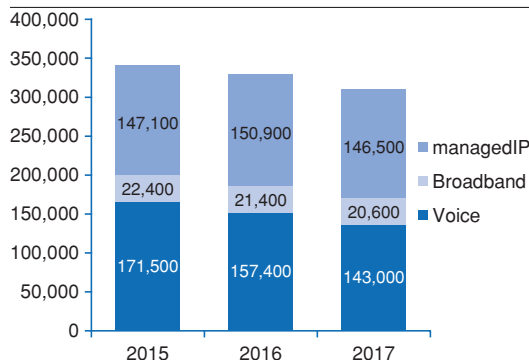
Wireline residential revenue per connection increased in 2017 due primarily to higher broadband speeds, IPTV connection growth, and price increases.

Residential Connections



Total residential connections decreased by 3% as declines in voice and broadband connections outpaced the growth in IPTV connections.

Commercial Connections



Total commercial connections decreased by 6% due primarily to a 9% decrease in voice connections, mostly in CLEC markets.

FINANCIAL OVERVIEW — WIRELINE

Components of Operating Income

Year Ended December 31,	2017	2016	2015	2017 vs. 2016	2016 vs. 2015
(Dollars in millions)					
Residential	\$ 319	\$ 309	\$ 297	3%	4%
Commercial	199	212	221	(6)%	(4)%
Wholesale	195	175	181	12%	(4)%
Service revenues	713	696	699	2%	–
Equipment and product sales	1	2	2	(33)%	(9)%
Total operating revenues	714	698	701	2%	–
Cost of services (excluding Depreciation, amortization and accretion reported below)	258	258	255	–	1%
Cost of equipment and products	2	2	2	(16)%	1%
Selling, general and administrative	191	197	194	(3)%	2%
Depreciation, amortization and accretion	151	159	166	(5)%	(4)%
(Gain) loss on asset disposals, net	1	2	5	(35)%	(62)%
(Gain) loss on sale of business and other exit costs, net	–	–	(10)	N/M	>100%
(Gain) loss on license sales and exchanges, net	–	(1)	–	N/M	N/M
Total operating expenses	603	618	612	(2)%	1%
Operating income	\$ 111	\$ 80	\$ 89	40%	(10)%
Income before income taxes	\$ 117	\$ 83	\$ 92	41%	(9)%
Adjusted OIBDA (Non-GAAP) ¹	\$ 263	\$ 240	\$ 250	10%	(4)%
Adjusted EBITDA (Non-GAAP) ¹	\$ 269	\$ 242	\$ 252	11%	(4)%
Capital expenditures	\$ 146	\$ 108	\$ 140	35%	(23)%

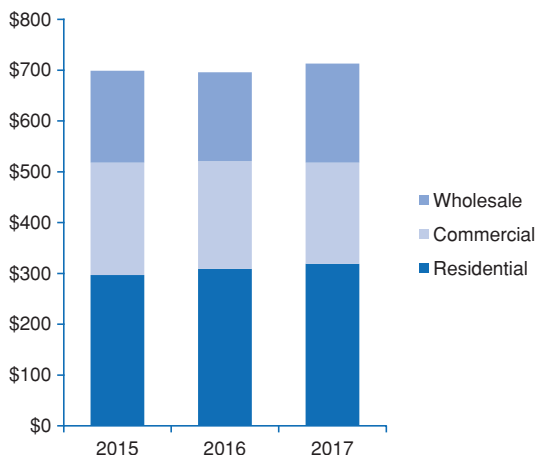
Numbers may not foot due to rounding.

N/M - Percentage change not meaningful

¹ Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

Operating Revenues

(Dollars in millions)



Residential revenues consist of:

- Broadband services, including fiber-based and other digital, premium and enhanced data services
- IPTV and satellite video
- Voice services

Commercial revenues consist of:

- TDS managedIP voice and data services
- High-speed and dedicated business internet services
- Voice services

Wholesale revenues consist of:

- Network access services to interexchange carriers for the origination and termination of interstate and intrastate long distance phone calls on TDS Telecom's network and special access services to carriers and others
- Federal and State USF support

Key components of changes in the statement of operations items were as follows:

2017-2016 Commentary

Total operating revenues

Residential revenues increased in 2017, due primarily to growth in broadband revenues. Sales of higher tiered services and price increases for broadband increased revenues \$9 million. IPTV average connections grew 13% increasing revenues \$5 million, while average voice connections declined by 4% decreasing revenues by \$6 million.

Commercial revenues decreased in 2017, due to declining connections mostly in CLEC markets.

Wholesale revenues increased in 2017, due primarily to increased support received from the A-CAM program.

In January 2017, the FCC finalized its modification of the USF high cost support program. Under this program, known as A-CAM, TDS is to receive approximately \$75 million in annual support which replaces approximately \$50 million in annual USF support received in 2016. In addition, TDS is to receive additional transition support payments in certain states. In 2017, TDS Telecom received \$82 million in support payments. The A-CAM support comes with an obligation to build defined broadband speeds to reach approximately 160,000 locations.

Cost of services

Cost of services decreased in 2017, due to reduced costs of provisioning circuits, purchasing unbundled network elements and providing long-distance services, offset by increased charges related to growth in IPTV.

Selling, general and administrative

Selling, general and administrative decreased in 2017, due to decreases in employee related expense and in contributions to the Federal Universal Service Fund.

Depreciation, amortization and accretion

Depreciation, amortization and accretion decreased in 2017 as certain assets became fully depreciated.

2016-2015 Commentary

Total operating revenues

Residential revenues increased in 2016 as growth in data and IPTV connections more than offset the decline in legacy voice connections. IPTV average connections grew 44% increasing revenues \$13 million, while average voice connections declined by 3% decreasing revenues by \$3 million. In addition, revenues increased due to 4% growth in

average revenue per residential connection driven by price increases for broadband and video services, growth in customers opting for faster broadband speeds and growth in customers selecting higher-tier IPTV packages.

Commercial revenues decreased in 2016 due to declining legacy voice and data connections offset by increases from 3% growth in average managedIP connections.

Wholesale revenues decreased in 2016 due primarily to the effect of divestitures and a 14% reduction in intra-state minutes-of-use and lower special access revenues.

Cost of services

Cost of services increased in 2016 due to increased charges related to growth in IPTV and increased employee expenses, offset by reduced costs of provisioning circuits, purchasing unbundled network elements and providing long-distance services.

Selling, general and administrative expenses

Selling, general and administrative expenses increased in 2016 due primarily to an increase in employee-related expenses.

Depreciation, amortization and accretion

Depreciation, amortization and accretion decreased in 2016 due primarily to an adjustment recorded in the second quarter of 2016 for excess depreciation attributable to prior periods.



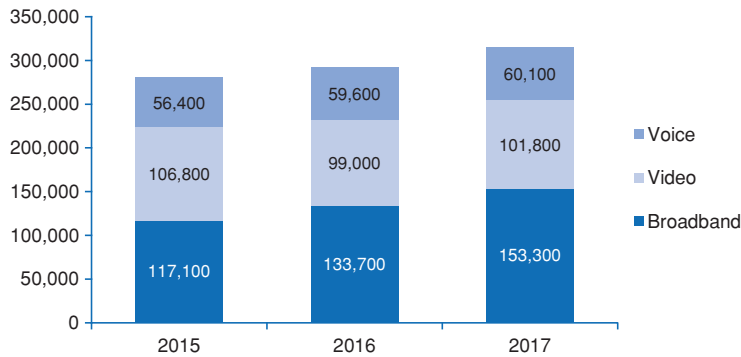
CABLE OPERATIONS

BUSINESS OVERVIEW

TDS Telecom's cable strategy is to expand its broadband services and leverage that growth by bundling with video and voice services. TDS Telecom seeks to be the leading provider of broadband services in its targeted markets by leveraging its core competencies in network management and customer focus.

OPERATIONAL OVERVIEW

Cable Connections



Cable connections grew 8% in 2017, including 12,800 connections from acquisitions. Broadband connections grew 15%, including 7,400 connections from acquisitions.

FINANCIAL OVERVIEW — CABLE

Components of Operating Income

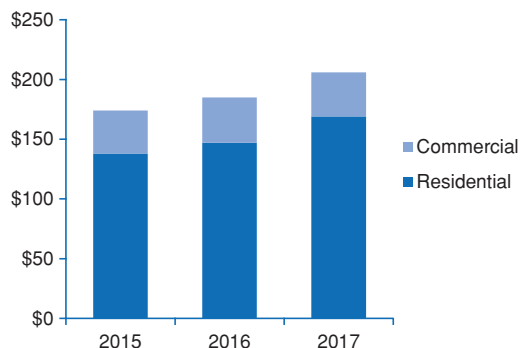
Year Ended December 31,	2017	2016	2015	2017 vs. 2016	2016 vs. 2015
(Dollars in millions)					
Residential	\$ 169	\$ 147	\$ 138	15%	6%
Commercial	37	38	36	(4)%	6%
Total operating revenues	206	185	175	11%	6%
Cost of services (excluding Depreciation, amortization and accretion reported below)	98	94	79	4%	19%
Selling, general and administrative	54	51	54	6%	(6)%
Depreciation, amortization and accretion	44	37	35	21%	4%
(Gain) loss on asset disposals, net	2	2	1	(7)%	>100%
Total operating expenses	198	183	169	8%	9%
Operating income	\$ 8	\$ 2	\$ 6	>100%	(71)%
Income before income taxes	\$ 8	\$ 2	\$ 7	>100%	(66)%
Adjusted OIBDA (Non-GAAP) ¹	\$ 54	\$ 41	\$ 42	33%	(4)%
Adjusted EBITDA (Non-GAAP) ¹	\$ 54	\$ 41	\$ 42	33%	(3)%
Capital expenditures	\$ 55	\$ 54	\$ 52	2%	5%

Numbers may not foot due to rounding.

¹ Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

Operating Revenues

(Dollars in millions)



Residential and Commercial revenues consist of:

- Broadband services, including high-speed internet, security and support services
- Video services including premium programming in HD, multi-room and TV Everywhere offerings
- Voice services

Key components of changes in the statement of operations items were as follows:

2017-2016 Commentary

Revenues increased in 2017, due primarily to growth in broadband connections and price increases. A change in classification of certain bulk broadband and video connections increased residential revenues and reduced commercial revenues by \$6 million in 2017. Cost of services increased in 2017, due primarily to increases in programming fees. Selling, general and administrative expenses increased in 2017 due to increased IT-related expenses and acquisition expense.

2016-2015 Commentary

Residential revenues increased in 2016 due primarily to an 8% increase in average residential connections partially offset by the impact of promotional pricing. Commercial revenues increased in 2016 due primarily to increases in advertising revenues and high-speed data customers. Cost of services increased in 2016 due primarily to increases in employee expenses and programming content costs. Selling, general and administrative expenses decreased in 2016 due to lower employee and customer service costs.



HMS OPERATIONS

BUSINESS OVERVIEW

Under the OneNeck IT Solutions brand, HMS offers a full-suite of IT solutions ranging from equipment resale to full management and hosting of a customer's IT infrastructure and applications. The goal of HMS operations is to create, deliver, and support a platform of IT products and services tailored for mid-market business customers.

FINANCIAL OVERVIEW — HMS

Components of Operating Loss

Year Ended December 31,	2017	2016	2015	2017 vs. 2016	2016 vs. 2015
(Dollars in millions)					
Service revenues	\$ 111	\$ 119	\$ 117	(6)%	1%
Equipment and product sales	114	155	170	(26)%	(9)%
Total operating revenues	225	273	287	(18)%	(5)%
Cost of services (excluding Depreciation, amortization and accretion reported below)	83	82	85	1%	(4)%
Cost of equipment and products	95	128	143	(26)%	(10)%
Selling, general and administrative	42	48	47	(13)%	3%
Depreciation, amortization and accretion	28	29	27	(4)%	6%
Loss on impairment of goodwill	35	—	—	N/M	N/M
Total operating expenses	282	288	302	(2)%	(5)%
Operating loss	\$ (57)	\$ (14)	\$ (15)	>(100)%	7%
Loss before income taxes	\$ (60)	\$ (18)	\$ (18)	>(100)%	(2)%
Adjusted OIBDA (Non-GAAP) ¹	\$ 6	\$ 14	\$ 12	(61)%	24%
Adjusted EBITDA (Non-GAAP) ¹	\$ 6	\$ 15	\$ 12	(59)%	26%
Capital expenditures	\$ 14	\$ 11	\$ 27	36%	(61)%

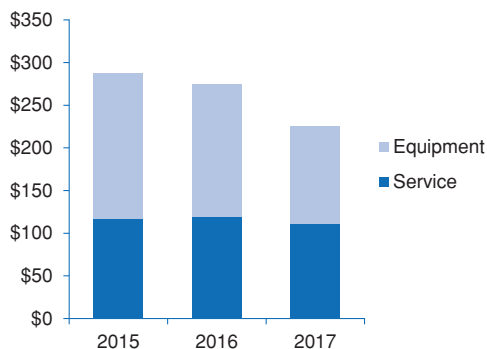
Numbers may not foot due to rounding.

N/M - Not meaningful

¹ Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

Operating Revenues

(Dollars in millions)



Service revenues consist of:

- Cloud and hosting solutions
- Managed services
- Enterprise Resource Planning (ERP) application management
- Professional services
- Co-location services
- IT hardware maintenance services

Equipment revenues consist of:

- IT hardware sales

Key components of changes in the statement of operations items were as follows:

2017-2016 Commentary

Declines in hardware maintenance and installation services resulted in a decrease in Service revenues in 2017. Equipment and product sales revenues from sales of IT infrastructure hardware solutions decreased in 2017, due primarily to lower spending by existing customers. There was a corresponding decrease in Cost of equipment and products. Cost of services increased in 2017, due to increased employee expenses and software maintenance and support costs. Selling, general and administrative expenses decreased due primarily to lower commissions associated with decreased sales.

Loss on impairment of goodwill

During the third quarter of 2017, HMS recorded a \$35 million loss on impairment related to goodwill. See Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements for additional information.

2016-2015 Commentary

Service revenues increased in 2016 due primarily to higher maintenance sales offset by lower professional services and installation revenue. Equipment and product sales revenues from sales of IT infrastructure hardware solutions decreased in 2016. There was a corresponding decrease in Cost of equipment and products. Cost of services decreased in 2016 due primarily to reduced employee expenses offset by higher maintenance and support costs. Selling, general and administrative expenses increased in 2016 due primarily to higher employee costs.

LIQUIDITY AND CAPITAL RESOURCES

Sources of Liquidity

TDS and its subsidiaries operate capital-intensive businesses. Historically, TDS has used internally-generated funds and also has obtained substantial funds from external sources for general corporate purposes. In the past, TDS' existing cash and investment balances, funds available under its revolving credit facilities, funds from other financing sources, including a term loan and other long-term debt, and cash flows from operating, certain investing and financing activities, including sales of assets or businesses, provided sufficient liquidity and financial flexibility for TDS to meet its normal day-to-day operating needs and debt service requirements, to finance the build-out and enhancement of markets and to fund acquisitions. There is no assurance that this will be the case in the future. See Market Risk for additional information regarding maturities of long-term debt.

Although TDS currently has a significant cash balance, TDS has incurred negative free cash flow at times in the past and this will occur in the future if operating results do not improve or capital expenditures are not reduced. However, TDS believes that existing cash and investment balances, funds available under its revolving credit facilities, receivables securitization facility and expected cash flows from operating and investing activities provide liquidity for TDS to meet its normal day-to-day operating needs and debt service requirements for the coming year.

TDS may require substantial additional capital for, among other uses, funding day-to-day operating needs including working capital, acquisitions of providers of cable, wireless or wireline telecommunications services, IT services or other businesses, spectrum license or system acquisitions, system development and network capacity expansion, debt service requirements, the repurchase of shares, the payment of dividends, or making additional investments. It may be necessary from time to time to increase the size of the existing revolving credit facilities, to put in place new credit facilities, or to obtain other forms of financing in order to fund potential expenditures. TDS' liquidity would be adversely affected if, among other things, TDS is unable to obtain short or long-term financing on acceptable terms, TDS makes significant spectrum license purchases, TDS makes significant business acquisitions, the LA Partnership discontinues or reduces distributions compared to historical levels, or Federal USF and/or other regulatory support payments decline. In addition, although sales of assets or businesses by TDS have been an important source of liquidity in prior periods, TDS does not expect a similar level of such sales in the future.

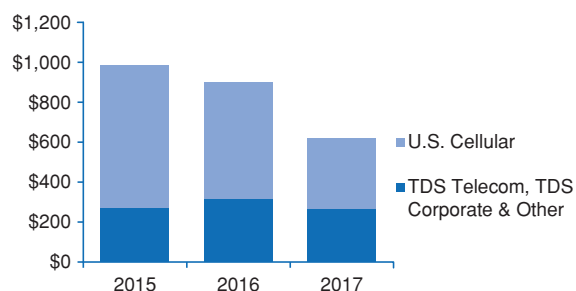
TDS' credit rating currently is sub-investment grade. There can be no assurance that sufficient funds will continue to be available to TDS or its subsidiaries on terms or at prices acceptable to TDS. Insufficient cash flows from operating activities, changes in its credit ratings, defaults of the terms of debt or credit agreements, uncertainty of access to capital, deterioration in the capital markets, reduced regulatory capital at banks which in turn limits their ability to borrow and lend, other changes in the performance of TDS or in market conditions or other factors could limit or restrict the availability of financing on terms and prices acceptable to TDS, which could require TDS to reduce its acquisition, capital expenditure and business development programs, reduce the acquisition of spectrum licenses, and/or reduce or cease share repurchases and/or the payment of dividends. TDS cannot provide assurance that circumstances that could have a material adverse effect on its liquidity or capital resources will not occur. Any of the foregoing would have an adverse impact on TDS' businesses, financial condition or results of operations.

Cash and Cash Equivalents

Cash and cash equivalents include cash and money market investments. The primary objective of TDS' Cash and cash equivalents investment activities is to preserve principal. Cash held by U.S. Cellular is for its operational needs and acquisition, capital expenditure and business development programs. TDS does not have direct access to U.S. Cellular cash unless U.S. Cellular pays a dividend on its common stock. U.S. Cellular has no current intention to pay a dividend to its shareholders.

Cash and Cash Equivalents

(Dollars in millions)



At December 31, 2017, TDS' consolidated Cash and cash equivalents totaled \$619 million compared to \$900 million and \$985 million at December 31, 2016 and December 31, 2015, respectively.

The majority of TDS' Cash and cash equivalents was held in bank deposit accounts and in money market funds that purchase only debt issued by the U.S. Treasury or U.S. government agencies across a range of eligible money market investments that may include, but are not limited to, government agency repurchase agreements, government agency debt, U.S. Treasury repurchase agreements, U.S. Treasury debt, and other securities collateralized by U.S. government obligations. TDS monitors the financial viability of the money market funds and direct investments in which it invests and believes that the credit risk associated with these investments is low.

Short-term investments

At December 31, 2017, TDS held \$100 million of Short-term investments which consisted of U.S. Treasury Bills with original maturities of six months. For these investments, TDS' objective is to earn a higher rate of return on funds that are not anticipated to be required to meet liquidity needs in the immediate future while maintaining low investment risk.

Financing

Revolving Credit Facilities

TDS and U.S. Cellular have unsecured revolving credit facilities available for general corporate purposes including acquisitions, spectrum purchases and capital expenditures, with a maximum borrowing capacity of \$400 million and \$300 million, respectively. Amounts under the revolving credit facilities may be borrowed, repaid and reborrowed from time to time until maturity in June 2021. As of December 31, 2017, there were no outstanding borrowings under the revolving credit facilities, except for letters of credit, and TDS and U.S. Cellular's unused capacity under their revolving credit facilities was \$399 million and \$298 million, respectively. The continued availability of the revolving credit facilities requires TDS and U.S. Cellular to comply with certain negative and affirmative covenants, maintain certain financial ratios and provide representations on certain matters at the time of each borrowing. TDS and U.S. Cellular believe they were in compliance as of December 31, 2017, with all of the covenants and requirements set forth in their revolving credit facilities. See Financial Covenants below.

See Note 11 — Debt in the Notes to Consolidated Financial Statements for additional information regarding the revolving credit facilities.

Term Loan

In January 2015, U.S. Cellular entered into an unsecured senior term loan credit facility. In July 2015, U.S. Cellular borrowed the full amount of \$225 million available under this facility in two separate draws. This term loan credit facility was amended and restated in June 2016. Principal reductions are due and payable in quarterly installments of \$3 million beginning in March 2016 through December 2021, and the remaining unpaid balance will be due and payable in January 2022. This facility was entered into for general corporate purposes, including working capital, spectrum purchases and capital expenditures.

The continued availability of the term loan facility requires U.S. Cellular to comply with certain negative and affirmative covenants, maintain certain financial ratios and make representations regarding certain matters at the time of each borrowing, that are substantially the same as those in the U.S. Cellular revolving credit facility described above. TDS believes that U.S. Cellular was in compliance at December 31, 2017, with all of the covenants and requirements set forth in the term loan facility. See Financial Covenants below.

See Note 11 — Debt in the Notes to Consolidated Financial Statements for additional information regarding the term loan.

Receivables Securitization Facility

In December 2017, U.S. Cellular, through its subsidiaries, entered into a \$200 million credit facility to permit securitized borrowings using its equipment installment receivables for general corporate purposes. U.S. Cellular entered into a performance guaranty whereby U.S. Cellular guarantees the performance of certain wholly-owned subsidiaries of U.S. Cellular under the facility. Amounts under the receivables securitization facility may be borrowed, repaid and reborrowed from time to time until maturity in December 2019, which may be extended from time to time as specified therein. As of December 31, 2017, there were no outstanding borrowings under the receivables securitization facility, and the entire unused capacity of \$200 million was available, subject to sufficient collateral to satisfy the asset borrowing base provisions of the facility. The continued availability of the receivables securitization facility requires U.S. Cellular to comply with certain negative and affirmative covenants, maintain certain financial ratios and provide representations on certain matters at the time of each borrowing. TDS believes that U.S. Cellular was in compliance as of December 31, 2017, with all of the covenants and requirements set forth in its receivables securitization facility. See Financial Covenants below.

See Note 11 — Debt in the Notes to Consolidated Financial Statements for additional information regarding the receivables securitization facility.

Financial Covenants

As noted above, the TDS and U.S. Cellular revolving credit facilities, the U.S. Cellular senior term loan facility and the U.S. Cellular receivables securitization facility require TDS or U.S. Cellular, as applicable, to comply with certain affirmative and negative covenants, which include certain financial covenants. In particular, under these agreements, TDS and U.S. Cellular are required to maintain the Consolidated Interest Coverage Ratio at a level not lower than 3.00 to 1.00 as of the end of any fiscal quarter. TDS and U.S. Cellular also are required to maintain the Consolidated Leverage Ratio at a level not to exceed 3.25 to 1.00 as of the end of any fiscal quarter through June 30, 2019. From July 1, 2019, and thereafter, the Consolidated Leverage Ratio is not to exceed 3.00 to 1.00 as of the end of any fiscal quarter. TDS and U.S. Cellular believe they were in compliance at December 31, 2017, with all such financial covenants.

Other Long-Term Financing

TDS and U.S. Cellular each have an effective shelf registration statement on Form S-3 to issue senior or subordinated debt securities. The proceeds from any such issuances may be used for general corporate purposes including: the possible reduction of other short-term or long-term debt, spectrum purchases, and capital expenditures; in connection with acquisition, construction and development programs; for working capital; to provide additional investments in subsidiaries; or the repurchase of shares. The TDS shelf registration permits TDS to issue at any time and from time to time senior or subordinated debt securities in one or more offerings in an indeterminate amount. The U.S. Cellular shelf registration statement permits U.S. Cellular to issue at any time and from time to time senior or subordinated debt securities in one or more offerings, up to the amount registered, which is currently \$500 million. The ability of TDS or U.S. Cellular to complete an offering pursuant to such shelf registration statements is subject to market conditions and other factors at the time.

TDS believes that it and/or its subsidiaries were in compliance as of December 31, 2017, with all covenants and other requirements set forth in the TDS and U.S. Cellular long-term debt indentures. The TDS and U.S. Cellular long-term debt indentures do not include any financial covenants. TDS and U.S. Cellular have not failed to make nor do they expect to fail to make any scheduled payment of principal or interest under such indentures.

The total long-term debt principal payments due for the next five years are \$229 million, which represent 9% of the total gross long-term debt obligation at December 31, 2017. Refer to Market Risk — Long-Term Debt for additional information regarding required principal payments and the weighted average interest rates related to TDS' Long-term debt.

TDS and U.S. Cellular, at their discretion, may from time to time seek to retire or purchase their outstanding debt through cash purchases and/or exchanges for other securities, in open market purchases, privately negotiated transactions, tender offers, exchange offers or otherwise. Such repurchases or exchanges, if any, will depend on prevailing market conditions, liquidity requirements, contractual restrictions and other factors. The amounts involved may be material.

See Note 11 — Debt in the Notes to Consolidated Financial Statements for additional information on long-term financing.

Credit Ratings

In certain circumstances, TDS' and U.S. Cellular's interest cost on their various facilities may be subject to increase if their current credit ratings from nationally recognized credit rating agencies are lowered, and may be subject to decrease if the ratings are raised. The facilities do not cease to be available nor do the maturity dates accelerate solely as a result of a downgrade in TDS' or U.S. Cellular's credit rating. However, downgrades in TDS' or U.S. Cellular's credit rating could adversely affect their ability to renew the facilities or obtain access to other credit facilities in the future.

TDS and U.S. Cellular are rated at sub-investment grade. TDS and U.S. Cellular's credit ratings as of December 31, 2017, and the dates such ratings were issued/re-affirmed were as follows:

Rating Agency	Rating	Outlook
Moody's (TDS) (updated August 2017)	Ba2	stable outlook
Moody's (U.S. Cellular) (updated August 2017)	Ba1	stable outlook
Standard & Poor's (re-affirmed October 2017)	BB	stable outlook
Fitch Ratings (re-affirmed August 2016)	BB+	stable outlook

Capital Requirements

The discussion below is intended to highlight some of the significant cash outlays expected during 2018 and beyond and to highlight the spending incurred in prior years for these items. This discussion does not include cash required to fund normal operations, and is not a comprehensive list of capital requirements. Significant cash requirements that are not routine or in the normal course of business could arise from time to time.

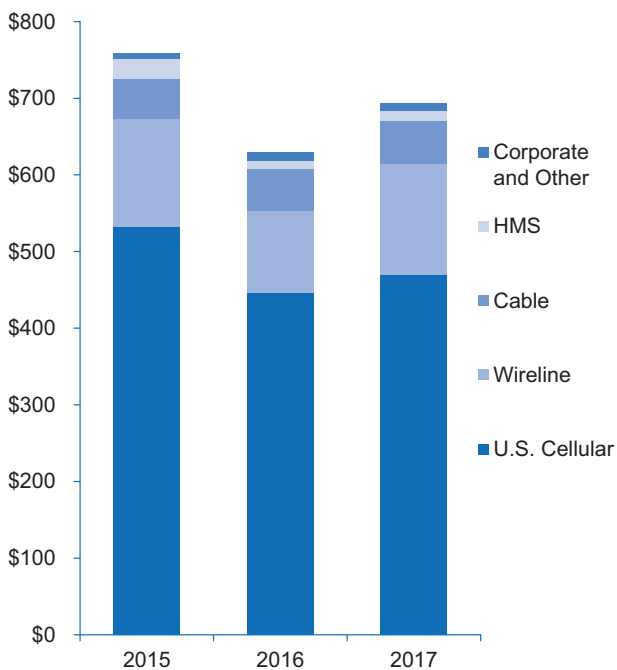
Capital Expenditures

TDS makes substantial investments to acquire, construct and upgrade telecommunications networks and facilities to remain competitive and as a basis for creating long-term value for shareholders. In recent years, rapid changes in technology and new opportunities (such as 4G LTE and VoLTE technology in the Wireless business and fiber in the Wireline business) have required substantial investments in potentially revenue-enhancing and cost-reducing upgrades to TDS' networks to remain competitive.

Capital expenditures (i.e., additions to property, plant and equipment and system development expenditures), which include the effects of accruals and capitalized interest, in 2017, 2016 and 2015 were as follows:

Capital Expenditures

(Dollars in millions)



U.S. Cellular's capital expenditures in 2017 were \$469 million compared to \$446 million in 2016 and \$533 million in 2015. In 2017, these capital expenditures were used to (i) enhance U.S. Cellular's network capabilities through the deployment of VoLTE technology; (ii) improve network support and billing related systems and platforms; and (iii) construct new cell sites.

Capital expenditures for 2018 are expected to be between \$500 million and \$550 million. These expenditures are expected to be used for the following purposes:

- Enhance network coverage by continuing to deploy VoLTE technology in certain markets and providing additional capacity to accommodate increased network usage, principally data usage, by current customers; and
- Invest in and replace end of life platforms.

TDS Telecom's capital expenditures for Wireline, Cable and HMS in 2017 were \$215 million compared to \$173 million in 2016 and \$219 million in 2015. In 2017 these capital expenditures were used primarily to upgrade broadband capacity and speeds and to support success-based growth.

Capital expenditures for Wireline and Cable in 2018 are expected to be approximately \$270 million. These expenditures are expected to be used for the following purposes:

- Maintain and enhance existing infrastructure including build-out requirements to meet state broadband and A-CAM programs;
- Upgrade broadband capacity and speeds;
- Support success-based spending to sustain IPTV, Broadband and Cable growth;
- Build Cloud TV platform; and
- Expand fiber deployment

TDS plans to finance its capital expenditures program for 2018 using primarily Cash flows from operating activities, existing cash balances and, if required, its receivables securitization and/or revolving credit facilities.

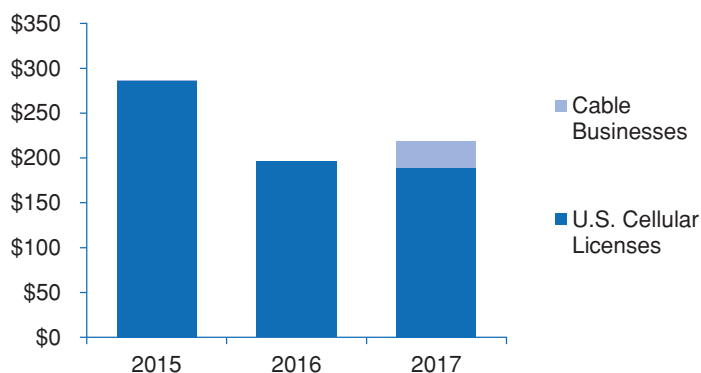
Acquisitions, Divestitures and Exchanges

TDS may be engaged from time to time in negotiations (subject to all applicable regulations) relating to the acquisition, divestiture or exchange of companies, properties, wireless spectrum and other possible businesses. In general, TDS may not disclose such transactions until there is a definitive agreement.

In July 2016, the FCC announced U.S. Cellular as a qualified bidder in the FCC's forward auction of 600 MHz spectrum licenses, referred to as Auction 1002. In April 2017, the FCC announced by way of public notice that U.S. Cellular was the winning bidder for 188 licenses for an aggregate purchase price of \$329 million. Prior to commencement of the forward auction, U.S. Cellular made an upfront payment to the FCC of \$143 million in June 2016. U.S. Cellular paid the remaining \$186 million to the FCC and was granted the licenses during the second quarter of 2017. In the table below, the \$143 million deposit is included with the 2016 Cash payments for acquisitions.

Cash Payments for Acquisitions

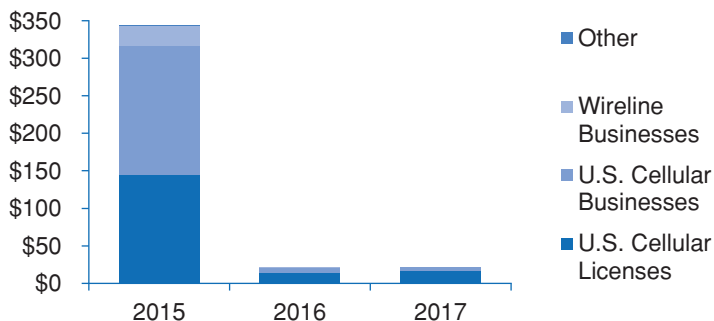
(Dollars in millions)



TDS assesses its business interests on an ongoing basis with a goal of improving the competitiveness of its operations and maximizing its long-term return on capital. As part of this strategy, TDS reviews attractive opportunities to acquire additional wireless operating markets and wireless spectrum, including pursuant to FCC auctions; and telecommunications, cable, HMS or other possible businesses.

Cash Received from Divestitures and Exchanges

(Dollars in millions)



TDS also may seek to divest outright or include in exchanges for other interests those interests that are not strategic to its long-term success.

In February 2016, U.S. Cellular entered into an agreement with a third party to exchange certain 700 MHz licenses for certain AWS and PCS licenses and \$28 million of cash. This license exchange was accomplished in two closings. The first closing occurred in the second quarter of 2016, at which time U.S. Cellular received \$13 million of cash and recorded a gain of \$9 million. The second closing occurred in the first quarter of 2017, at which time U.S. Cellular received \$15 million of cash and recorded a gain of \$17 million.

See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for additional information related to significant transactions.

Variable Interest Entities

TDS consolidates certain “variable interest entities” as defined under GAAP. See Note 14 — Variable Interest Entities in the Notes to Consolidated Financial Statements for additional information related to these variable interest entities. TDS may elect to make additional capital contributions and/or advances to these variable interest entities in future periods in order to fund their operations.

Common Share Repurchase Programs

TDS and U.S. Cellular have repurchased and expect to continue to repurchase their common shares, in each case subject to any available repurchase program. Share repurchases made under these programs were as follows:

Year Ended December 31,	Number of Shares	Average Cost Per Share	Dollar Amount (in millions)
2017			
U.S. Cellular Common Shares	—	\$ —	\$ —
TDS Common Shares	—	—	—
2016			
U.S. Cellular Common Shares	154,449	\$ 34.55	\$ 5
TDS Common Shares	111,700	22.56	3
2015			
U.S. Cellular Common Shares	177,508	\$ 34.86	\$ 6
TDS Common Shares	—	—	—

Depending on their future financial performance, construction, development and acquisition programs, and available sources of financing, TDS and U.S. Cellular may not have sufficient liquidity or capital resources to make significant share repurchases. Therefore, there is no assurance that TDS or U.S. Cellular will make any significant share repurchases in the future.

For additional information related to the current TDS and U.S. Cellular repurchase authorizations, see Note 16 — Common Shareholders’ Equity in the Notes to Consolidated Financial Statements.

Off-Balance Sheet Arrangements

TDS had no transactions, agreements or other contractual arrangements with unconsolidated entities involving “off-balance sheet arrangements,” as defined by SEC rules, that had or are reasonably likely to have a material current or future effect on its financial condition, results of operations, liquidity, capital expenditures or capital resources.

Dividends

TDS paid quarterly dividends per outstanding share of \$0.155 in 2017, \$0.148 in 2016 and \$0.141 in 2015. TDS increased the dividend per share to \$0.16 in the first quarter of 2018. See Note 16 — Common Shareholders’ Equity in the Notes to Consolidated Financial Statements for additional information. TDS has no current plans to change its policy of paying dividends.

CONTRACTUAL AND OTHER OBLIGATIONS

At December 31, 2017, the resources required for contractual obligations were as follows:

	Total	Payments Due by Period			
		Less Than 1 Year	1 - 3 Years	3 - 5 Years	More Than 5 Years
(Dollars in millions)					
Long-term debt obligations ¹	\$ 2,526	\$ 20	\$ 39	\$ 170	\$ 2,297
Interest payments on long-term debt obligations	5,851	167	335	325	5,024
Operating leases ²	1,438	160	285	227	766
Capital leases	7	1	2	1	3
Purchase obligations ³	2,110	1,258	750	67	35
	\$ 11,932	\$ 1,606	\$ 1,411	\$ 790	\$ 8,125

¹ Includes current and long-term portions of debt obligations. The total long-term debt obligation differs from Total long-term debt, net due to capital leases, debt issuance costs, unamortized discounts related to U.S. Cellular's 6.7% Senior Notes, and unamortized discounts related to the Installment payment agreement. See Note 11 — Debt in the Notes to Consolidated Financial Statements for additional information.

² Includes future lease costs related to telecommunications plant facilities, office space, retail sites, cell sites, data centers and equipment. See Note 13 — Commitments and Contingencies in the Notes to Consolidated Financial Statements for additional information.

³ Includes obligations payable under non-cancellable contracts, commitments for device purchases, network facilities and transport services, agreements for software licensing, long-term marketing programs, as well as certain agreements, to purchase goods or services, calculated based on termination fees that can be paid to exit the contract.

The table above excludes potential liabilities related to "unrecognized tax benefits" as defined by GAAP because TDS is unable to predict the outcome or period of settlement of such liabilities. Such unrecognized tax benefits were \$46 million at December 31, 2017. See Note 4 — Income Taxes in the Notes to Consolidated Financial Statements for additional information on unrecognized tax benefits.

See Note 13 — Commitments and Contingencies in the Notes to Consolidated Financial Statements for additional information.

CONSOLIDATED CASH FLOW ANALYSIS

TDS operates a capital- and marketing-intensive business. TDS makes substantial investments to acquire wireless licenses and properties and to construct and upgrade communications networks and facilities as a basis for creating long-term value for shareholders. In recent years, rapid changes in technology and new opportunities have required substantial investments in potentially revenue-enhancing and cost-reducing upgrades to TDS' networks. TDS utilizes cash on hand, cash from operating activities, cash proceeds from divestitures and dispositions of investments, short-term credit facilities and long-term debt financing to fund its acquisitions (including spectrum licenses), construction costs, operating expenses and share repurchases. Cash flows may fluctuate from quarter to quarter and year to year due to seasonality, the timing of acquisitions and divestitures, capital expenditures and other factors. The following discussion summarizes TDS' cash flow activities in 2017, 2016 and 2015.

2017 Commentary

TDS' Cash, cash equivalents and restricted cash decreased \$282 million in 2017. Net cash provided by operating activities was \$776 million in 2017 due primarily to net income of \$157 million plus non-cash items of \$742 million (including a \$262 million loss on impairment of goodwill and a \$369 million decrease in the deferred income tax liability) and distributions received from unconsolidated entities of \$136 million (including \$62 million from the LA Partnership). This was partially offset by changes in working capital items which decreased net cash by \$259 million. The decrease resulting from changes in working capital items was due primarily to a \$261 million increase in equipment installment plan receivables, which are expected to continue to increase and further require the use of working capital in the near term. TDS paid income taxes, net of refunds received, of \$56 million in 2017. After considering the bonus depreciation provision of the Tax Act, TDS does not expect to incur a significant current federal income tax liability in 2018.

Cash flows used for investing activities were \$981 million. Cash paid in 2017 for additions to property, plant and equipment totaled \$685 million. Cash paid for acquisitions and licenses was \$218 million which included the remaining \$186 million due to the FCC for licenses U.S. Cellular won in Auction 1002. Cash paid for investments was \$100 million which included the purchase of short-term Treasury bills. This was partially offset by Cash received from divestitures and exchanges of \$21 million. See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for additional information related to these transactions.

Cash flows used for financing activities were \$77 million, reflecting ordinary activity such as the payment of dividends and the scheduled repayments of debt.

2016 Commentary

TDS' Cash, cash equivalents and restricted cash decreased \$85 million in 2016. Net cash provided by operating activities was \$782 million in 2016 due primarily to net income of \$52 million plus non-cash items of \$882 million and distributions received from unconsolidated entities of \$93 million, including \$29 million in distributions from the LA Partnership. This was partially offset by changes in working capital items which decreased cash by \$245 million. The decrease in working capital items was due to a \$246 million increase in equipment installment plan receivables.

The net cash provided by operating activities was offset by cash flows used for investing activities of \$808 million. Cash paid in 2016 for additions to property, plant and equipment totaled \$636 million. In June 2016, U.S. Cellular made a deposit of \$143 million to the FCC for its participation in Auction 1002. Cash paid for acquisitions and licenses in 2016 was \$53 million partially offset by Cash received from divestitures and exchanges of \$21 million. See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for additional information related to these transactions.

Cash flows used for financing activities were \$59 million in 2016, reflecting ordinary activity such as the payment of dividends and the scheduled repayments of debt.

2015 Commentary

Cash flows from operating activities were \$790 million in 2015. An increase in cash flows from operating activities was due primarily to improved net income and working capital factors. In 2015, increased receivables related to equipment installment plans decreased cash flows from operating activities.

In December 2015, as part of the Protecting Americans from Tax Hikes Act of 2015, bonus depreciation was enacted which allowed TDS to accelerate deductions for depreciation, resulting in an overpayment of estimated tax amounts paid during 2015. Primarily as a result of this overpayment, TDS recorded \$70 million of Income taxes receivable at December 31, 2015. TDS paid income taxes, net of refunds, of \$57 million in 2015.

Cash flows used for investing activities were \$743 million in 2015. Cash paid for additions to property, plant and equipment totaled \$801 million in 2015.

During 2015, a \$278 million payment was made by Advantage Spectrum, L.P to the FCC for licenses for which it was the provisional winning bidder. See Note 6 — Acquisitions, Divestitures and Exchanges and Note 14 — Variable Interest Entities in the Notes to Consolidated Financial Statements for additional information.

Cash flows from financing activities were \$461 million in 2015. In July 2015, U.S. Cellular borrowed \$225 million on its Term Loan. In November 2015, U.S. Cellular issued \$300 million of 7.25% Senior Notes due 2064.

CONSOLIDATED BALANCE SHEET ANALYSIS

The following discussion addresses certain captions in the consolidated balance sheet and changes therein. This discussion is intended to highlight the significant changes and is not intended to fully reconcile the changes. Changes in financial condition during 2017 are as follows:

Cash and cash equivalents

See the Consolidated Cash Flow analysis above for a discussion of cash and cash equivalents.

Short-term investments

Short-term investments increased \$100 million due to the purchase of short-term investments, which consisted of U.S. Treasury Bills with original maturities of six months.

Licenses

Licenses increased \$337 million due primarily to an aggregate winning bid of \$329 million in FCC Auction 1002. These licenses were granted by the FCC in the second quarter of 2017. See Note 6 — Acquisitions, Divestitures and Exchanges in the Notes to Consolidated Financial Statements for more information about this transaction.

Goodwill

Goodwill decreased \$257 million due primarily to the impairment loss recorded in the third quarter of 2017. See Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements for additional information.

Deferred income tax liability, net

In December 2017, the Tax Act was signed into law. The major provisions of the Tax Act impacting TDS are the reduction of the U.S. federal corporate tax rate from 35% to 21% and the enactment of the bonus depreciation allowing for full expensing of qualified property. Deferred income tax liability, net, decreased \$370 million due primarily to the impact of the rate decrease on TDS' federal taxable temporary differences as well as the impairment of tax-amortizable goodwill.

APPLICATION OF CRITICAL ACCOUNTING POLICIES AND ESTIMATES

TDS prepares its consolidated financial statements in accordance with GAAP. TDS' significant accounting policies are discussed in detail in Note 1 — Summary of Significant Accounting Policies and Recent Accounting Pronouncements in the Notes to Consolidated Financial Statements.

Management believes the application of the following critical accounting policies and the estimates required by such application reflect its most significant judgments and estimates used in the preparation of TDS' consolidated financial statements. Management has discussed the development and selection of each of the following accounting policies and related estimates and disclosures with the Audit Committee of TDS' Board of Directors.

Intangible Asset Impairment

Licenses, Goodwill and Franchise rights represent a significant component of TDS' consolidated assets. These assets are considered to be indefinite-lived assets and, therefore, are not amortized but rather are tested annually for impairment. TDS performs annual impairment testing of Licenses, Goodwill and Franchise rights as of November 1 of each year or more frequently if triggering events are present. Significant negative events, such as changes in any of the assumptions described below as well as decreases in forecasted cash flows, could result in an impairment in future periods. Licenses and Franchise rights are tested for impairment at the level of reporting referred to as a unit of accounting. Goodwill is tested for impairment at the level of reporting referred to as a reporting unit.

TDS early adopted Accounting Standards Update 2017-04, *Intangibles — Goodwill and Other: Simplifying the Test for Goodwill Impairment* (ASU 2017-04), in the third quarter of 2017 and applied the guidance to interim and annual goodwill impairment tests completed in 2017. ASU 2017-04 eliminated Step 2 of the goodwill impairment test. See Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements for information related to Licenses, Goodwill and Franchise rights activity in 2017 and 2016.

Wireless Licenses — U.S. Cellular

U.S. Cellular performs its annual impairment assessment of Licenses as of November 1 of each year or more frequently if there are events or circumstances that cause U.S. Cellular to believe the carrying value of Licenses exceeds their fair value on a more likely than not basis. For purposes of its 2017 and 2016 impairment testing of Licenses, U.S. Cellular separated its FCC licenses into eight units of accounting. The eight units of accounting consisted of one unit of accounting for developed operating market licenses (built licenses) and seven geographic non-operating market licenses (unbuilt licenses). U.S. Cellular performed a quantitative impairment assessment in 2017, and a qualitative impairment assessment in 2016, to determine whether it was more likely than not that the fair value of the built and unbuilt licenses exceeded their carrying value.

In 2017, a market approach was used to value the spectrum license portfolio. The licenses were segregated by type and by similar geographical area. The market approach develops an indication of fair value by calculating estimated market values using observable license purchase and auction transactions as a basis for such values for each pool of licenses. The sum of the fair values of the discrete pools represents the estimated fair value of U.S. Cellular's licenses. Based on the assessment, the fair values of the license units of accounting exceeded their respective carrying values by amounts ranging from 16% to greater than 100%. Therefore, no impairment of licenses existed.

In 2016, U.S. Cellular considered several qualitative factors, including analysts' estimates of license values, which contemplated recent spectrum auction results, recent U.S. Cellular and other market participant transactions and other industry and market factors. Based on this assessment, U.S. Cellular concluded that it was more likely than not that the fair value of the licenses in each unit of accounting exceeded the respective carrying values. Therefore, no impairment of licenses existed and no Step 1 quantitative impairment evaluation was completed.

Goodwill — U.S. Cellular

U.S. Cellular had recorded Goodwill as a result of the acquisition of wireless companies. For purposes of the 2017 and 2016 Goodwill impairment tests, U.S. Cellular had one reporting unit.

During the third quarter of 2017, management identified a triggering event and performed an interim impairment assessment. A discounted cash flow approach was used to value the reporting unit, using value drivers and risks specific to U.S. Cellular and the industry and current economic factors. The cash flow estimates incorporated certain assumptions that market participants may use in their estimates of fair value and may not be indicative of U.S. Cellular specific assumptions. However, the discount rate used in the analysis considers any additional risk a market participant might place on integrating the U.S. Cellular reporting unit into its operations. The most significant assumptions made in this process were the revenue growth rate (shown as a compound annual growth rate in the table below), the terminal revenue growth rate, and the discount rate.

Key Assumptions

Revenue growth rate	0.8%
Terminal revenue growth rate	2.0%
Discount rate	9.5%

The results of the interim goodwill impairment test indicated that the carrying value of the U.S. Cellular reporting unit exceeded its fair value. Therefore, TDS recognized a loss on impairment of goodwill of \$227 million to reduce the carrying value of goodwill for the U.S. Cellular reporting unit to zero. Prior to 2009, TDS accounted for U.S. Cellular's share repurchases as step acquisitions, allocating a portion of the share repurchase value to TDS' Goodwill. This resulted in a difference between U.S. Cellular's Goodwill on a stand-alone basis and the TDS consolidated Goodwill related to U.S. Cellular. TDS recorded subsequent activities relating to Goodwill, including impairments and divestiture activities, for both entities based on their respective balances.

In connection with the interim goodwill impairment test in the third quarter of 2017, conditions existed that indicated U.S. Cellular's long-lived asset group might not be recoverable. As a result, the company also performed a long-lived asset recoverability assessment related to the U.S. Cellular asset group in the third quarter of 2017, and determined that no impairment of the long-lived asset group existed as of the interim assessment date.

Goodwill — TDS Telecom

TDS Telecom has recorded Goodwill as a result of the acquisition of wireline, cable and HMS businesses. For purposes of the 2017 and 2016 Goodwill impairment tests, TDS Telecom had three reporting units: Wireline, Cable and HMS.

HMS

During the third quarter of 2017, management identified a triggering event for the HMS reporting unit and performed an interim Goodwill impairment assessment. TDS used the discounted cash flow approach and guideline public company method to value the HMS reporting unit. The discounted cash flow approach uses value drivers and considers risks specific to the industry as well as current economic factors. The most significant assumptions made in this process were the revenue growth rate (shown as a compound annual growth rate in the table below), the terminal revenue growth rate and the discount rate. The guideline public company method develops an indication of fair value by calculating average market pricing multiples for selected publicly-traded companies. The developed multiples was applied to applicable

financial measures of the HMS reporting unit to determine fair value. The discounted cash flow approach and guideline public company method were weighted to arrive at the total fair value used for impairment testing. The weighting of methods was consistently applied in both 2017 and 2016.

Key Assumptions

Revenue growth rate	3.8%
Terminal revenue growth rate	2.5%
Discount rate	10.5%

The results of the interim goodwill impairment test indicated that the carrying value of the HMS reporting unit exceeded its fair value. Therefore, TDS recognized a loss on impairment of goodwill of \$35 million to reduce the carrying value of goodwill for the HMS reporting unit to zero.

Wireline and Cable

Based on the results of the TDS Telecom annual Goodwill impairment assessment performed as of November 1, 2017, the fair values of the Wireline and Cable reporting units exceeded their carrying values. Therefore, no impairment of Goodwill existed for these reporting units.

The discounted cash flow approach and guideline public company method were used to value the Wireline and Cable reporting units. The discounted cash flow approach uses value drivers and considers risks specific to the industry as well as current economic factors. The most significant assumptions made in this process were the revenue growth rate (shown as a compound annual growth rate in the table below), the terminal revenue growth rate and the discount rate. The guideline public company method develops an indication of fair value by calculating average market pricing multiples for selected publicly-traded companies. The developed multiples were applied to applicable financial measures of the respective reporting unit to determine fair value. The discounted cash flow approach and guideline public company method were weighted to arrive at the total fair value used for impairment testing. The weighting of methods was consistently applied in both 2017 and 2016.

For purposes of the discounted cash flow approach, the following table represents key assumptions used in estimating the fair value of the Wireline and Cable reporting units as of November 1, 2017. There are uncertainties associated with these key assumptions and potential events and/or circumstances that could have a negative effect on the key assumptions described below.

Key Assumptions	Wireline	Cable
Revenue growth rate ¹	(1.7)%	7.1%
Terminal revenue growth rate ¹	0.0%	2.0%
Discount rate ²	5.5%	9.0%

¹ There are risks that could negatively impact the projected revenue growth rates, including but not limited to the success of new and existing products/ services, competition, and operational difficulties. TDS Telecom's reporting units use internally generated forecasts. These internally generated forecasts consider such things as observed demand, market factors and competitive knowledge.

² The weighted average cost of capital is derived based on a set of guideline public companies and is an indicator of the cost of capital for a market participant in TDS Telecom's industries. The weighted average cost of capital may increase if borrowing costs rise, market participants weight more of their capital structure towards equity vs. debt, long-term risk free interest rates increase modestly, or other elements affecting the estimated cost of equity or debt increase. To the extent that the weighted average cost of capital of market participants increases or Wireline or Cable's risk in relation to its peers increases, this would decrease the estimated fair value of the reporting units.

Provided all other assumptions remained the same, the Wireline and Cable discount rates would have to increase to 7.4% and 9.7%, respectively, to yield estimated fair values equal to their respective carrying values at November 1, 2017. Further, provided all other assumptions remained the same, the Wireline and Cable terminal revenue growth rate assumptions would need to decrease to negative 3.0% and positive 0.9%, respectively, to yield an estimate of fair value equal to the carrying value of the respective reporting units at November 1, 2017.

The Goodwill balances of the reporting units tested for impairment as of November 1, 2017, and the percentage by which the estimated fair value of the corresponding reporting units exceeded their carrying values, as a percentage of carrying value, was as follows:

Reporting unit	Goodwill balance	Excess of estimated Fair Value over Carrying Value
(Dollars in millions)		
Wireline	\$ 409	26.1%
Cable	\$ 100	8.7%

Franchise Rights — TDS Telecom

TDS Telecom has recorded Franchise rights as a result of acquisitions of cable businesses. For purposes of its impairment testing of Franchise rights, TDS Telecom had one unit of accounting: Cable.

TDS Telecom applied the build-out (or Greenfield) method to estimate the fair value of Franchise rights in 2017 and 2016. Based on the results of this assessment, the estimated fair value of the Franchise rights exceeded their carrying value.

The following table represents key assumptions used in estimating the fair value of the Franchise rights using the build-out method as of November 1, 2017. There are uncertainties associated with these key assumptions and potential events and/or circumstances that could have a negative effect on the key assumptions are described below.

Key Assumptions

Build-out period ¹	2 years
Discount rate ²	7.0%
Terminal revenue growth rate ³	2.0%

- ¹ The build-out period represents the estimated time to perform a hypothetical build of the network. Changes in the estimated build-out period can occur as a result of changes in resources and technology. Such changes could negatively or positively impact the results.
- ² The discount rate used in the valuation of Franchise rights is less than the discount rate used in the valuation of the Cable reporting unit for purposes of Goodwill impairment testing. The discount rate used for Franchise rights includes a reduced company-specific risk premium as it is assumed a market participant starting a cable network build would construct and operate its network in an optimal manner and would not be constrained by the current network and operations associated with a mature cable company. The discount rate is estimated based on the overall risk-free interest rate adjusted for industry participant information, such as a typical capital structure (i.e., debt-equity ratio), the after-tax cost of debt, and the cost of equity. The cost of equity takes into consideration the average risk of market participants. The weighted average cost of capital may increase if borrowing costs rise, market participants weight more of their capital structure towards equity vs. debt, long-term interest rates increase modestly, or other elements affecting the estimated cost of equity increase.
- ³ There are risks that could negatively impact the projected revenue growth rates, including but not limited to the success of new and existing products/ services, competition, network buildout costs and operational difficulties. TDS Telecom's reporting units use internally generated forecasts. These internally generated forecasts consider such things as observed demand, market factors and competitive knowledge.

As of November 1, 2017, the fair value of the franchise rights exceeded their carrying value by 33.9%. Provided all other assumptions remained the same, the discount rate would have to increase to 7.5% to yield an estimated fair value of the Franchise rights that equals the carrying value at November 1, 2017. Further, provided all other assumptions remained the same, the terminal revenue growth rate assumption would need to decrease to 1.2% to yield an estimate of fair value equal to the carrying value of the Franchise rights at November 1, 2017.

Income Taxes

The amounts of income tax assets and liabilities, the related income tax provision and the amount of unrecognized tax benefits are critical accounting estimates because such amounts are significant to TDS' financial condition and results of operations.

The preparation of the consolidated financial statements requires TDS to calculate a provision for income taxes. This process involves estimating the actual current income tax liability together with assessing temporary differences resulting from the different treatment of items for tax purposes. These temporary differences result in deferred income tax assets and liabilities, which are included in TDS' Consolidated Balance Sheet. TDS must then assess the likelihood that deferred income tax assets will be realized based on future taxable income and, to the extent management believes that realization is not likely, establish a valuation allowance. Management's judgment is required in determining the provision

for income taxes, deferred income tax assets and liabilities and any valuation allowance that is established for deferred income tax assets.

TDS recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on management's judgment as to the possible outcome that has a greater than 50% cumulative likelihood of being realized upon ultimate resolution.

See Note 4 — Income Taxes in the Notes to Consolidated Financial Statements for details regarding TDS' income tax provision, deferred income taxes and liabilities, valuation allowances and unrecognized tax benefits, including information regarding estimates that impact income taxes.

Equipment Installment Plans

TDS sells devices and certain accessories to customers under installment contracts over a specified time period and, under certain of these plans, offers the customer a trade-in right. Customers on an installment contract who elect to trade-in the device will receive a credit in the amount of the outstanding balance of the installment contract, provided the customer trades-in an eligible used device in good working condition and purchases a new device from TDS. Equipment revenue under these contracts is recognized at the time the device is delivered to the end-user customer for the selling price of the device, net of any deferred imputed interest and the value of the trade-in right, if applicable. See Note 3 — Equipment Installment Plans in the Notes to Consolidated Financial Statements for additional information.

Trade-In Right

TDS values the trade-in right as a guarantee liability. This liability is initially measured at fair value and is determined based on assumptions including the probability and timing of the customer upgrading to a new device and the fair value of the device being traded-in at the time of trade-in. TDS reevaluates its estimate of the guarantee liability quarterly. A significant change in any of the aforementioned assumptions used to compute the guarantee liability would impact the amount of revenue recognized under these plans and the timing thereof. In 2017 and 2016, TDS assumed the earliest contractual time of trade-in, or the minimum amount of payments as specified in the device installment contract, for all customers on installment contracts with trade-in rights.

When a customer exercises the trade-in option, both the outstanding receivable and guarantee liability balances related to the respective devices are reduced to zero, and the value of the used device that is received in the transaction is recognized as inventory. If the customer does not exercise the trade-in option at the time of eligibility, TDS begins amortizing the liability and records this amortization as additional equipment revenue.

Interest

TDS equipment installment plans do not provide for explicit interest charges. Because equipment installment plans have a duration of greater than twelve months, TDS imputes interest using a market rate and recognizes such interest income over the duration of the plan as Services revenues. Changes in the imputed interest rate would impact the amount of revenue recognized under these plans.

Allowance for doubtful accounts

TDS maintains an allowance for doubtful accounts for estimated losses that result from the failure of its customers to make payments due under the equipment installment plans. The allowance is estimated based on historical experience, account aging and other factors that could affect collectability. When it is probable that an account balance will not be collected, the account balance is charged against the allowance for doubtful accounts. To the extent that actual loss experience differs significantly from historical trends, the required allowance amounts could differ from the original estimates.

OTHER ITEMS

Inflation

Management believes that inflation affects TDS' business to no greater or lesser extent than the general economy.

Seasonality

TDS' profitability historically has been lower in the fourth quarter as a result of U.S. Cellular's significant marketing and promotional activity during the holiday season.

Recently Issued Accounting Pronouncements

See Note 1 — Summary of Significant Accounting Policies and Recent Accounting Pronouncements in the Notes to Consolidated Financial Statements for information on recently issued accounting pronouncements.

Certain Relationships and Related Transactions

See Note 20 — Certain Relationships and Related Transactions in the Notes to Consolidated Financial Statements.

REGULATORY MATTERS

FCC Auction 1002

U.S. Cellular was a bidder in the FCC's forward auction of 600 MHz spectrum licenses, referred to as Auction 1002, which concluded in March 2017. In April 2017, the FCC announced by way of public notice that U.S. Cellular was the winning bidder for 188 licenses for an aggregate purchase price of \$329 million. Prior to commencement of the forward auction, U.S. Cellular made an upfront payment to the FCC of \$143 million in June 2016. U.S. Cellular paid the remaining \$186 million to the FCC and was granted the licenses during the second quarter of 2017.

FCC Mobility Fund Phase II Order

In October 2011, the FCC adopted its USF/Intercarrier Compensation Transformation Order (USF Order). Pursuant to this order, U.S. Cellular's then current Federal USF support was to be phased down at the rate of 20% per year beginning July 1, 2012. The USF Order contemplated the establishment of a new mobile USF program and provided for a pause in the phase down if that program was not timely implemented by July 2014. The Phase II Connect America Mobility Fund (MF2) was not operational as of July 2014 and, therefore, as provided by the USF Order, the phase down was suspended at 60% of the baseline amount until such time as the FCC had taken steps to establish the MF2. In February 2017, the FCC adopted the MF2 Order addressing the framework for MF2 and the resumption of the phase down. The MF2 Order establishes a support fund of \$453 million annually for ten years to be distributed through a market-based, multi-round reverse auction. For areas that receive support under MF2, legacy support to MF2 Auction winners will terminate and be replaced with MF2 support effective the first day of the month following release of the public notice closing the auction. Legacy support in areas where the legacy support recipient is not an MF2 winner will be subject to phase down over two years unless there is no winner in a particular census block, in which case it will be continued for one legacy support recipient only. The MF2 Order further states that the phase down of legacy support for areas that were not eligible for support under MF2 will commence on the first day of the month following the completion of the auction and will conclude two years later.

In August 2017, the FCC adopted the MF2 Challenge Process Order, which laid out procedures for establishing areas that would be eligible for support under the MF2 program. This will include a collection process to be followed by a challenge window, a challenge response window, and finally adjudication of any coverage disputes. In September 2017, the FCC issued a public notice initiating the collection of 4G LTE coverage data. Responses submitting the collected data were due on January 4, 2018.

In October 2017, the FCC issued a public notice proposing and seeking comment on detailed challenge procedures and a schedule for the challenge process. Under this proposal, the challenge window would begin no earlier than four weeks after the January 4 collection date and would last 150 days. No earlier than five business days after the close of the challenge window, the FCC would open a thirty-day challenge response window. Following the challenge response window, the FCC would adjudicate any disputes. This entire process must be completed before an auction can be commenced.

U.S. Cellular cannot predict at this time when the MF2 auction will occur, when the phase down period for its existing legacy support from the Federal USF will commence, or whether the MF2 auction will provide opportunities to U.S. Cellular to offset any loss in existing support. However, the FCC indicated that it currently plans to hold the MF2 auction in 2018. U.S. Cellular currently expects that its legacy support will continue at the 2017 level through 2018.

FCC Rulemaking — Restoring Internet Freedom

In December 2017, the FCC approved rules reversing or revising decisions made in the FCC's 2015 Open Internet and Title II Order (Restoring Internet Freedom). The 2017 action reversed the FCC's 2015 decision to reclassify Broadband Internet Access Services as telecommunications services subject to regulation under Title II of the Telecommunications Act. The 2017 action also reversed the FCC's 2015 restrictions on blocking, throttling and paid prioritization, and modified transparency rules relating to such practices. Parties are pursuing legal proceedings challenging the 2017 actions. TDS cannot predict the outcome of these proceedings or the impact on its business.

Action is being pursued in a number of states, including certain states in which TDS operates, to adopt state laws that would be intended to reinstate aspects of the foregoing net neutrality regulations that were reversed or revised by the FCC in 2017. To the extent such laws are enacted, it is expected that legal proceedings will be pursued challenging such laws. TDS cannot predict the outcome of these proceedings or the impact on its business.

Other Regulatory Matters

In March 2017, both the U.S. Senate and U.S. House of Representatives approved a joint resolution under the Congressional Review Act to repeal regulations approved by the FCC in October 2016 governing consumer privacy by broadband Internet service providers. The President approved the resolution in April 2017. The repeal removed the pending FCC rules, which would have gone into effect in 2017 and reinstated the prior set of rules that apply to telecommunication services. The privacy broadband rules would have prohibited broadband internet service providers from sharing certain sensitive customer information unless customers opted in and expressly agreed to share such information. TDS will continue to protect customer information in accordance with Section 222 of the Telecommunications Act and applicable regulations and also its publicly available Privacy Statement until such time as it becomes subject to other privacy requirements.

PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995 SAFE HARBOR CAUTIONARY STATEMENT

This Management's Discussion and Analysis of Financial Condition and Results of Operations and other sections of this Annual Report contain statements that are not based on historical facts, including the words "believes," "anticipates," "estimates," "expects," "plans," "intends," "projects" and similar expressions. These statements constitute and represent "forward-looking statements" as this term is defined in the Private Securities Litigation Reform Act of 1995. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, events or developments to be significantly different from any future results, events or developments expressed or implied by such forward-looking statements. Each of the following risks could have a material adverse effect on TDS' business, financial condition or results of operations. However, such factors are not necessarily all of the important factors that could cause actual results, performance or achievements to differ materially from those expressed in, or implied by, the forward-looking statements contained in this document. Other unknown or unpredictable factors also could have material adverse effects on future results, performance or achievements. Such risks, uncertainties and other factors include, but are not limited to, the following risks. See "Risk Factors" in TDS' Annual Report on Form 10-K for the year ended December 31, 2017, for a further discussion of these risks. TDS undertakes no obligation to update publicly any forward-looking statements whether as a result of new information, future events or otherwise. Readers should evaluate any statements in light of these important factors.

- *Intense competition in the markets in which TDS operates could adversely affect TDS' revenues or increase its costs to compete.*
- *A failure by TDS to successfully execute its business strategy (including planned acquisitions, spectrum acquisitions, divestitures and exchanges) or allocate resources or capital could have an adverse effect on TDS' business, financial condition or results of operations.*
- *Uncertainty in TDS' future cash flow and liquidity or in the ability to access capital, deterioration in the capital markets, other changes in TDS' performance or market conditions, changes in TDS' credit ratings or other factors could limit or restrict the availability of financing on terms and prices acceptable to TDS, which could require TDS to reduce its construction, development or acquisition programs, reduce the acquisition of spectrum licenses, and/or reduce or cease share repurchases and/or the payment of dividends.*
- *TDS has a significant amount of indebtedness which could adversely affect its financial performance and in turn adversely affect its ability to make payments on its indebtedness, comply with terms of debt covenants and incur additional debt.*
- *Changes in roaming practices or other factors could cause TDS' roaming revenues to decline from current levels, roaming expenses to increase from current levels and/or impact TDS' ability to service its customers in geographic areas where TDS does not have its own network, which could have an adverse effect on TDS' business, financial condition or results of operations.*
- *A failure by TDS to obtain access to adequate radio spectrum to meet current or anticipated future needs and/or to accurately predict future needs for radio spectrum could have an adverse effect on TDS' business, financial condition or results of operations.*
- *To the extent conducted by the FCC, TDS may participate in FCC auctions for additional spectrum or for funding in certain Universal Service programs in the future directly or indirectly and, during certain periods, will be subject to the FCC's anti-collusion rules, which could have an adverse effect on TDS.*
- *Failure by TDS to timely or fully comply with any existing applicable legislative and/or regulatory requirements or changes thereto could adversely affect TDS' business, financial condition or results of operations.*
- *An inability to attract people of outstanding potential, to develop their potential through education and assignments, and to retain them by keeping them engaged, challenged and properly rewarded could have an adverse effect on TDS' business, financial condition or results of operations.*
- *TDS' assets and revenue are concentrated primarily in the U.S. telecommunications industry. Consequently, its operating results may fluctuate based on factors related primarily to conditions in this industry.*

- *TDS' smaller scale relative to larger competitors that may have greater financial and other resources than TDS could cause TDS to be unable to compete successfully, which could adversely affect its business, financial condition or results of operations.*
- *Changes in various business factors, including changes in demand, customer preferences and perceptions, price competition, churn from customer switching activity and other factors, could have an adverse effect on TDS' business, financial condition or results of operations.*
- *Advances or changes in technology could render certain technologies used by TDS obsolete, could put TDS at a competitive disadvantage, could reduce TDS' revenues or could increase its costs of doing business.*
- *Complexities associated with deploying new technologies present substantial risk and TDS' investments in unproven technologies may not produce the benefits that TDS expects.*
- *TDS receives regulatory support and is subject to numerous surcharges and fees from federal, state and local governments, and the applicability and the amount of the support and fees are subject to great uncertainty, which could have an adverse effect on TDS' business, financial condition or results of operations.*
- *Performance under device purchase agreements could have a material adverse impact on TDS' business, financial condition or results of operations.*
- *Changes in TDS' enterprise value, changes in the market supply or demand for wireless licenses, wireline or cable markets or IT service providers, adverse developments in the businesses or the industries in which TDS is involved and/or other factors could require TDS to recognize impairments in the carrying value of its licenses, goodwill, franchise rights and/or physical assets or require re-evaluation of the indefinite-lived nature of such assets.*
- *Costs, integration problems or other factors associated with acquisitions, divestitures or exchanges of properties or licenses and/or expansion of TDS' businesses could have an adverse effect on TDS' business, financial condition or results of operations.*
- *A failure by TDS to complete significant network construction and systems implementation activities as part of its plans to improve the quality, coverage, capabilities and capacity of its network, support and other systems and infrastructure could have an adverse effect on its operations.*
- *Difficulties involving third parties with which TDS does business, including changes in TDS' relationships with or financial or operational difficulties of key suppliers or independent agents and third party national retailers who market TDS' services, could adversely affect TDS' business, financial condition or results of operations.*
- *TDS has significant investments in entities that it does not control. Losses in the value of such investments could have an adverse effect on TDS' financial condition or results of operations.*
- *A failure by TDS to maintain flexible and capable telecommunication networks or information technology, or a material disruption thereof, could have an adverse effect on TDS' business, financial condition or results of operations.*
- *TDS has experienced and, in the future, expects to experience cyber-attacks or other breaches of network or information technology security of varying degrees on a regular basis, which could have an adverse effect on TDS' business, financial condition or results of operations.*
- *The market price of TDS' Common Shares is subject to fluctuations due to a variety of factors.*
- *Changes in facts or circumstances, including new or additional information, could require TDS to record charges relating to adjustments of amounts reflected in the financial statements, which could have an adverse effect on TDS' business, financial condition or results of operations.*
- *Disruption in credit or other financial markets, a deterioration of U.S. or global economic conditions or other events could, among other things, impede TDS' access to or increase the cost of financing its operating and investment activities and/or result in reduced revenues and lower operating income and cash flows, which would have an adverse effect on TDS' business, financial condition or results of operations.*
- *Settlements, judgments, restraints on its current or future manner of doing business and/or legal costs resulting from pending and future litigation could have an adverse effect on TDS' business, financial condition or results of operations.*

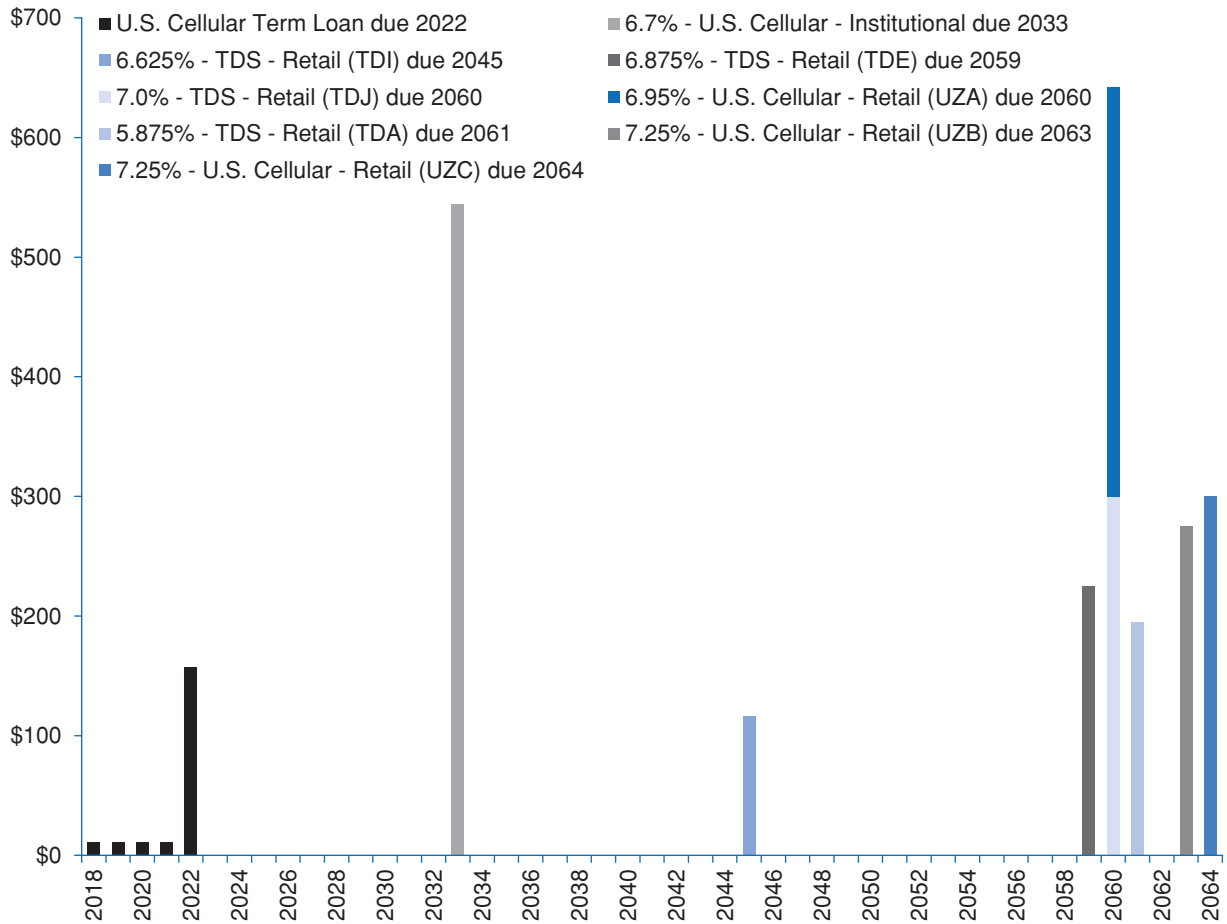
- *The possible development of adverse precedent in litigation or conclusions in professional studies to the effect that radio frequency emissions from wireless devices and/or cell sites cause harmful health consequences, including cancer or tumors, or may interfere with various electronic medical devices such as pacemakers, could have an adverse effect on TDS' wireless business, financial condition or results of operations.*
- *Claims of infringement of intellectual property and proprietary rights of others, primarily involving patent infringement claims, could prevent TDS from using necessary technology to provide products or services or subject TDS to expensive intellectual property litigation or monetary penalties, which could have an adverse effect on TDS' business, financial condition or results of operations.*
- *Certain matters, such as control by the TDS Voting Trust and provisions in the TDS Restated Certificate of Incorporation, may serve to discourage or make more difficult a change in control of TDS.*
- *Any of the foregoing events or other events could cause revenues, earnings, capital expenditures and/or any other financial or statistical information to vary from TDS' forward-looking estimates by a material amount.*

MARKET RISK

Long-Term Debt

As of December 31, 2017, the majority of TDS' long-term debt was in the form of fixed-rate notes with remaining maturities ranging up to 47 years. Fluctuations in market interest rates can lead to significant fluctuations in the fair value of these fixed-rate notes.

The following chart presents the scheduled principal payments on long-term debt by maturity dates at December 31, 2017:



The following table presents the scheduled principal payments on long-term debt, capital lease obligations, and other installment arrangements, and the related weighted average interest rates by maturity dates at December 31, 2017:

	Principal Payments Due by Period	
	Long-Term Debt Obligations ¹	Weighted-Avg. Interest Rates on Long-Term Debt Obligations ²
(Dollars in millions)		
2018	\$ 21	2.8%
2019	21	2.8%
2020	21	2.7%
2021	13	4.2%
2022	158	4.3%
After 5 years	2,298	6.9%
Total	\$ 2,532	6.6%

¹ The total long-term debt obligation differs from Long-term debt in the Consolidated Balance Sheet due to unamortized debt issuance costs on all non-revolving debt instruments, unamortized discounts related to U.S. Cellular's 6.7% Senior Notes, and unamortized discounts related to the Installment payment agreement. See Note 11 — Debt in the Notes to Consolidated Financial Statements for additional information.

² Represents the weighted average interest rates at December 31, 2017, for debt maturing in the respective periods.

Fair Value of Long-Term Debt

At December 31, 2017 and 2016, the estimated fair value of long-term debt obligations, excluding capital lease obligations, other installment arrangements, the current portion of such long-term debt and debt financing costs, was \$2,499 million and \$2,480 million, respectively. See Note 2 — Fair Value Measurements in the Notes to Consolidated Financial Statements for additional information.

Other Market Risk Sensitive Instruments

The substantial majority of TDS' other market risk sensitive instruments (as defined in item 305 of SEC Regulation S-K) are short-term, including Cash and cash equivalents. Accordingly, TDS believes that a significant change in interest rates would not have a material effect on such other market risk sensitive instruments.

SUPPLEMENTAL INFORMATION RELATING TO NON-GAAP FINANCIAL MEASURES

TDS sometimes uses information derived from consolidated financial information but not presented in its financial statements prepared in accordance with U.S. GAAP to evaluate the performance of its business. Certain of these measures are considered "non-GAAP financial measures" under U.S. Securities and Exchange Commission Rules. Specifically, TDS has referred to the following measures in this Form 10-K Report:

- EBITDA
- Adjusted EBITDA
- Adjusted OIBDA
- Free cash flow
- Postpaid ABPU
- Postpaid ABPA
- Goodwill impairment, net of tax and noncontrolling interests and Tax Act, net of noncontrolling interests

Following are explanations of each of these measures:

EBITDA, Adjusted EBITDA and Adjusted OIBDA

EBITDA, Adjusted EBITDA and Adjusted OIBDA are defined as net income adjusted for the items set forth in the reconciliation below. EBITDA, Adjusted EBITDA and Adjusted OIBDA are not measures of financial performance under GAAP and should not be considered as alternatives to Net income or Cash flows from operating activities, as indicators of cash flows or as measures of liquidity. TDS does not intend to imply that any such items set forth in the reconciliation below are non-recurring, infrequent or unusual; such items may occur in the future.

Adjusted EBITDA is a segment measure reported to the chief operating decision maker for purposes of making decisions about allocating resources to the segments and assessing their performance. See Note 18 — Business Segment Information in the Notes to Consolidated Financial Statements for additional information.

Management uses Adjusted EBITDA and Adjusted OIBDA as measurements of profitability and, therefore, reconciliations to applicable GAAP income measures are deemed appropriate. Management believes Adjusted EBITDA and Adjusted OIBDA are useful measures of TDS' operating results before significant recurring non-cash charges, gains and losses, and other items as presented below as they provide additional relevant and useful information to investors and other users of TDS' financial data in evaluating the effectiveness of its operations and underlying business trends in a manner that is consistent with management's evaluation of business performance. Adjusted EBITDA shows adjusted earnings before interest, taxes, depreciation, amortization and accretion, and gains and losses, while Adjusted OIBDA reduces this measure further to exclude Equity in earnings of unconsolidated entities and Interest and dividend income in order to more effectively show the performance of operating activities excluding investment activities. The following table reconciles EBITDA, Adjusted EBITDA and Adjusted OIBDA to the corresponding GAAP measure, Net income or Income (loss) before income taxes. Income tax expense is not provided at the individual segment level for Wireline, Cable and HMS. TDS calculates income tax expense for TDS Telecom in total.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

TDS — CONSOLIDATED	2017		2016		2015	
(Dollars in millions)						
Net income (GAAP)	\$	157	\$	52	\$	263
Add back or deduct:						
Income tax expense (benefit)		(279)		40		172
Interest expense		170		170		142
Depreciation, amortization and accretion		844		850		844
EBITDA (Non-GAAP)		892		1,112		1,421
Add back or deduct:						
Loss on impairment of goodwill		262		—		—
(Gain) loss on sale of business and other exit costs, net		(1)		(1)		(136)
(Gain) loss on license sales and exchanges, net		(22)		(20)		(147)
(Gain) loss on asset disposals, net		21		27		22
Adjusted EBITDA (Non-GAAP)		1,152		1,118		1,160
Deduct:						
Equity in earnings of unconsolidated entities		137		140		140
Interest and dividend income		15		11		5
Other, net		1		—		1
Adjusted OIBDA (Non-GAAP)		999		967		1,014
Deduct:						
Depreciation, amortization and accretion		844		850		844
Loss on impairment of goodwill		262		—		—
(Gain) loss on sale of business and other exit costs, net		(1)		(1)		(136)
(Gain) loss on license sales and exchanges, net		(22)		(20)		(147)
(Gain) loss on asset disposals, net		21		27		22
Operating income (loss) (GAAP)	\$	(105)	\$	111	\$	431
U.S. CELLULAR						
(Dollars in millions)						
Net income (GAAP)	\$	15	\$	49	\$	247
Add back or deduct:						
Income tax expense (benefit)		(287)		33		157
Interest expense		113		113		86
Depreciation, amortization and accretion		615		618		607
EBITDA (Non-GAAP)		456		813		1,097
Add back or deduct:						
Loss on impairment of goodwill		370		—		—
(Gain) loss on sale of business and other exit costs, net		(1)		—		(114)
(Gain) loss on license sales and exchanges, net		(22)		(19)		(147)
(Gain) loss on asset disposals, net		17		22		16
Adjusted EBITDA (Non-GAAP)		820		816		852
Deduct:						
Equity in earnings of unconsolidated entities		137		140		140
Interest and dividend income		8		6		2
Other, net		—		1		1
Adjusted OIBDA (Non-GAAP)		675		669		709
Deduct:						
Depreciation, amortization and accretion		615		618		607
Loss on impairment of goodwill		370		—		—
(Gain) loss on sale of business and other exit costs, net		(1)		—		(114)
(Gain) loss on license sales and exchanges, net		(22)		(19)		(147)
(Gain) loss on asset disposals, net		17		22		16
Operating income (loss) (GAAP)	\$	(304)	\$	48	\$	347

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

TDS TELECOM	2017	2016	2015
(Dollars in millions)			
Net income (GAAP)	\$ 88	\$ 42	\$ 46
Add back or deduct:			
Income tax expense (benefit)	(24)	25	35
Interest expense	4	3	1
Depreciation, amortization and accretion	222	224	228
EBITDA (Non-GAAP)	291	294	310
Add back or deduct:			
Loss on impairment of goodwill	35	–	–
(Gain) loss on sale of business and other exit costs, net	–	–	(10)
(Gain) loss on license sales and exchanges, net	–	(1)	–
(Gain) loss on asset disposals, net	4	4	6
Adjusted EBITDA (Non-GAAP)	329	298	306
Deduct:			
Interest and dividend income	5	3	2
Adjusted OIBDA (Non-GAAP)	323	295	304
Deduct:			
Depreciation, amortization and accretion	222	224	228
Loss on impairment of goodwill	35	–	–
(Gain) loss on sale of business and other exit costs, net	–	–	(10)
(Gain) loss on license sales and exchanges, net	–	(1)	–
(Gain) loss on asset disposals, net	4	4	6
Operating income (GAAP)	\$ 63	\$ 67	\$ 79

Numbers may not foot due to rounding.

WIRELINE	2017	2016	2015
(Dollars in millions)			
Income before income taxes (GAAP)	\$ 117	\$ 83	\$ 92
Add back or deduct:			
Interest expense	–	(1)	(1)
Depreciation, amortization and accretion	151	159	166
EBITDA (Non-GAAP)	267	241	257
Add back or deduct:			
(Gain) loss on sale of business and other exit costs, net	–	–	(10)
(Gain) loss on license sales and exchanges, net	–	(1)	–
(Gain) loss on asset disposals, net	1	2	5
Adjusted EBITDA (Non-GAAP)	269	242	252
Deduct:			
Interest and dividend income	5	3	2
Adjusted OIBDA (Non-GAAP)	263	240	250
Deduct:			
Depreciation, amortization and accretion	151	159	166
(Gain) loss on sale of business and other exit costs, net	–	–	(10)
(Gain) loss on license sales and exchanges, net	–	(1)	–
(Gain) loss on asset disposals, net	1	2	5
Operating income (GAAP)	\$ 111	\$ 80	\$ 89

Numbers may not foot due to rounding.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

CABLE	2017	2016	2015
(Dollars in millions)			
Income before income taxes (GAAP)	\$ 8	\$ 2	\$ 7
Add back:			
Depreciation, amortization and accretion	44	37	35
EBITDA (Non-GAAP)	52	38	42
Add back or deduct:			
(Gain) loss on asset disposals, net	2	2	1
Adjusted EBITDA (Non-GAAP)	54	41	42
Deduct:			
Interest and dividend income	-	-	-
Adjusted OIBDA (Non-GAAP)	54	41	42
Deduct:			
Depreciation, amortization and accretion	44	37	35
(Gain) loss on asset disposals, net	2	2	1
Operating income (GAAP)	\$ 8	\$ 2	\$ 6

Numbers may not foot due to rounding.

HMS	2017	2016	2015
(Dollars in millions)			
Loss before income taxes (GAAP)	\$ (60)	\$ (18)	\$ (18)
Add back:			
Interest expense	4	4	2
Depreciation, amortization and accretion	28	29	27
EBITDA (Non-GAAP)	(29)	14	11
Add back or deduct:			
Loss on impairment of goodwill	35	-	-
Adjusted EBITDA (Non-GAAP)	6	15	12
Deduct:			
Interest and dividend income	-	-	-
Adjusted OIBDA (Non-GAAP)	6	14	12
Deduct:			
Depreciation, amortization and accretion	28	29	27
Loss on impairment of goodwill	35	-	-
Operating loss (GAAP)	\$ (57)	\$ (14)	\$ (15)

Numbers may not foot due to rounding.

Free Cash Flow

The following table presents Free cash flow. Management uses Free cash flow as a liquidity measure and it is defined as Cash flows from operating activities less Cash paid for additions to property, plant and equipment. Free cash flow is a non-GAAP financial measure which TDS believes may be useful to investors and other users of its financial information in evaluating liquidity, specifically, the amount of net cash generated by business operations after deducting Cash paid for additions to property, plant and equipment.

	2017	2016	2015
(Dollars in millions)			
Cash flows from operating activities (GAAP)	\$ 776	\$ 782	\$ 790
Less: Cash paid for additions to property, plant and equipment	685	636	801
Free cash flow (Non-GAAP)	\$ 91	\$ 146	\$ (11)

Postpaid ABPU and Postpaid ABPA

U.S. Cellular presents Postpaid ABPU and Postpaid ABPA to reflect the revenue shift from Service revenues to Equipment and product sales resulting from the increased adoption of equipment installment plans. Postpaid ABPU and Postpaid ABPA, as previously defined, are non-GAAP financial measures which U.S. Cellular believes are useful to investors and other users of its financial information in showing trends in both service and equipment and product sales revenues received from customers.

	2017		2016		2015
(Dollars and connection counts in millions)					
<u>Calculation of Postpaid ARPU</u>					
Postpaid service revenues	\$ 2,389	\$	2,517	\$	2,831
Average number of postpaid connections	4.49		4.47		4.33
Number of months in period	12		12		12
Postpaid ARPU (GAAP metric)	\$ 44.38	\$	46.96	\$	54.50
<u>Calculation of Postpaid ABPU</u>					
Postpaid service revenues	\$ 2,389	\$	2,517	\$	2,831
Equipment installment plan billings	604		491		272
Total billings to postpaid connections	\$ 2,993	\$	3,008	\$	3,103
Average number of postpaid connections	4.49		4.47		4.33
Number of months in period	12		12		12
Postpaid ABPU (Non-GAAP metric)	\$ 55.60	\$	56.12	\$	59.74
<u>Calculation of Postpaid ARPA</u>					
Postpaid service revenues	\$ 2,389	\$	2,517	\$	2,831
Average number of postpaid accounts	1.67		1.69		1.72
Number of months in period	12		12		12
Postpaid ARPA (GAAP metric)	\$ 118.96	\$	124.09	\$	136.90
<u>Calculation of Postpaid ABPA</u>					
Postpaid service revenues	\$ 2,389	\$	2,517	\$	2,831
Equipment installment plan billings	604		491		272
Total billings to postpaid accounts	\$ 2,993	\$	3,008	\$	3,103
Average number of postpaid accounts	1.67		1.69		1.72
Number of months in period	12		12		12
Postpaid ABPA (Non-GAAP metric)	\$ 149.02	\$	148.29	\$	150.07

Goodwill impairment, net of tax and noncontrolling interests and Tax Act, net of noncontrolling interests

The following non-GAAP financial measures isolate the total effects on net income of the current period loss on impairment of goodwill including tax, enactment of the Tax Act and other related tax effects and noncontrolling interests impacts. The loss on impairment of goodwill, which occurred in the third quarter of 2017, and the deferred tax benefit are being excluded in this presentation, as they cause current operations of TDS not to be comparable with prior periods. TDS believes these measures may be useful to investors and other users of its financial information to assist in comparing the current period financial results with periods that were not impacted by such items.

	2017		2016		2015
(Dollars in millions)					
Goodwill impairment:					
Loss on impairment of goodwill	\$ 262	\$	-	\$	-
Tax benefit on impairment of goodwill ¹	(22)		-		-
Net income (loss) attributable to noncontrolling interests, net of tax ² . . .	(52)		-		-
Goodwill impairment, net of tax and noncontrolling interests (Non-GAAP) .	188		-		-
Tax Act:					
Effect of the Tax Act	(327)		-		-
Noncontrolling interests impact ²	45		-		-
Tax Act, net of noncontrolling interests (Non-GAAP)	(282)	\$	-	\$	-

¹ Tax benefit represents the amount associated with the tax-amortizable portion of the loss on goodwill impairment.

² Noncontrolling interests, net of tax, includes noncontrolling public shareholders' share in U.S. Cellular for similar adjustments recorded on U.S. Cellular's consolidated financial statements.

FINANCIAL STATEMENTS

Year Ended December 31,	2017	2016	2015
(Dollars and shares in millions, except per share amounts)			
Operating revenues			
Service	\$ 3,979	\$ 4,050	\$ 4,356
Equipment and product sales	1,065	1,105	854
Total operating revenues	5,044	5,155	5,210
Operating expenses			
Cost of services (excluding Depreciation, amortization and accretion reported below)	1,164	1,189	1,191
Cost of equipment and products	1,195	1,240	1,224
Selling, general and administrative	1,686	1,759	1,781
Depreciation, amortization and accretion	844	850	844
Loss on impairment of goodwill	262	—	—
(Gain) loss on asset disposals, net	21	27	22
(Gain) loss on sale of business and other exit costs, net	(1)	(1)	(136)
(Gain) loss on license sales and exchanges, net	(22)	(20)	(147)
Total operating expenses	5,149	5,044	4,779
Operating income (loss)	(105)	111	431
Investment and other income (expense)			
Equity in earnings of unconsolidated entities	137	140	140
Interest and dividend income	15	11	5
Interest expense	(170)	(170)	(142)
Other, net	1	—	1
Total investment and other income (expense)	(17)	(19)	4
Income (loss) before income taxes	(122)	92	435
Income tax expense (benefit)	(279)	40	172
Net income	157	52	263
Less: Net income attributable to noncontrolling interests, net of tax	4	9	44
Net income attributable to TDS shareholders	153	43	219
TDS Preferred dividend requirement	—	—	—
Net income available to TDS common shareholders	\$ 153	\$ 43	\$ 219
Basic weighted average shares outstanding	111	110	109
Basic earnings per share available to TDS common shareholders	\$ 1.39	\$ 0.39	\$ 2.02
Diluted weighted average shares outstanding	112	111	110
Diluted earnings per share available to TDS common shareholders	\$ 1.37	\$ 0.39	\$ 1.98
Dividends per share to TDS shareholders	\$ 0.62	\$ 0.59	\$ 0.56

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

TELEPHONE AND DATA SYSTEMS, INC. CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Net income	\$ 157	\$ 52	\$ 263
Net change in accumulated other comprehensive income			
Change in net unrealized gain on equity investments	-	1	-
Change related to retirement plan			
Amounts included in net periodic benefit cost for the period			
Net actuarial gains	2	2	1
Prior service cost	(3)	-	(7)
Amortization of prior service cost	(2)	(2)	(3)
Change in deferred income taxes	(3)	-	(9)
Change related to retirement plan, net of tax	1	-	3
Change related to retirement plan, net of tax	(2)	-	(6)
Net change in accumulated other comprehensive income	(2)	1	(6)
Comprehensive income	155	53	257
Less: Net income attributable to noncontrolling interests, net of tax	4	9	44
Comprehensive income attributable to TDS shareholders	\$ 151	\$ 44	\$ 213

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

TELEPHONE AND DATA SYSTEMS, INC. CONSOLIDATED STATEMENT OF CASH FLOWS

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Cash flows from operating activities			
Net income	\$ 157	\$ 52	\$ 263
Add (deduct) adjustments to reconcile net income to net cash flows from operating activities			
Depreciation, amortization and accretion	844	850	844
Bad debts expense	95	102	112
Stock-based compensation expense	46	42	40
Deferred income taxes, net	(369)	22	71
Equity in earnings of unconsolidated entities	(137)	(140)	(140)
Distributions from unconsolidated entities	136	93	60
Loss on impairment of goodwill	262	—	—
(Gain) loss on asset disposals, net	21	27	22
(Gain) loss on sale of business and other exit costs, net	(1)	(1)	(136)
(Gain) loss on license sales and exchanges, net	(22)	(20)	(147)
Noncash interest	3	3	3
Other operating activities	—	(3)	(1)
Changes in assets and liabilities from operations			
Accounts receivable	(61)	(23)	(120)
Equipment installment plans receivable	(261)	(246)	(134)
Inventory	6	4	115
Accounts payable	(7)	36	7
Customer deposits and deferred revenues	(4)	(52)	(36)
Accrued taxes	37	60	38
Accrued interest	—	(1)	4
Other assets and liabilities	31	(23)	(75)
Net cash provided by operating activities	776	782	790
Cash flows from investing activities			
Cash paid for additions to property, plant and equipment	(685)	(636)	(801)
Cash paid for acquisitions and licenses	(218)	(53)	(287)
Cash paid for investments	(100)	—	—
Cash received from divestitures and exchanges	21	21	343
Federal Communications Commission deposit	—	(143)	—
Other investing activities	1	3	2
Net cash used in investing activities	(981)	(808)	(743)
Cash flows from financing activities			
Issuance of long-term debt	—	2	525
Repayment of long-term debt	(17)	(12)	(1)
TDS Common Shares reissued for benefit plans, net of tax payments	4	9	13
U.S. Cellular Common Shares reissued for benefit plans, net of tax payments	1	6	2
Repurchase of TDS Common Shares	—	(3)	—
Repurchase of U.S. Cellular Common Shares	—	(5)	(6)
Repurchase of TDS Preferred Shares	(1)	—	—
Dividends paid to TDS shareholders	(69)	(65)	(61)
Payment of debt issuance costs	(2)	(4)	(13)
Distributions to noncontrolling interests	(4)	(1)	(6)
Payments to acquire additional interest in subsidiaries	—	—	(4)
Other financing activities	11	14	12
Net cash provided by (used in) financing activities	(77)	(59)	461
Net increase (decrease) in cash, cash equivalents and restricted cash	(282)	(85)	508
Cash, cash equivalents and restricted cash			
Beginning of period	904	989	481
End of period	\$ 622	\$ 904	\$ 989

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

TELEPHONE AND DATA SYSTEMS, INC. CONSOLIDATED BALANCE SHEET — ASSETS

December 31,	2017	2016
(Dollars in millions)		
Current assets		
Cash and cash equivalents	\$ 619	\$ 900
Short-term investments	100	—
Accounts receivable		
Customers and agents, less allowances of \$61 and \$55, respectively	861	753
Other, less allowances of \$2 and \$2, respectively	100	98
Inventory, net	145	151
Prepaid expenses	112	115
Income taxes receivable	2	10
Other current assets	27	32
Total current assets	1,966	2,059
Assets held for sale	10	8
Licenses	2,232	1,895
Goodwill	509	766
Franchise rights	255	244
Other intangible assets, net of accumulated amortization of \$142 and \$153, respectively	24	33
Investments in unconsolidated entities	453	451
Other investments	—	1
Property, plant and equipment		
In service and under construction	11,742	11,679
Less: Accumulated depreciation and amortization	8,318	8,124
Property, plant and equipment, net	3,424	3,555
Other assets and deferred charges	422	434
Total assets ¹	\$ 9,295	\$ 9,446

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

TELEPHONE AND DATA SYSTEMS, INC. CONSOLIDATED BALANCE SHEET — LIABILITIES AND EQUITY

December 31,	2017	2016
(Dollars and shares in millions, except per share amounts)		
Current liabilities		
Current portion of long-term debt	\$ 20	\$ 12
Accounts payable	368	365
Customer deposits and deferred revenues	223	229
Accrued interest	11	11
Accrued taxes	64	44
Accrued compensation	126	127
Other current liabilities	106	99
Total current liabilities	918	887
Deferred liabilities and credits		
Deferred income tax liability, net	552	922
Other deferred liabilities and credits	495	453
Long-term debt, net	2,437	2,433
Commitments and contingencies		
Noncontrolling interests with redemption features	1	1
Equity		
TDS shareholders' equity		
Series A Common and Common Shares		
Authorized 290 shares (25 Series A Common and 265 Common Shares)		
Issued 133 shares (7 Series A Common and 126 Common Shares)		
Outstanding 111 shares (7 Series A Common and 104 Common Shares) and 110 shares (7 Series A Common and 103 Common Shares), respectively		
Par Value (\$.01 per share)	1	1
Capital in excess of par value	2,413	2,386
Treasury shares, at cost, 22 and 23 Common Shares, respectively	(669)	(698)
Accumulated other comprehensive income (loss)	(1)	1
Retained earnings	2,525	2,454
Total TDS shareholders' equity	4,269	4,144
Preferred shares	—	1
Noncontrolling interests	623	605
Total equity	4,892	4,750
Total liabilities and equity ¹	\$ 9,295	\$ 9,446

¹ The consolidated total assets as of December 31, 2017 and 2016, include assets held by consolidated variable interest entities (VIEs) of \$765 million and \$804 million, respectively, which are not available to be used to settle the obligations of TDS. The consolidated total liabilities as of December 31, 2017 and 2016, include certain liabilities of consolidated VIEs of \$21 million and \$17 million, respectively, for which the creditors of the VIEs have no recourse to the general credit of TDS. See Note 14 — Variable Interest Entities for additional information.

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

TELEPHONE AND DATA SYSTEMS, INC. CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

TDS Shareholders

	Series A Common and Common shares	Capital in excess of par value	Treasury shares	Accumulated other comprehensive income	Retained earnings	Total TDS shareholders' equity	Preferred shares	Noncontrolling interests	Total equity
December 31, 2016	1 \$	2,386 \$	(698) \$	1 \$	2,454 \$	4,144 \$	1 \$	605 \$	4,750 \$
Net income attributable to TDS shareholders	—	—	—	—	153	153	—	—	153
Net income attributable to noncontrolling interests classified as equity	—	—	—	—	—	—	—	4	4
Other comprehensive loss	—	—	—	(2)	—	(2)	—	—	(2)
TDS Common and Series A Common share dividends	—	—	—	—	(69)	(69)	—	—	(69)
Redemption of Preferred shares	—	—	—	—	—	—	(1)	—	(1)
Dividend reinvestment plan	—	—	13	—	(1)	12	—	—	12
Incentive and compensation plans	—	—	16	—	(12)	4	—	—	4
Adjust investment in subsidiaries for repurchases, issuances and other compensation plans	—	13	—	—	—	13	—	18	31
Stock-based compensation awards	—	14	—	—	—	14	—	—	14
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(4)	(4)
December 31, 2017	1 \$	2,413 \$	(669) \$	(1) \$	2,525 \$	4,269 \$	— \$	623 \$	4,892 \$

(Dollars in millions)

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

TELEPHONE AND DATA SYSTEMS, INC. CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

TDS Shareholders

	Series A Common and Common shares	Capital in excess of par value	Treasury shares	Accumulated other comprehensive income	Retained earnings	Total TDS shareholders' equity	Preferred shares	Noncontrolling interests	Total equity
December 31, 2015	1	2,365	(727)	—	2,487	4,126	1	577	4,704
Net income attributable to TDS shareholders	—	—	—	43	—	43	—	—	43
Net income attributable to noncontrolling interests classified as equity	—	—	—	—	—	—	—	9	9
Other comprehensive income	—	—	—	1	—	1	—	—	1
TDS Common and Series A Common Share dividends	—	—	—	—	(65)	(65)	—	—	(65)
Repurchase of Common Shares	—	—	(3)	—	(3)	(3)	—	—	(3)
Dividend reinvestment plan	—	2	7	—	—	9	—	—	9
Incentive and compensation plans	—	(5)	25	—	(11)	9	—	—	9
Adjust investment in subsidiaries for repurchases, issuances and other compensation plans	—	7	—	—	—	7	—	20	27
Stock-based compensation awards	—	16	—	—	—	16	—	—	16
Tax windfall (shortfall) from stock awards	—	1	—	—	—	1	—	—	1
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(1)	(1)
December 31, 2016	1	2,386	(698)	1	2,454	4,144	1	605	4,750

(Dollars in millions)

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

TELEPHONE AND DATA SYSTEMS, INC. CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

TDS Shareholders

	Series A Common and Common Shares	Capital in excess of par value	Treasury shares	Accumulated other comprehensive income (loss)	Retained earnings	Total TDS shareholders' equity	Preferred shares	Noncontrolling interests	Total equity
December 31, 2014	1	\$ 2,337	\$ (748)	\$ 6	\$ 2,330	\$ 3,926	\$ 1	\$ 528	\$ 4,455
Net income attributable to TDS shareholders	—	—	—	—	219	219	—	—	219
Net income attributable to noncontrolling interests classified as equity	—	—	—	—	—	—	—	38	38
Other comprehensive loss	—	—	—	(6)	—	(6)	—	—	(6)
TDS Common and Series A Common Share dividends	—	—	—	—	(61)	(61)	—	—	(61)
Dividend reinvestment plan	—	3	9	—	—	12	—	—	12
Incentive and compensation plans	—	2	12	—	(1)	13	—	—	13
Adjust investment in subsidiaries for repurchases, issuances and other compensation plans	—	7	—	—	—	7	—	12	19
Stock-based compensation awards	—	16	—	—	—	16	—	—	16
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(1)	(1)
December 31, 2015	1	\$ 2,365	\$ (727)	\$ —	\$ 2,487	\$ 4,126	\$ 1	\$ 577	\$ 4,704

(Dollars in millions)

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

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND RECENT ACCOUNTING PRONOUNCEMENTS

Nature of Operations

Telephone and Data Systems, Inc. (TDS) is a diversified telecommunications company providing high-quality communications services to customers with approximately 5.1 million wireless connections and 1.2 million wireline and cable connections at December 31, 2017. TDS conducts all of its wireless operations through its 83%-owned subsidiary, United States Cellular Corporation (U.S. Cellular). TDS provides wireline services, cable services and hosted and managed services through its wholly-owned subsidiary, TDS Telecommunications LLC (TDS Telecom).

TDS has the following reportable segments: U.S. Cellular, Wireline, Cable, and Hosted and Managed Services (HMS) operations. TDS' non-reportable other business activities are presented as "Corporate, Eliminations and Other". This includes the operations of TDS' wholly-owned subsidiary Suttle-Straus, Inc. (Suttle-Straus). Suttle-Straus' financial results were not significant to TDS' operations. All of TDS' segments operate only in the United States, except for HMS, which includes an insignificant foreign operation. See Note 18 — Business Segment Information for summary financial information on each business segment.

Principles of Consolidation

The accounting policies of TDS conform to accounting principles generally accepted in the United States of America (GAAP) as set forth in the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC). Unless otherwise specified, references to accounting provisions and GAAP in these notes refer to the requirements of the FASB ASC. The consolidated financial statements include the accounts of TDS and subsidiaries in which it has a controlling financial interest, including U.S. Cellular and TDS Telecom. In addition, the consolidated financial statements include certain entities in which TDS has a variable interest that requires consolidation under GAAP. See Note 14 — Variable Interest Entities for additional information relating to TDS' VIEs. All material intercompany accounts and transactions have been eliminated.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect (a) the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and (b) the reported amounts of revenues and expenses during the reported period. Actual results could differ from those estimates. Significant estimates are involved in accounting for goodwill and indefinite-lived intangible assets, income taxes and equipment installment plans.

Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents include cash and highly liquid investments with original maturities of three months or less. Cash and cash equivalents subject to contractual restrictions are classified as restricted cash. On December 31, 2017, TDS early adopted the provisions of Accounting Standards Update 2016-18, *Statement of Cash Flows: Restricted Cash* (ASU 2016-18) on a retrospective basis which requires that restricted cash be presented with cash and cash equivalents in the statement of cash flows. The following table provides a reconciliation of Cash and cash equivalents and restricted cash reported in the Consolidated Balance Sheet to the total of the amounts in the Consolidated Statement of Cash Flows.

December 31,	2017	2016	2015
(Dollars in millions)			
Cash and cash equivalents	\$ 619	\$ 900	\$ 985
Restricted cash included in:			
Other current assets	3	3	3
Other assets and deferred charges	—	1	1
Cash, cash equivalents and restricted cash in the statement of cash flows	\$ 622	\$ 904	\$ 989

Accounts Receivable and Allowance for Doubtful Accounts

U.S. Cellular's accounts receivable consist primarily of amounts owed by customers for wireless services and equipment sales, including sales of certain devices under equipment installment plans, by agents for sales of equipment to them and by other wireless carriers whose customers have used U.S. Cellular's wireless systems.

TDS Telecom's accounts receivable primarily consist of amounts owed by customers for services and products provided, by state and federal funds including Alternative Connect America Cost Model (A-CAM), and by interexchange carriers for long-distance traffic, which TDS Telecom carries on its network.

The allowance for doubtful accounts is the best estimate of the amount of probable credit losses related to existing billed and unbilled accounts receivable. The allowance is estimated based on historical experience, account aging and other factors that could affect collectability. Accounts receivable balances are reviewed on either an aggregate or individual basis for collectability depending on the type of receivable. When it is probable that an account balance will not be collected, the account balance is charged against the allowance for doubtful accounts. TDS does not have any off-balance sheet credit exposure related to its customers.

Inventory

Inventory consists primarily of wireless devices stated at the lower of cost or net realizable value. Cost is determined using the first-in, first-out method. Net realizable value is determined by reference to the stand-alone selling price.

Licenses

Licenses consist of direct and incremental costs incurred in acquiring Federal Communications Commission (FCC) licenses to provide wireless service.

TDS has determined that wireless licenses are indefinite-lived intangible assets and, therefore, not subject to amortization based on the following factors:

- Radio spectrum is not a depleting asset.
- The ability to use radio spectrum is not limited to any one technology.
- TDS and its consolidated subsidiaries are licensed to use radio spectrum through the FCC licensing process, which enables licensees to utilize specified portions of the spectrum for the provision of wireless service.
- TDS and its consolidated subsidiaries are required to renew their FCC licenses every ten years or, in some cases, every fifteen years. To date, all of TDS' license renewal applications have been granted by the FCC. Generally, license renewal applications filed by licensees otherwise in compliance with FCC regulations are routinely granted. If, however, a license renewal application is challenged either by a competing applicant for the license or by a petition to deny the renewal application, the license will be renewed if the licensee can demonstrate its entitlement to a "renewal expectancy." Licensees are entitled to such an expectancy if they can demonstrate to the FCC that they have provided "substantial service" during their license term and have "substantially complied" with FCC rules and policies. TDS believes that it is probable that its future license renewal applications will be granted.

U.S. Cellular performs its annual impairment assessment of Licenses as of November 1 of each year or more frequently if there are events or circumstances that cause U.S. Cellular to believe the carrying value of Licenses exceeds their fair value on a more likely than not basis. For purposes of its 2017 and 2016 impairment testing of Licenses, U.S. Cellular separated its FCC licenses into eight units of accounting. The eight units of accounting consisted of one unit of accounting for developed operating market licenses (built licenses) and seven geographic non-operating market licenses (unbuilt licenses).

U.S. Cellular performed a quantitative impairment assessment in 2017 and a qualitative impairment assessment in 2016 to determine whether it was more likely than not that the fair value of the built and unbuilt licenses exceed their carrying value. Based on the impairment assessments performed, U.S. Cellular did not have an impairment of its Licenses in 2017 or 2016. See Note 7 — Intangible Assets for additional details related to Licenses.

Goodwill

TDS early adopted Accounting Standards Update 2017-04, *Intangibles — Goodwill and Other: Simplifying the Test for Goodwill Impairment* (ASU 2017-04), in the third quarter of 2017 and applied the guidance to interim and annual goodwill

impairment tests completed in 2017. ASU 2017-04 eliminated Step 2 of the goodwill impairment test. Goodwill impairment loss will be measured as the amount by which a reporting unit's carrying amount exceeds its fair value. The loss recognized should not exceed the total amount of goodwill allocated to that reporting unit.

TDS has Goodwill as a result of its acquisition of wireline and cable companies and, as previously reported, had Goodwill as a result of its acquisitions of wireless and HMS companies. Under previous business combination guidance in effect prior to 2009, step acquisitions related to U.S. Cellular's repurchase of its common shares also contributed to TDS' goodwill balance. Such Goodwill represents the excess of the total purchase price over the fair value of net assets acquired in these transactions. TDS performs its annual impairment assessment of Goodwill as of November 1 of each year or more frequently if there are events or circumstances that cause TDS to believe the carrying value of individual reporting units exceeds their respective fair values on a more likely than not basis.

See Note 7 — Intangible Assets for additional details related to Goodwill.

U.S. Cellular

For purposes of conducting its impairment tests, U.S. Cellular identified one reporting unit. During the third quarter of 2017, management identified a triggering event and performed an interim impairment assessment. A discounted cash flow approach was used to value the reporting unit for purposes of the Goodwill impairment review. As a result of the interim impairment assessment, TDS recorded a loss on impairment of \$227 million. U.S. Cellular did not have an impairment of its Goodwill in 2016.

TDS Telecom

For purposes of conducting its Goodwill impairment tests for 2017 and 2016, TDS Telecom identified three reporting units: Wireline, Cable and HMS. During the third quarter of 2017, management identified a triggering event for the HMS reporting unit and performed an interim impairment assessment. As a result of the interim impairment assessment, TDS recorded a loss on impairment of \$35 million. HMS did not have an impairment of its Goodwill in 2016.

The discounted cash flow approach and guideline public company method were used to value the HMS reporting unit for the interim impairment assessment as well as the Wireline and Cable reporting units for the annual impairment tests.

Based on the annual impairment assessments performed as of November 1, 2017, Wireline and Cable did not have an impairment of their Goodwill in 2017 or 2016.

Franchise Rights

TDS Telecom has Franchise rights as a result of acquisitions of cable businesses. Franchise rights are intangible assets that provide their holder with the right to operate a business in a certain geographical location as sanctioned by the franchiser, usually a government agency. Cable Franchise rights are generally granted for ten year periods and may be renewed for additional terms upon approval by the granting authority. TDS anticipates that future renewals of its Franchise rights will be granted. At December 31, 2017, TDS has determined that Franchise rights are indefinite-lived intangible assets and, therefore, not subject to amortization because TDS expects both the renewal by the granting authorities and the cash flows generated from the Franchise rights to continue indefinitely. TDS periodically evaluates the remaining useful life of these intangible assets to determine whether events and circumstances continue to support an indefinite useful life.

TDS Telecom performs its annual impairment assessment of Franchise rights as of November 1 of each year or more frequently if there are events or circumstances that cause TDS Telecom to believe the carrying value of Franchise rights exceeds their fair value on a more likely than not basis. TDS Telecom tests Franchise rights for impairment at a unit of accounting level for which one unit of accounting was identified and estimates the fair value of Franchise rights for purposes of impairment testing using the build-out (or Greenfield) method. Based on the impairment assessments performed, TDS Telecom did not have an impairment of Franchise rights in 2017 or 2016. See Note 7 — Intangible Assets for additional details related to Franchise rights.

Investments in Unconsolidated Entities

For its equity method investments for which financial information is readily available, TDS records its equity in the earnings of the entity in the current period. For its equity method investments for which financial information is not readily available, TDS records its equity in the earnings of the entity on a one quarter lag basis.

Property, Plant and Equipment

Property, plant and equipment is stated at the original cost of construction or purchase including capitalized costs of certain taxes, payroll-related expenses, interest and estimated costs to remove the assets.

Expenditures that enhance the productive capacity of assets in service or extend their useful lives are capitalized and depreciated. Expenditures for maintenance and repairs of assets in service are charged to Cost of services or Selling, general and administrative expense, as applicable. Retirements and disposals of assets are recorded by removing the original cost of the asset (along with the related accumulated depreciation) from plant in service and charging it, together with net removal costs (removal costs less an applicable accrued asset retirement obligation and salvage value realized), to (Gain) loss on asset disposals, net. Certain Wireline segment assets use the group depreciation method. Accordingly, when a group method asset is retired in the ordinary course of business, the original cost of the asset and accumulated depreciation in the same amount are removed, with no gain or loss recognized on the disposition.

TDS capitalizes certain costs of developing new information systems. Software licenses are accounted for as the acquisition of an intangible asset and the incurrence of a liability to the extent that the license fees are not fully paid at acquisition.

Depreciation and Amortization

Depreciation is provided using the straight-line method over the estimated useful life of the related asset, except for certain Wireline segment assets, which use the group depreciation method. The group depreciation method develops a depreciation rate based on the average useful life of a specific group of assets, rather than each asset individually. TDS depreciates leasehold improvement assets associated with leased properties over periods ranging from one to thirty years; such periods approximate the shorter of the assets' economic lives or the specific lease terms.

Useful lives of specific assets are reviewed throughout the year to determine if changes in technology or other business changes would warrant accelerating the depreciation of those specific assets. There were no material changes to useful lives of property, plant and equipment in 2017, 2016 or 2015. See Note 9 — Property, Plant and Equipment for additional details related to useful lives.

Impairment of Long-Lived Assets

TDS reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the assets might be impaired.

U.S. Cellular has one asset group for purposes of assessing property, plant and equipment for impairment based on the fact that the individual operating markets are reliant on centrally operated data centers, mobile telephone switching offices and a network operations center. U.S. Cellular operates a single integrated national wireless network. The cash flows generated by this single interdependent network represent the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets and liabilities.

TDS Telecom has three asset groups of Wireline, Cable and HMS for purposes of assessing property, plant and equipment for impairment based on their integrated network, assets and operations. The cash flows generated by each of these groups is the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets and liabilities.

In connection with the interim goodwill impairment test in the third quarter of 2017, conditions existed that indicated U.S. Cellular's long-lived asset group might not be recoverable. As a result, the company performed a long-lived asset recoverability assessment related to the U.S. Cellular asset group and determined that no impairment of the long-lived asset group existed.

Agent Liabilities

U.S. Cellular has relationships with agents, which are independent businesses that obtain customers for U.S. Cellular. At December 31, 2017 and 2016, U.S. Cellular had accrued \$61 million and \$57 million, respectively, for amounts due to agents. These amounts are included in Other current liabilities in the Consolidated Balance Sheet.

Debt Issuance Costs

Debt issuance costs include underwriters' and legal fees and other charges related to issuing various borrowing instruments and other long-term agreements, and are amortized over the respective term of each instrument. TDS

presents certain debt issuance costs in the balance sheet as an offset to the related debt obligation. Debt issuance costs related to TDS and U.S. Cellular's revolving credit facilities and U.S. Cellular's receivables securitization facility are recorded in Other assets and deferred charges in the Consolidated Balance Sheet.

Asset Retirement Obligations

TDS accounts for asset retirement obligations by recording the fair value of a liability for legal obligations associated with an asset retirement in the period in which the obligations are incurred. At the time the liability is incurred, TDS records a liability equal to the net present value of the estimated cost of the asset retirement obligation and increases the carrying amount of the related long-lived asset by an equal amount. Until the obligation is fulfilled, TDS updates its estimates relating to cash flows required and timing of settlement. TDS records the present value of the changes in the future value as an increase or decrease to the liability and the related carrying amount of the long-lived asset. The liability is accreted to future value over a period ending with the estimated settlement date of the respective asset retirement obligation. The carrying amount of the long-lived asset is depreciated over the useful life of the related asset. Upon settlement of the obligation, any difference between the cost to retire the asset and the recorded liability is recognized in the Consolidated Statement of Operations.

Treasury Shares

Common Shares repurchased by TDS are recorded at cost as treasury shares and result in a reduction of equity. When treasury shares are reissued, TDS determines the cost using the first-in, first-out cost method. The difference between the cost of the treasury shares and reissuance price is included in Capital in excess of par value or Retained earnings.

Revenue Recognition

Revenues related to services are recognized as services are rendered. Revenues billed in advance or in arrears of the services being provided are estimated and deferred or accrued, as appropriate. Revenues from sales of equipment, products and accessories are recognized when TDS no longer has any requirements to perform, when title has passed and when the products are accepted by the customer.

Multiple Deliverable Arrangements

U.S. Cellular and TDS Telecom sell multiple element service and equipment offerings. In these instances, revenues are allocated using the relative selling price method. Under this method, arrangement consideration is allocated to each element on the basis of its relative selling price. Revenue recognized for the delivered items is limited to the amount due from the customer that is not contingent upon the delivery of additional products or services.

Loyalty Reward Program

In March 2015, U.S. Cellular announced that it would discontinue its loyalty reward program effective September 1, 2015. All unredeemed reward points expired at that time and the deferred revenue balance of \$58 million related to such expired points was recognized as service revenues.

U.S. Cellular followed the deferred revenue method of accounting for its loyalty reward program. Under this method, revenue allocated to loyalty reward points was deferred. The amount allocated to the loyalty points was based on the estimated retail price of the services and products for which points were redeemable divided by the number of loyalty points required to receive such services and products. This was calculated on a weighted average basis and required U.S. Cellular to estimate the percentage of loyalty points that would be redeemed for each product or service.

Revenue was recognized at the time of customer redemption or when such points were depleted via an account maintenance charge. U.S. Cellular employed the proportional model to recognize revenues associated with breakage. Under the proportional model, U.S. Cellular allocated a portion of the estimated future breakage to each redemption and recorded revenue proportionally.

Equipment Installment Plans

U.S. Cellular equipment revenue under equipment installment plan contracts is recognized at the time the device is delivered to the end-user customer for the selling price of the device, net of any deferred imputed interest or trade-in right, if applicable. Imputed interest is reflected as a reduction to the receivable balance and recognized over the duration of the plan as Service revenues.

Incentives

Discounts and incentives that are deemed cash are recognized as a reduction of Operating revenues concurrently with the associated revenue.

U.S. Cellular issues rebates to its agents and end customers. These incentives are recognized as a reduction to revenue at the time the wireless device sale to the customer occurs. The total potential rebates and incentives are reduced by U.S. Cellular's estimate of rebates that will not be redeemed by customers based on historical experience of such redemptions.

From time to time, U.S. Cellular may offer certain promotions to incentivize customers to switch to, or to purchase additional services from, U.S. Cellular. Under these types of promotions, an eligible customer may receive an incentive in the form of a discount off additional services purchased shown as a rebate or credit to the customer's monthly bill. U.S. Cellular accounts for the future discounts at the time of the initial transaction by allocating and deferring a portion of equipment revenue based on the relative proportion of the future discounts in comparison to the aggregate initial purchase plus the minimum future purchases required to receive the discounts. The deferred revenue will be recognized as service revenue in future periods.

Activation Fees

TDS charges its end customers activation fees in connection with the sale of certain services and equipment. Activation fees charged by TDS Telecom in conjunction with a service offering are deferred and recognized over the average customer's service period. Device activation fees charged at both agent locations and U.S. Cellular company-owned retail stores in connection with equipment installment plan device transactions are deferred and recognized over a period that corresponds with the equipment upgrade eligibility date based on the contract terms. Device activation fees charged at U.S. Cellular agent locations in connection with subsidized device sales are deferred and recognized over a period that corresponds with the length of the customer's service contract. Device activation fees charged at U.S. Cellular company-owned retail stores in connection with subsidized device sales are recognized at the time the device is delivered to the customer.

Amounts Collected from Customers and Remitted to Governmental Authorities

TDS records amounts collected from customers and remitted to governmental authorities on a net basis within a tax liability account if the tax is assessed upon the customer and TDS merely acts as an agent in collecting the tax on behalf of the imposing governmental authority. If the tax is assessed upon TDS, then amounts collected from customers as recovery of the tax are recorded in Service revenues and amounts remitted to governmental authorities are recorded in Selling, general and administrative expenses in the Consolidated Statement of Operations. The amounts recorded gross in revenues that are billed to customers and remitted to governmental authorities totaled \$80 million, \$85 million and \$95 million for 2017, 2016 and 2015, respectively.

Wholesale Revenues

TDS Telecom earns wholesale revenues in its Wireline segment from state and federal support fund payments including A-CAM and by payments made by long-distance carriers to local service providers for originating and terminating calls on local telephone networks.

Eligible Telecommunications Carrier (ETC) Revenues

Telecommunications companies may be designated by states, or in some cases by the FCC, as an ETC to receive support payments from the Universal Service Fund if they provide specified services in "high cost" areas. ETC revenues recognized in the reporting period represent the amounts which U.S. Cellular is entitled to receive for such period, as determined and approved in connection with U.S. Cellular's designation as an ETC in various states.

Advertising Costs

TDS expenses advertising costs as incurred. Advertising costs totaled \$228 million, \$263 million and \$268 million in 2017, 2016 and 2015, respectively.

Income Taxes

TDS files a consolidated federal income tax return. Deferred taxes are computed using the liability method, whereby deferred tax assets are recognized for future deductible temporary differences and operating loss carryforwards, and deferred tax liabilities are recognized for future taxable temporary differences. Both deferred tax assets and liabilities are measured using the tax rates anticipated to be in effect when the temporary differences reverse. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment. Deferred tax assets are reduced by a valuation allowance when it is more likely than not that some portion or all of the deferred tax assets will not be realized. TDS evaluates income tax uncertainties, assesses the probability of the ultimate settlement with the applicable taxing authority and records an amount based on that assessment. Deferred taxes are reported as a net non-current asset or liability by jurisdiction. Any corresponding valuation allowance to reduce the amount of deferred tax assets is also recorded as non-current.

Stock-Based Compensation and Other Plans

TDS has established long-term incentive plans, dividend reinvestment plans, and a non-employee director compensation plan. The dividend reinvestment plan of TDS is not considered a compensatory plan and, therefore, recognition of compensation costs for grants made under this plan is not required. All other plans are considered compensatory plans; therefore, recognition of compensation costs for grants made under these plans is required.

TDS recognizes stock compensation expense based upon the fair value of the specific awards granted using established valuation methodologies. The amount of stock compensation cost recognized on either a straight-line basis or graded attribution method is based on the portion of the award that is expected to vest over the requisite service period, which generally represents the vesting period. Stock-based compensation cost recognized has been reduced for estimated forfeitures. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. See Note 17 — Stock-Based Compensation for additional information.

Recently Issued Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09) and has since amended the standard with Accounting Standards Update 2015-14, *Revenue from Contracts with Customers: Deferral of the Effective Date*, Accounting Standards Update 2016-08, *Revenue from Contracts with Customers: Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*, Accounting Standards Update 2016-10, *Revenue from Contracts with Customers: Identifying Performance Obligations and Licensing*, Accounting Standards Update 2016-12, *Revenue from Contracts with Customers: Narrow-Scope Improvements and Practical Expedients*, and Accounting Standards Update 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*. These standards replace existing revenue recognition rules with a single comprehensive model to use in accounting for revenue arising from contracts with customers. TDS will adopt ASU 2014-09, as amended, on January 1, 2018, under the modified retrospective transition method whereby a cumulative effect adjustment to retained earnings will be recognized upon adoption and the guidance is applied prospectively. TDS has implemented new systems, processes and controls to adopt ASU 2014-09, as amended. ASU 2014-09, as amended, impacts TDS' revenue recognition related to the allocation of contract revenues between various services and equipment, and the timing of when those revenues are recognized. In addition, ASU 2014-09, as amended, requires deferral of incremental contract acquisition and fulfillment costs and subsequent expense recognition over the contract period or expected customer life. Upon adoption, the cumulative effect adjustment will include the establishment of contract asset and contract liability accounts with a corresponding adjustment to retained earnings to reflect the reallocation of revenues between service and equipment performance obligations for which control is transferred to customers in different periods. Reallocation impacts generally arise when bundle discounts are provided in a contract arrangement that includes equipment and service performance obligations. In these cases, the revenue will be reallocated according to the relative stand-alone selling prices of the performance obligations included in the bundle and this may be different than how the revenue is billed to the customer and recognized under current guidance. In addition, contract cost assets will be established to reflect costs that will be deferred as incremental contract acquisition and fulfillment costs. Incremental contract acquisition costs generally relate to commissions paid to sales associates while fulfillment costs are generally related to service installation costs on the wireline and cable businesses. The cumulative effect of adoption of the new standard will be to increase Retained earnings as of January 1, 2018, by approximately \$175 million. Based on currently available information, TDS estimates that the new standard will not have a significant impact on operating income in 2018.

In January 2016, the FASB issued Accounting Standards Update 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities* (ASU 2016-01). This ASU introduces changes to current accounting for equity investments and financial liabilities under the fair value option and the presentation and disclosure requirements for financial instruments. TDS is required to adopt ASU 2016-01 on January 1, 2018, using the modified retrospective approach. The adoption of ASU 2016-01 is not expected to have a significant impact on TDS' financial position or results of operations.

In February 2016, the FASB issued Accounting Standards Update 2016-02, *Leases* (ASU 2016-02). ASU 2016-02 requires lessees to record a right-of-use asset and lease liability for almost all leases. This ASU does not substantially impact the lessor accounting model. However, some changes to the lessor accounting guidance were made to align with lessee accounting changes within Accounting Standards Codification (ASC) 842, *Leases* and certain key aspects of ASC 606, *Revenue from Contracts with Customers*. Early adoption is permitted; however, TDS plans to adopt ASU 2016-02 on a modified retrospective basis when required on January 1, 2019. In January 2018, the FASB issued Accounting Standards Update 2018-01, *Leases* (ASU 2018-01), which permits an entity to elect an optional transition practical expedient to not evaluate land easements that exist or expired before the entities adoption of ASU 2016-02. TDS plans to adopt ASU 2018-01 in conjunction with its adoption of ASU 2016-02. TDS is evaluating the full effect that adoption of ASU 2016-02 and ASU 2018-01 will have on its financial condition, results of operations and disclosures. Upon adoption, TDS expects a substantial increase to assets and liabilities on its balance sheet and is in the process of implementing a new lease management and accounting system to assist in the application of the new standard.

In March 2016, the FASB issued Accounting Standards Update 2016-04, *Liabilities – Extinguishments of Liabilities: Recognition of Breakage from Certain Prepaid Stored-Value Products* (ASU 2016-04). ASU 2016-04 requires companies that sell prepaid stored-value products redeemable for goods, services or cash at third-party merchants to recognize breakage (i.e., the value that is ultimately not redeemed by the consumer) in a way that is consistent with how it will be recognized under the new revenue recognition standard. TDS is required to adopt ASU 2016-04 on January 1, 2018, retrospectively. The adoption of ASU 2016-04 is not expected to have a significant impact on TDS' financial position or results of operations.

In June 2016, the FASB issued Accounting Standards Update 2016-13, *Financial Instruments – Credit Losses: Measurement of Credit Losses on Financial Instruments* (ASU 2016-13). ASU 2016-13 requires entities to use a new forward-looking, expected loss model to estimate credit losses. It also requires additional disclosure relating to the credit quality of trade and other receivables, including information relating to management's estimate of credit allowances. TDS is required to adopt ASU 2016-13 on January 1, 2020, using the modified retrospective approach. Early adoption is permitted as of January 1, 2019. TDS is evaluating the effects that adoption of ASU 2016-13 will have on its financial position, results of operations and disclosures.

In October 2016, the FASB issued Accounting Standards Update 2016-16, *Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory* (ASU 2016-16). ASU 2016-16 impacts the accounting for the income tax consequences of intra-entity transfers of assets other than inventory when the transfer occurs between entities in different tax jurisdictions. TDS is required to adopt ASU 2016-16 on January 1, 2018, using the modified retrospective approach. The adoption of ASU 2016-16 is not expected to have a significant impact on TDS' financial position or results of operations.

In February 2017, the FASB issued Accounting Standards Update 2017-05, *Other Income – Gains and Losses from the Derecognition of Nonfinancial Assets: Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets* (ASU 2017-05). ASU 2017-05 clarifies how entities account for the derecognition of a nonfinancial asset and adds guidance for partial sales of nonfinancial assets. TDS is required to adopt ASU 2017-05 on January 1, 2018, either retrospectively or using the modified retrospective approach. The adoption of ASU 2017-05 is not expected to have a significant impact on TDS' financial position or results of operations.

In March 2017, the FASB issued Accounting Standards Update 2017-07, *Compensation – Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* (ASU 2017-07). ASU 2017-07 requires that an employer report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net periodic benefit cost must be presented separately from the service cost component and outside of Operating income in the Consolidated Statement of Operations. The guidance also specifies that only the service cost component of net benefit cost is eligible for capitalization. TDS is required to adopt ASU 2017-07, retrospectively on January 1, 2018. The adoption of ASU 2017-07 is not expected to have a significant impact on TDS' results of operations.

In May 2017, the FASB issued Accounting Standards Update 2017-09, *Compensation – Stock Compensation* (ASU 2017-09). ASU 2017-09 clarifies when changes to the terms or conditions of share-based payment awards must be accounted for as modifications. TDS is required to adopt ASU 2017-09 prospectively on January 1, 2018. The adoption of ASU 2017-09 is not expected to have a significant impact on TDS' financial position or results of operations.

In July 2017, the FASB issued Accounting Standards Update 2017-11, *Earnings Per Share, Distinguishing Liabilities from Equity, Derivatives and Hedging: I. Accounting for Certain Financial Instruments with Down Round Features, II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception* (ASU 2017-11). The amendments in Part I of ASU 2017-11 that relate to liability or equity classification of financial instruments (or embedded features) affect all entities that issue financial instruments (for example, warrants or convertible instruments) that include down round features. The amendments in Part II ASU 2017-11 do not have an accounting effect since the amendments only replace the indefinite deferral of certain guidance with a scope exception. TDS is required to adopt ASU 2017-11 on January 1, 2019, either retrospectively or using the modified retrospective approach. Early adoption is permitted. The adoption of ASU 2017-11 is not expected to have a significant impact on TDS' financial position or results of operations.

In August 2017, the FASB issued Accounting Standards Update 2017-12, *Derivatives and Hedging: Targeted Improvements to Accounting for Hedging Activities* (ASU 2017-12). ASU 2017-12 amends hedge accounting recognition and presentation requirements to improve transparency and understandability of information disclosed in the financials as well as simplifies the application of hedge accounting guidance. TDS is required to adopt ASU 2017-12 on January 1, 2019, using the modified retrospective approach. Early adoption is permitted. The adoption of ASU 2017-12 is not expected to have a significant impact on TDS' financial position or results of operations.

In February 2018, the FASB issued Accounting Standards Update 2018-02, *Income Statement – Reporting Comprehensive Income: Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* (ASU 2018-02). The provisions in ASU 2018-02 allow for a reclassification from accumulated other comprehensive income to retained earnings to eliminate the stranded tax effects resulting from the change in federal corporate income tax rate in the Tax Act. TDS is required to adopt ASU 2018-02 on January 1, 2019. Early adoption is permitted, including adoption in any interim period for which financial statements have not yet been issued. TDS adopted ASU 2018-02 on December 31, 2017, and elected to reclassify the income tax effects of the Tax Act to retained earnings. The adoption of ASU 2018-02 did not have a significant impact on TDS' financial position or results of operations.

NOTE 2 FAIR VALUE MEASUREMENTS

As of December 31, 2017 and 2016, TDS did not have any material financial or nonfinancial assets or liabilities that were required to be recorded at fair value in its Consolidated Balance Sheet in accordance with GAAP.

The provisions of GAAP establish a fair value hierarchy that contains three levels for inputs used in fair value measurements. Level 1 inputs include quoted market prices for identical assets or liabilities in active markets. Level 2 inputs include quoted market prices for similar assets and liabilities in active markets or quoted market prices for identical assets and liabilities in inactive markets. Level 3 inputs are unobservable. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. A financial instrument's level within the fair value hierarchy is not representative of its expected performance or its overall risk profile and, therefore, Level 3 assets are not necessarily higher risk than Level 2 assets or Level 1 assets.

TDS has applied the provisions of fair value accounting for purposes of computing the fair value of financial instruments for disclosure purposes as displayed below.

	Level within the Fair Value Hierarchy	December 31, 2017		December 31, 2016	
		Book Value	Fair Value	Book Value	Fair Value
(Dollars in millions)					
Cash and cash equivalents	1	\$ 619	\$ 619	\$ 900	\$ 900
Short-term investments	1	100	100	–	–
Long-term debt					
Retail	2	1,753	1,783	1,753	1,741
Institutional	2	534	522	533	532
Other	2	194	194	208	207

The fair value of Cash and cash equivalents and Short-term investments approximate their book values due to the short-term nature of these financial instruments. Long-term debt excludes capital lease obligations, other installment arrangements, the current portion of Long-term debt and debt financing costs. The fair value of “Retail” Long-term debt was estimated using market prices for TDS’ 7.0% Senior Notes, 6.875% Senior Notes, 6.625% Senior Notes and 5.875% Senior Notes, and U.S. Cellular’s 6.95% Senior Notes, 7.25% 2063 Senior Notes and 7.25% 2064 Senior Notes. TDS’ “Institutional” debt consists of U.S. Cellular’s 6.7% Senior Notes which are traded over the counter. TDS’ “Other” debt consists of a senior term loan credit facility and other borrowings with financial institutions. TDS estimated the fair value of its Institutional and Other debt through a discounted cash flow analysis using the interest rates or estimated yield to maturity for each borrowing, which ranged from 4.74% to 7.13% and 0.00% to 6.93% at December 31, 2017 and 2016, respectively.

NOTE 3 EQUIPMENT INSTALLMENT PLANS

TDS sells devices to customers under equipment installment contracts over a specified time period. For certain equipment installment plans, after a specified period of time or amount of payments, the customer may have the right to upgrade to a new device and have the remaining unpaid equipment installment contract balance waived, subject to certain conditions, including trading in the original device in good working condition and signing a new equipment installment contract. TDS values this trade-in right as a guarantee liability. The guarantee liability is initially measured at fair value and is determined based on assumptions including the probability and timing of the customer upgrading to a new device and the fair value of the device being traded-in at the time of trade-in. When a customer exercises the trade-in option, both the outstanding receivable and guarantee liability balances related to the respective device are reduced to zero, and the value of the used device that is received in the transaction is recognized as inventory. If the customer does not exercise the trade-in option at the time of eligibility, TDS begins amortizing the liability and records this amortization as additional equipment revenue. As of December 31, 2017 and 2016, the guarantee liability related to these plans was \$15 million and \$33 million, respectively, and is reflected in Customer deposits and deferred revenues in the Consolidated Balance Sheet.

TDS equipment installment plans do not provide for explicit interest charges. Because equipment installment plans have a duration of greater than twelve months, TDS imputes interest. TDS records imputed interest as a reduction to the related accounts receivable and recognizes it over the term of the installment agreement as a component of Service revenues. Equipment installment plan receivables had a weighted average effective imputed interest rate of 12.5% and 11.2% as of December 31, 2017 and 2016, respectively.

The following table summarizes equipment installment plan receivables as of December 31, 2017 and 2016.

December 31,	2017	2016
(Dollars in millions)		
Equipment installment plan receivables, gross	\$ 873	\$ 628
Deferred interest	(80)	(53)
Equipment installment plan receivables, net of deferred interest	793	575
Allowance for credit losses	(65)	(50)
Equipment installment plan receivables, net	\$ 728	\$ 525
Net balance presented in the Consolidated Balance Sheet as:		
Accounts receivable — Customers and agents (Current portion)	\$ 428	\$ 345
Other assets and deferred charges (Non-current portion)	300	180
Equipment installment plan receivables, net	\$ 728	\$ 525

TDS uses various inputs, including internal data, information from the credit bureaus and other sources, to evaluate the credit profiles of its customers. From this evaluation, a credit class is assigned to the customer that determines the number of eligible lines, the amount of credit available, and the down payment requirement, if any. Customers assigned to credit classes requiring no down payment represent a lower risk category, whereas those assigned to credit classes requiring a down payment represent a higher risk category. The balance and aging of the equipment installment plan receivables on a gross basis by credit category were as follows:

	December 31, 2017			December 31, 2016		
	Lower Risk	Higher Risk	Total	Lower Risk	Higher Risk	Total
(Dollars in millions)						
Unbilled	\$ 807	\$ 20	\$ 827	\$ 553	\$ 38	\$ 591
Billed — current	31	1	32	23	2	25
Billed — past due	12	2	14	10	2	12
Equipment installment plan receivables, gross	\$ 850	\$ 23	\$ 873	\$ 586	\$ 42	\$ 628

The activity in the allowance for credit losses balance for the equipment installment plan receivables was as follows:

	2017	2016
(Dollars in millions)		
Allowance for credit losses, beginning of year	\$ 50	\$ 26
Bad debts expense	62	63
Write-offs, net of recoveries	(47)	(39)
Allowance for credit losses, end of year	\$ 65	\$ 50

TDS recorded out-of-period adjustments in 2016 due to errors related to equipment installment plan transactions occurring in 2015 (2016 EIP adjustments). The 2016 EIP adjustments had the impact of increasing Equipment and product sales revenues by \$2 million, decreasing bad debts expense, which is a component of Selling, general and administrative expense, by \$2 million and increasing Income before income taxes by \$4 million in 2016. Additionally, TDS recorded out-of-period adjustments in 2015 due to errors related to equipment installment plan transactions (2015 EIP adjustments) that were attributable to 2014. The 2015 EIP adjustments had the impact of reducing Equipment and product sales revenues and Income before income taxes by \$6 million in 2015. TDS has determined that these adjustments were not material to any of the periods impacted.

NOTE 4 INCOME TAXES

TDS' current income taxes balances at December 31, 2017 and 2016, were as follows:

December 31,	2017	2016
(Dollars in millions)		
Federal income taxes receivable (payable)	\$ (17)	\$ 7
Net state income taxes receivable	2	3

Income tax expense (benefit) is summarized as follows:

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Current			
Federal	\$ 77	\$ 17	\$ 93
State	13	1	8
Deferred			
Federal	(366)	20	61
State	(3)	2	10
Total income tax expense (benefit)	\$ (279)	\$ 40	\$ 172

In December 2017, the Tax Act was signed into law. TDS adjusts for the effects of changes in tax laws and rates in the period of enactment. The major provisions of the Tax Act impacting TDS are the reduction of the U.S. federal corporate tax rate from 35% to 21% and the bonus depreciation deduction allowing for full expensing of qualified property additions.

The disclosed amounts within include provisional estimates, pursuant to SEC Staff Accounting Bulletin No. 118, for current and deferred taxes related to tax depreciation of fixed assets. For property acquired and placed in service after September 27, 2017, the Tax Act provides for full expensing if such property was not subject to a written binding agreement in existence as of September 27, 2017. As of December 31, 2017, TDS has not completed a full analysis of all contracts and agreements related to fixed assets placed in service during 2017, but was able to record a reasonable estimate of the effects of these changes based on capital expenditures made during 2017. TDS expects any final adjustments to the provisional amounts to be recorded by the third quarter of 2018, which could be material to TDS' financial statements. The accounting for all other applicable provisions of the Tax Act was performed based on TDS' current interpretation of the provisions of the law as enacted as of December 31, 2017.

A reconciliation of TDS' income tax expense computed at the statutory rate to the reported income tax expense, and the statutory federal income tax expense rate to TDS' effective income tax expense rate is as follows:

Year Ended December 31,	2017		2016		2015	
	Amount	Rate	Amount	Rate	Amount	Rate
(Dollars in millions)						
Statutory federal income tax expense and rate	\$ (43)	35.0%	\$ 32	35.0%	\$ 152	35.0%
State income taxes, net of federal benefit ¹	6	(5.2)	2	2.5	11	2.5
Effect of noncontrolling interests	(2)	1.7	(1)	(0.8)	3	0.6
Federal income tax rate change ²	(314)	257.5	—	—	—	—
Change in federal valuation allowance ³	(5)	4.3	2	2.6	2	0.5
Goodwill impairment ⁴	71	(58.2)	—	—	—	—
Nondeductible compensation	10	(8.1)	3	2.7	1	0.2
Other differences, net	(2)	2.1	2	1.2	3	0.8
Total income tax expense (benefit) and rate	\$ (279)	229.1%	\$ 40	43.2%	\$ 172	39.6%

¹ State income taxes, net of federal benefit, include changes in unrecognized tax benefits as well as adjustments to the valuation allowance.

² Federal income tax rate change due to the Tax Act reducing the federal income tax rate from 35% to 21% and a corresponding reduction to the deferred tax liability. The amount is slightly different from the total impact of the federal tax rate change because the rate change impacts the amount of State income taxes, net of federal benefit as well as the Change in federal valuation allowance.

³ Change in federal valuation allowance relates primarily to losses incurred by certain entities where realization of deferred tax assets is not "more likely than not." The 2017 amount also reflects the revaluation of the federal valuation allowance due to the reduction in federal income tax rate.

⁴ Goodwill impairment reflects an adjustment to increase income tax expense by \$71 million related to a portion of the impaired goodwill that is not amortizable for income tax purposes. See Note 7 — Intangible Assets for additional information related to the goodwill impairment.

Significant components of TDS' deferred income tax assets and liabilities at December 31, 2017 and 2016, were as follows:

December 31,	2017	2016
(Dollars in millions)		
Deferred tax assets		
Net operating loss (NOL) carryforwards	\$ 167	\$ 145
Stock-based compensation	42	62
Compensation and benefits - other	9	35
Deferred rent	21	23
Other	70	73
Total deferred tax assets	309	338
Less valuation allowance	(147)	(122)
Net deferred tax assets	162	216
Deferred tax liabilities		
Property, plant and equipment	368	639
Licenses/intangibles	221	325
Partnership investments	123	173
Total deferred tax liabilities	712	1,137
Net deferred income tax liability	\$ 550	\$ 921
Presented in the Consolidated Balance Sheet as:		
Deferred income tax liability, net	\$ 552	\$ 922
Other assets and deferred charges	(2)	(1)
Net deferred income tax liability	\$ 550	\$ 921

At December 31, 2017, TDS and certain subsidiaries had \$2,823 million of state NOL carryforwards (generating a \$153 million deferred tax asset) available to offset future taxable income. The state NOL carryforwards expire between 2018 and 2037. Certain subsidiaries had federal NOL carryforwards (generating a \$14 million deferred tax asset) available to offset their future taxable income. The federal NOL carryforwards expire between 2018 and 2037. A valuation allowance was established for certain state NOL carryforwards and federal NOL carryforwards since it is more likely than not that a portion of such carryforwards will expire before they can be utilized.

A summary of TDS' deferred tax asset valuation allowance is as follows:

	2017	2016	2015
(Dollars in millions)			
Balance at beginning of year	\$ 122	\$ 113	\$ 114
Charged (credited) to income tax expense	25	9	(1)
Balance at end of year	\$ 147	\$ 122	\$ 113

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2017	2016	2015
(Dollars in millions)			
Unrecognized tax benefits balance at beginning of year	\$ 42	\$ 39	\$ 38
Additions for tax positions of current year	6	11	7
Additions for tax positions of prior years	1	3	2
Reductions for tax positions of prior years	(1)	(1)	(2)
Reductions for settlements of tax positions	-	-	(1)
Reductions for lapses in statutes of limitations	(2)	(10)	(5)
Unrecognized tax benefits balance at end of year	\$ 46	\$ 42	\$ 39

Unrecognized tax benefits are included in Accrued taxes and Other deferred liabilities and credits in the Consolidated Balance Sheet. If these benefits were recognized, they would have reduced income tax expense in 2017, 2016 and 2015 by \$37 million, \$28 million and \$26 million, respectively, net of the federal benefit from state income taxes.

TDS recognizes accrued interest and penalties related to unrecognized tax benefits in Income tax expense (benefit). The amounts charged to income tax expense related to interest and penalties resulted in an expense of \$3 million in 2017, a benefit of \$1 million in 2016 and an expense of \$1 million in 2015. Net accrued liabilities for interest and penalties were \$19 million and \$15 million at December 31, 2017 and 2016, respectively, and are included in Other deferred liabilities and credits in the Consolidated Balance Sheet.

TDS and its subsidiaries file federal and state income tax returns. With only limited exceptions, TDS is no longer subject to federal and state income tax audits for the years prior to 2013.

NOTE 5 EARNINGS PER SHARE

Basic earnings per share available to TDS common shareholders is computed by dividing Net income available to TDS common shareholders by the weighted average number of common shares outstanding during the period. Diluted earnings per share available to TDS common shareholders is computed by dividing Net income available to TDS common shareholders by the weighted average number of common shares outstanding during the period adjusted to include the effects of potentially dilutive securities. Potentially dilutive securities primarily include incremental shares issuable upon the exercise of outstanding stock options and the vesting of performance and restricted stock units.

The amounts used in computing earnings per common share and the effects of potentially dilutive securities on the weighted average number of common shares were as follows:

Year Ended December 31,	2017	2016	2015
<small>(Dollars and shares in millions, except earnings per share)</small>			
Basic earnings per share available to TDS common shareholders:			
Net income available to TDS common shareholders used in basic earnings per share	\$ 153	\$ 43	\$ 219
Adjustments to compute diluted earnings:			
Noncontrolling interest adjustment	-	-	(1)
Net income available to TDS common shareholders used in diluted earnings per share	\$ 153	\$ 43	\$ 218
Weighted average number of shares used in basic earnings per share:			
Common Shares	104	103	102
Series A Common Shares	7	7	7
Total	111	110	109
Effects of dilutive securities	1	1	1
Weighted average number of shares used in diluted earnings per share	112	111	110
Basic earnings per share available to TDS common shareholders	\$ 1.39	\$ 0.39	\$ 2.02
Diluted earnings per share available to TDS common shareholders	\$ 1.37	\$ 0.39	\$ 1.98

Certain Common Shares issuable upon the exercise of stock options, vesting of performance and restricted stock units or conversion of preferred shares were not included in average diluted shares outstanding for the calculation of Diluted earnings per share available to TDS common shareholders because their effects were antidilutive. The number of such Common Shares excluded was 4 million shares, 4 million shares and 5 million shares for 2017, 2016, and 2015, respectively.

NOTE 6 ACQUISITIONS, DIVESTITURES AND EXCHANGES

Cable Acquisitions

In 2017, TDS acquired substantially all of the assets of several small tuck-in cable companies for \$29 million in cash. The allocations of the purchase price for these acquisitions were as follows:

	Purchase Price ¹	Allocation of Purchase Price			
		Goodwill ²	Franchise Rights	Intangible Assets Subject to Amortization ³	Net Tangible Assets/(Liabilities)
(Dollars in millions)					
TDS Telecom cable business	\$ 29	\$ 5	\$ 11	\$ 1	\$ 12

¹ Cash amounts paid for acquisitions may differ from the purchase price due to cash acquired in the transactions and the timing of cash payments related to the respective transactions.

² The entire amount of Goodwill acquired in 2017 was amortizable for income tax purposes.

³ In 2017, at the date of acquisition, the weighted average amortization period for Intangible Assets Subject to Amortization acquired was 3.6 years for TDS Telecom's cable business.

Other Acquisitions, Divestitures and Exchanges

In July 2016, the FCC announced U.S. Cellular as a qualified bidder in the FCC's forward auction of 600 MHz spectrum licenses, referred to as Auction 1002. Prior to commencement of the forward auction, U.S. Cellular made an upfront payment to the FCC of \$143 million in June 2016 to establish its initial bidding eligibility. In April 2017, the FCC announced by way of public notice that U.S. Cellular was the winning bidder for 188 licenses for an aggregate purchase price of \$329 million. U.S. Cellular paid the remaining \$186 million to the FCC and was granted the licenses during the second quarter of 2017.

In March 2016, U.S. Cellular entered into an agreement with a third party to transfer FCC licenses in non-operating markets and receive FCC licenses in operating markets. The agreement provided for the transfer of certain AWS and PCS spectrum licenses to U.S. Cellular in exchange for U.S. Cellular transferring certain PCS spectrum licenses with a carrying value of \$8 million and \$1 million of cash to the third party. This transaction closed in the fourth quarter of 2016, at which time U.S. Cellular recorded a gain of \$3 million.

In February 2016, U.S. Cellular entered into an agreement with a third party to exchange certain 700 MHz licenses for certain AWS and PCS licenses and \$28 million of cash. This license exchange was accomplished in two closings. The first closing occurred in the second quarter of 2016, at which time U.S. Cellular received \$13 million of cash and recorded a gain of \$9 million. The second closing occurred in the first quarter of 2017 at which time U.S. Cellular received \$15 million of cash and recorded a gain of \$17 million.

In February 2016, U.S. Cellular entered into an additional agreement with a third party that provided for the transfer of certain AWS spectrum licenses and \$2 million in cash to U.S. Cellular, in exchange for U.S. Cellular transferring certain AWS, PCS and 700 MHz licenses with a carrying value of \$7 million to the third party. This transaction closed in the third quarter of 2016, at which time U.S. Cellular recorded a gain of \$7 million.

In 2015 and 2016, U.S. Cellular entered into multiple agreements to purchase spectrum licenses located in U.S. Cellular's existing operating markets. The aggregate purchase price for these spectrum licenses is \$57 million, of which \$53 million closed in 2016 and \$3 million closed in 2017. The remaining agreement is expected to close in early 2018.

In 2015, TDS sold certain Wireline markets for \$26 million, including working capital adjustments, and recognized aggregated gains of \$10 million.

In March 2015, U.S. Cellular exchanged certain of its unbuilt PCS licenses for certain other PCS licenses located in U.S. Cellular's existing operating markets and \$117 million of cash. As of the transaction date, the licenses received in the transaction had an estimated fair value, per a market approach, of \$43 million. A gain of \$125 million was recorded in (Gain) loss on license sales and exchanges, net in the Consolidated Statement of Operations in the first quarter of 2015.

U.S. Cellular participated in Auction 97 indirectly through its limited partnership interest in Advantage Spectrum. Advantage Spectrum was the provisional winning bidder for 124 licenses for an aggregate winning bid of \$338 million, after its designated entity discount of 25%. Advantage Spectrum's bid amount, less the upfront payment of \$60 million paid in 2014, was paid to the FCC in March 2015. These licenses were granted by the FCC in July 2016. See Note 14 — Variable Interest Entities for additional information.

In December 2014, U.S. Cellular entered into an agreement with a third party to sell 595 towers and certain related contracts, assets, and liabilities for \$159 million. This agreement and related transactions were accomplished in two closings. The first closing occurred in December 2014 and included the sale of 236 towers, without tenants, for \$10 million. On this same date, U.S. Cellular received \$8 million in earnest money. At the time of the first closing, a \$5 million gain was recorded. The second closing for the remaining 359 towers, primarily with tenants, took place in January 2015, at which time U.S. Cellular received \$142 million in additional cash proceeds and TDS recorded a gain of \$120 million in (Gain) loss on sale of business and other exit costs, net.

In September 2014, U.S. Cellular entered into an agreement with a third party to exchange certain PCS and AWS licenses for certain other PCS and AWS licenses and \$28 million of cash. This license exchange was accomplished in two closings. The first closing occurred in December 2014 at which time U.S. Cellular transferred licenses to the counterparty with a net book value of \$11 million, received licenses with an estimated fair value, per a market approach, of \$52 million, recorded a \$22 million gain and recorded an \$18 million deferred credit in Other current liabilities. The license that was transferred to the counterparty in the second closing had a net book value of \$22 million. The second closing occurred in July 2015. At the time of the second closing, U.S. Cellular received \$28 million in cash and recognized the deferred credit from the first closing resulting in a total gain of \$24 million recorded on this part of the license exchange.

NOTE 7 INTANGIBLE ASSETS

Activity related to TDS' Licenses, Goodwill and Franchise rights is presented below. See Note 6 — Acquisitions, Divestitures and Exchanges for information regarding transactions which affected these intangible assets during the periods. Prior to 2009, TDS accounted for U.S. Cellular's share repurchases as step acquisitions, allocating a portion of the share repurchase value to TDS' Licenses and Goodwill. Further, a goodwill impairment loss on the U.S. Cellular reporting unit was recognized in 2003 at TDS but not at U.S. Cellular. Consequently, U.S. Cellular's Licenses and Goodwill on a stand-alone basis do not equal the TDS consolidated Licenses and Goodwill related to U.S. Cellular.

Licenses

	U.S. Cellular	Wireline	Cable	Total
(Dollars in millions)				
Balance at December 31, 2015	\$ 1,838	\$ 3	\$ 3	\$ 1,844
Acquisitions	53	—	—	53
Transferred to Assets held for sale	(8)	—	—	(8)
Divestitures	—	(1)	—	(1)
Exchanges — Licenses received	25	—	—	25
Exchanges — Licenses surrendered	(18)	—	—	(18)
Balance at December 31, 2016	1,890	2	3	1,895
Acquisitions	331	—	—	331
Transferred to Assets held for sale	(10)	—	—	(10)
Exchanges — Licenses received	25	—	—	25
Exchanges — Licenses surrendered	(9)	—	—	(9)
Balance at December 31, 2017	\$ 2,227	\$ 2	\$ 3	\$ 2,232

Goodwill

	U.S. Cellular		Wireline		Cable		HMS		Total
(Dollars in millions)									
Balance at December 31, 2015	\$	227	\$	409	\$	95	\$	35	\$ 766
Other		—		—		—		—	—
Balance at December 31, 2016		227		409		95		35	766
Acquisitions		—		—		5		—	5
Loss on impairment		(227)		—		—		(35)	(262)
Balance at December 31, 2017	\$	—	\$	409	\$	100	\$	—	\$ 509

Accumulated impairment losses in prior periods were \$334 million for U.S. Cellular, \$29 million for Wireline, \$84 million for HMS, and \$4 million for Corporate and Other.

Goodwill Interim Impairment Assessment*U.S. Cellular*

U.S. Cellular operates in an intensely competitive wireless industry environment and has experienced declining service revenues in recent periods. Based on recent 2017 developments, including wireless expansion plans announced by other companies and the results of the FCC's forward auction of 600 MHz spectrum licenses and other FCC actions, U.S. Cellular anticipates increased competition for customers in its primary operating markets from new and existing market participants over the long term. In addition, the widening adoption of unlimited data plans and other data pricing constructs across the industry, including U.S. Cellular's introduction of unlimited plans earlier in 2017, may limit the industry's ability to monetize future growth in data usage. These factors when assessed and considered as part of U.S. Cellular's annual planning process conducted in the third quarter of each year caused management to revise its long-range financial forecast in the third quarter of 2017. Based on the factors noted above, management identified a triggering event and performed a quantitative goodwill impairment test on an interim basis.

TDS used a one-step quantitative approach that compared the fair value of the U.S. Cellular reporting unit to its carrying value. A discounted cash flow approach was used to value the reporting unit, using value drivers and risks specific to U.S. Cellular and the industry and current economic factors. The cash flow estimates incorporated certain assumptions that market participants would use in their estimates of fair value and may not be indicative of U.S. Cellular specific assumptions. However, the discount rate used in the analysis considers any additional risk a market participant might place on integrating the U.S. Cellular reporting unit into its operations.

The results of the interim goodwill impairment test indicated that the carrying value of the U.S. Cellular reporting unit exceeded its fair value. Therefore, TDS recognized a loss on impairment of goodwill of \$227 million to reduce the carrying value of goodwill for the U.S. Cellular reporting unit to zero in the third quarter of 2017.

HMS

HMS has continued to experience slower than expected service revenue growth in 2017 due primarily to the competitive nature of the hosted and managed services industry, and the portfolio of services offered by HMS compared to the industry overall. Further, revenue mix has been trending towards a higher proportion of lower margin revenue streams. These factors when assessed and considered as part of its annual planning process caused HMS management to revise its long-range forecast in the third quarter of 2017. Based on the factors noted above, management identified a triggering event and performed a quantitative goodwill impairment test on an interim basis. No other triggering events for indefinite-lived intangible assets or long-lived assets were identified.

TDS used a one-step quantitative approach that compared the fair value of the HMS reporting unit to its carrying value. TDS used the discounted cash flow approach and guideline public company method to value the HMS reporting unit. The discounted cash flow approach uses value drivers and considers risks specific to the industry as well as current economic factors. The guideline public company method develops an indication of fair value by calculating average market pricing multiples for selected publicly-traded companies. The developed multiples were applied to applicable financial measures of the HMS reporting unit to determine fair value. The discounted cash flow approach and guideline public company method were weighted to arrive at the total fair value used for impairment testing. The weighting of methods was consistently applied in both 2017 and 2016.

The results of the interim goodwill impairment test indicated that the carrying value of the HMS reporting unit exceeded its fair value. Therefore, TDS recognized a loss on impairment of goodwill of \$35 million to reduce the carrying value of goodwill for the HMS reporting unit to zero in the third quarter of 2017.

Franchise Rights

Franchise rights were \$255 million and \$244 million as of December 31, 2017 and 2016, respectively. The increase in Franchise rights was due primarily to the acquisition of several small cable companies during 2017. See Note 6 — Acquisitions, Divestitures and Exchanges for further information.

NOTE 8 INVESTMENTS IN UNCONSOLIDATED ENTITIES

Investments in unconsolidated entities consist of amounts invested in wireless and wireline entities in which TDS holds a noncontrolling interest. These investments are accounted for using either the equity or cost method as shown in the following table:

December 31,	2017	2016
(Dollars in millions)		
Equity method investments:		
Capital contributions, loans, advances and adjustments	\$ 116	\$ 118
Cumulative share of income	1,753	1,613
Cumulative share of distributions	(1,434)	(1,298)
Total equity method investments	435	433
Cost method investments	18	18
Total investments in unconsolidated entities	\$ 453	\$ 451

The following tables, which are based on information provided in part by third parties, summarize the combined assets, liabilities and equity, and results of operations of TDS' equity method investments:

December 31,	2017	2016
(Dollars in millions)		
Assets		
Current	\$ 705	\$ 776
Due from affiliates	323	386
Property and other	4,852	4,666
Total assets	\$ 5,880	\$ 5,828
Liabilities and Equity		
Current liabilities	\$ 436	\$ 468
Deferred credits	181	189
Long-term liabilities	208	197
Long-term capital lease obligations	1	6
Partners' capital and shareholders' equity	5,054	4,968
Total liabilities and equity	\$ 5,880	\$ 5,828

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Results of Operations			
Revenues	\$ 6,585	\$ 6,769	\$ 6,979
Operating expenses	4,985	5,068	5,245
Operating income	1,600	1,701	1,734
Other income (expense), net	(3)	(13)	(9)
Net income	\$ 1,597	\$ 1,688	\$ 1,725

NOTE 9 PROPERTY, PLANT AND EQUIPMENT

TDS' Property, plant and equipment in service and under construction, and related accumulated depreciation and amortization, as of December 31, 2017 and 2016, were as follows:

December 31,	Useful Lives (Years)	2017	2016
(Dollars in millions)			
Land	N/A	\$ 55	\$ 54
Buildings	5-40	519	511
Leasehold and land improvements	1-30	1,214	1,188
Cable and wire	15-35	1,802	1,740
Network and switching equipment	3-13	2,361	2,348
Cell site equipment	7-25	3,411	3,383
Office furniture and equipment	3-10	480	508
Other operating assets and equipment	3-12	194	187
System development	1-7	1,387	1,523
Work in process	N/A	319	237
Total property, plant and equipment, gross		11,742	11,679
Accumulated depreciation and amortization		(8,318)	(8,124)
Total property, plant and equipment, net		\$ 3,424	\$ 3,555

Depreciation and amortization expense totaled \$817 million, \$820 million and \$811 million in 2017, 2016 and 2015, respectively. In 2017, 2016 and 2015, (Gain) loss on asset disposals, net included charges of \$21 million, \$27 million and \$22 million, respectively, related to disposals of assets, trade-ins of older assets for replacement assets and other retirements of assets from service in the normal course of business.

During 2016, TDS recorded an out-of-period adjustment attributable to 2014 and 2015 related to the over-depreciation of certain assets in the Wireline segment. TDS has determined that this adjustment was not material to the prior annual periods and also was not material to 2016 results. As a result of this out-of-period adjustment, Depreciation, amortization and accretion expense decreased by \$4 million in 2016. This adjustment was made in the second quarter of 2016.

NOTE 10 ASSET RETIREMENT OBLIGATIONS

U.S. Cellular is subject to asset retirement obligations associated with its leased cell sites, switching office sites, retail store sites and office locations in its operating markets. Asset retirement obligations generally include obligations to restore leased land and retail store and office premises to their pre-lease conditions.

TDS Telecom owns poles, cable and wire and certain buildings and also leases data center and office space and property used for housing central office switching equipment and fiber cable. These assets and leases often have removal or remediation requirements associated with them. For example, TDS Telecom's poles, cable and wire are often located on property that is not owned by TDS Telecom and may be subject to the provisions of easements, permits, or leasing arrangements. Pursuant to the terms of the permits, easements, or leasing arrangements, TDS Telecom is often required to remove these assets and return the property to its original condition at some defined date in the future.

Asset retirement obligations are included in Other deferred liabilities and credits in the Consolidated Balance Sheet.

In 2017 and 2016, U.S. Cellular and TDS Telecom performed a review of the assumptions and estimated costs related to asset retirement obligations. The results of the reviews (identified as Revisions in estimated cash outflows) and other changes in asset retirement obligations during 2017 and 2016, were as follows:

	2017	2016
(Dollars in millions)		
Balance at beginning of year	\$ 266	\$ 243
Additional liabilities accrued	1	1
Revisions in estimated cash outflows	(1)	7
Acquisition of assets	1	-
Disposition of assets	(1)	(1)
Accretion expense	17	16
Balance at end of year	\$ 283	\$ 266

NOTE 11 DEBT

Revolving Credit Facilities

At December 31, 2017, TDS and U.S. Cellular had revolving credit facilities available for general corporate purposes, including acquisitions, spectrum purchases and capital expenditures. Amounts under the revolving credit facilities may be borrowed, repaid and reborrowed from time to time until maturity in June 2021. As of December 31, 2017, there were no outstanding borrowings under the revolving credit facilities, except for letters of credit. Interest expense representing commitment fees on the unused portion of the revolving lines of credit was \$2 million in each of 2017, 2016 and 2015. The commitment fees are based on the unsecured senior debt ratings assigned to TDS and U.S. Cellular by certain ratings agencies.

The following table summarizes the revolving credit facilities as of December 31, 2017:

	TDS	U.S. Cellular
(Dollars in millions)		
Maximum borrowing capacity	\$ 400	\$ 300
Letters of credit outstanding	\$ 1	\$ 2
Amount borrowed	\$ -	\$ -
Amount available for use	\$ 399	\$ 298

Borrowings under the revolving credit facilities bear interest either at a LIBOR rate plus 1.75% or at an alternative Base Rate as defined in the revolving credit agreement plus 0.75%, at TDS' or U.S. Cellular's option. TDS and U.S. Cellular may select a borrowing period of either one, two, three or six months (or other period of twelve months or less if requested by TDS or U.S. Cellular and approved by the lenders). TDS' and U.S. Cellular's credit spread and commitment fees on their revolving credit facilities may be subject to increase if their current credit ratings from nationally recognized credit rating agencies are lowered, and may be subject to decrease if the ratings are raised.

In connection with U.S. Cellular's revolving credit facility, TDS and U.S. Cellular entered into a subordination agreement dated June 15, 2016, together with the administrative agent for the lenders under U.S. Cellular's revolving credit agreement. Pursuant to this subordination agreement, (a) any consolidated funded indebtedness from U.S. Cellular to TDS will be unsecured and (b) any (i) consolidated funded indebtedness from U.S. Cellular to TDS (other than "refinancing indebtedness" as defined in the subordination agreement) in excess of \$105 million and (ii) refinancing indebtedness in excess of \$250 million will be subordinated and made junior in right of payment to the prior payment in full of obligations to the lenders under U.S. Cellular's revolving credit agreement. As of December 31, 2017, U.S. Cellular had no outstanding consolidated funded indebtedness or refinancing indebtedness that was subordinated to the revolving credit agreement pursuant to the subordination agreement.

The continued availability of the revolving credit facilities requires TDS and U.S. Cellular to comply with certain negative and affirmative covenants, maintain certain financial ratios and make representations regarding certain matters at the time of each borrowing. TDS and U.S. Cellular believe they were in compliance as of December 31, 2017, with all covenants and other requirements set forth in the revolving credit facilities.

The revolving credit agreements include the following financial covenants:

- Consolidated Interest Coverage Ratio may not be less than 3.00 to 1.00 as of the end of any fiscal quarter.
- Consolidated Leverage Ratio may not be greater than the ratios indicated as of the end of any fiscal quarter for each period specified below:

Period	Ratios
From the agreement date of June 15, 2016 through June 30, 2019	3.25 to 1.00
From July 1, 2019 and thereafter	3.00 to 1.00

Certain TDS and U.S. Cellular wholly-owned subsidiaries have jointly and severally unconditionally guaranteed the payment and performance of the obligations of TDS and U.S. Cellular under the revolving credit agreements pursuant to a guaranty dated June 15, 2016. Other subsidiaries that meet certain criteria will be required to provide a similar guaranty in the future. TDS and U.S. Cellular believe that they were in compliance with all of the financial and other covenants and requirements set forth in their revolving credit facilities as of December 31, 2017.

Term Loan

In July 2015, U.S. Cellular borrowed \$225 million on a senior term loan credit facility in two separate draws. This facility was entered into in January 2015 and amended and restated in June 2016. The interest rate on outstanding borrowings is reset at three and six month intervals at a rate of LIBOR plus 250 basis points. This credit facility provides for the draws to be continued on a long-term basis under terms that are readily determinable. U.S. Cellular has the ability and intent to carry the debt for the duration of the agreement. Principal reductions are due and payable in quarterly installments of \$3 million beginning in March 2016 through December 2021, and the remaining unpaid balance will be due and payable in January 2022. The senior term loan credit facility contains financial covenants and subsidiary guarantees that are consistent with the revolving credit agreements described above. This facility was entered into for general corporate purposes, including working capital, spectrum purchases and capital expenditures. U.S. Cellular believes that it was in compliance with all of the financial and other covenants and requirements set forth in its term loan credit facility as of December 31, 2017.

In connection with U.S. Cellular’s term loan credit facility, TDS and U.S. Cellular entered into a subordination agreement in June 2016 together with the administrative agent for the lenders under U.S. Cellular’s term loan credit agreement, which is substantially the same as the subordination agreement for U.S. Cellular as described above under the “Revolving Credit Facilities.” As of December 31, 2017, U.S. Cellular had no outstanding consolidated funded indebtedness or refinancing indebtedness that was subordinated to the term loan facility pursuant to this subordination agreement.

Receivables Securitization Facility

In December 2017, U.S. Cellular, through its subsidiaries, entered into a \$200 million credit facility to permit securitized borrowings using its equipment installment receivables for general corporate purposes, including acquisitions, spectrum purchases and capital expenditures. In connection with the receivables securitization facility, U.S. Cellular formed a wholly-owned subsidiary, USCC Master Note Trust (Trust), which qualifies as a bankruptcy remote entity. Under the terms of the facility, U.S. Cellular, through its subsidiaries, transfers eligible equipment installment receivables to the Trust. The Trust then utilizes the transferred assets as collateral for notes payables issued to third party financial institutions. Since U.S. Cellular retains effective control of the transferred assets in the Trust, any activity associated with this receivables securitization facility will be treated as a secured borrowing. Therefore, TDS will continue to report equipment installment receivables and any related balances on the Consolidated Balance Sheet. Cash received from borrowings under the receivables securitization facility will be reported as Debt. Refer to Note 14 — Variable Interest Entities for additional information.

U.S. Cellular entered into a performance guaranty whereby U.S. Cellular guarantees the performance of certain wholly-owned subsidiaries of U.S. Cellular under the receivables securitization facility. Amounts under the receivables securitization facility may be borrowed, repaid and reborrowed from time to time until maturity in December 2019, which may be extended from time to time as specified therein. As of December 31, 2017, there were no outstanding borrowings under the receivables securitization facility, and the entire unused capacity of \$200 million was available, subject to sufficient collateral to satisfy the asset borrowing base provisions of the facility. As of December 31, 2017, the Trust held less than \$1 million of assets available to be pledged as collateral for the receivables securitization facility.

The continued availability of the receivables securitization facility requires U.S. Cellular to comply with certain negative and affirmative covenants, maintain certain financial ratios and provide representations on certain matters at the time of each borrowing. The covenants include the same financial covenants for U.S. Cellular as described above under the "Revolving Credit Facility." TDS believes that U.S. Cellular was in compliance as of December 31, 2017, with all of the financial covenants and requirements set forth in its receivables securitization facility.

Other Long-Term Debt

Long-term debt as of December 31, 2017 and 2016, was as follows:

	Issuance date	Maturity date	Call date (any time on or after)	December 31, 2017			December 31, 2016		
				Principal Amount	Less Unamortized discount and debt issuance costs	Total	Principal Amount	Less Unamortized discount and debt issuance costs	Total
(Dollars in millions)									
TDS:									
Unsecured Senior Notes									
6.625%	March 2005	March 2045	March 2010	\$ 116	\$ 3	\$ 113	\$ 116	\$ 3	\$ 113
6.875%	Nov 2010	Nov 2059	Nov 2015	225	7	218	225	7	218
7.000%	March 2011	March 2060	March 2016	300	9	291	300	10	290
5.875%	Dec 2012	Dec 2061	Dec 2017	195	7	188	195	7	188
Purchase contract	Oct 2001	Oct 2021		-	-	-	1	-	1
Total Parent				\$ 836	\$ 26	\$ 810	\$ 837	\$ 27	\$ 810
Subsidiaries:									
U.S. Cellular									
Unsecured Senior Notes									
6.700%	Dec 2003 and June 2004	Dec 2033	Dec 2003 and June 2004	\$ 544	\$ 15	\$ 529	\$ 544	\$ 15	\$ 529
6.950%	May 2011	May 2060	May 2016	342	11	331	342	11	331
7.250%	Dec 2014	Dec 2063	Dec 2019	275	10	265	275	10	265
7.250%	Nov 2015	Dec 2064	Dec 2020	300	10	290	300	10	290
Term Loan	Jul 2015	Jan 2022		203	2	201	214	2	212
Capital lease obligations				4	-	4	2	-	2
Installment payment agreement				21	1	20	-	-	-
TDS Telecom									
Rural Utilities Service (RUS) and other notes				-	-	-	1	-	1
Capital lease obligations				1	-	1	1	-	1
Installment payment agreement				2	-	2	-	-	-
Other									
Long-term notes		Through 2021		4	-	4	4	-	4
Total Subsidiaries				1,696	49	1,647	1,683	48	1,635
Total long-term debt				\$ 2,532	\$ 75	\$ 2,457	\$ 2,520	\$ 75	\$ 2,445
Long-term debt, current						\$ 20			\$ 12
Long-term debt, noncurrent						\$ 2,437			\$ 2,433

TDS may redeem its callable notes and U.S. Cellular may redeem its 6.95% Senior Notes, 7.25% 2063 Senior Notes and 7.25% 2064 Senior Notes, in whole or in part at any time after the respective call date, at a redemption price equal to

100% of the principal amount redeemed plus accrued and unpaid interest. U.S. Cellular may redeem the 6.7% Senior Notes, in whole or in part, at any time prior to maturity at a redemption price equal to the greater of (a) 100% of the principal amount of such notes, plus accrued and unpaid interest, or (b) the sum of the present values of the remaining scheduled payments of principal and interest thereon discounted to the redemption date on a semi-annual basis at the Treasury Rate plus 30 basis points.

Interest on the Senior Notes outstanding at December 31, 2017, is payable quarterly, with the exception of U.S. Cellular's 6.7% Senior Notes for which interest is payable semi-annually.

The annual requirements for principal payments on long-term debt are approximately \$21 million for each of the years 2018 through 2020, and \$13 million and \$158 million for the years 2021 and 2022, respectively.

The covenants associated with TDS and its subsidiaries' long-term debt obligations, among other things, restrict TDS' ability, subject to certain exclusions, to incur additional liens, enter into sale and leaseback transactions, and sell, consolidate or merge assets.

TDS' and U.S. Cellular's long-term debt notes do not contain any provisions resulting in acceleration of the maturities of outstanding debt in the event of a change in TDS' or U.S. Cellular's credit rating. However, a downgrade in TDS' or U.S. Cellular's credit rating could adversely affect its ability to obtain long-term debt financing in the future.

NOTE 12 EMPLOYEE BENEFIT PLANS

Defined Contribution Plans

TDS sponsors a qualified noncontributory defined contribution pension plan. The plan provides benefits for certain employees of TDS Corporate, TDS Telecom and U.S. Cellular. Under this plan, pension costs are calculated separately for each participant and are funded annually. Total pension costs were \$16 million, \$17 million and \$16 million in 2017, 2016 and 2015, respectively. In addition, TDS sponsors a defined contribution retirement savings plan (401(k)) plan. Total costs incurred from TDS' contributions to the 401(k) plan were \$27 million in 2017 and 2016, and \$26 million in 2015.

TDS also sponsors an unfunded nonqualified deferred supplemental executive retirement plan for certain employees to offset the reduction of benefits caused by the limitation on annual employee compensation under the tax laws.

Other Post-Retirement Benefits

TDS sponsors a defined benefit post-retirement plan that provides medical benefits to retirees and that covers certain employees of TDS Corporate and TDS Telecom, which is not significant to TDS' financial position or operating results. The plan is contributory, with retiree contributions adjusted annually. TDS recognizes the funded status of the plan as a component of Other assets and deferred charges in the Consolidated Balance Sheet as of December 31, 2017 and 2016. Changes in the funded status are included in Accumulated other comprehensive income (loss) in the Consolidated Balance Sheet before affecting such amounts for income taxes to the extent that such changes are not recognized in earnings as a component of net periodic benefit cost.

The post-retirement benefit fund invests mainly in mutual funds that hold U.S. equities, international equities, and debt securities. The post-retirement benefit fund does not hold any debt or equity securities issued by TDS, U.S. Cellular or any related parties. The fair value of the plan assets of the post-retirement benefit fund was \$59 million and \$52 million as of December 31, 2017 and 2016, respectively. The total plan benefit obligations were \$45 million and \$39 million as of December 31, 2017 and 2016, respectively. Therefore, the total funded status was an asset of \$14 million and \$13 million as of December 31, 2017 and 2016, respectively.

TDS is not required to set aside current funds for its future retiree health insurance benefits. The decision to contribute to the plan assets is based upon several factors, including the funded status of the plan, market conditions, alternative investment opportunities, tax benefits and other circumstances. In accordance with applicable income tax regulations, annual contributions to fund the costs of future retiree medical benefits may not exceed certain thresholds. TDS has not determined whether it will make a contribution to the plan in 2018.

NOTE 13 COMMITMENTS AND CONTINGENCIES

Purchase Obligations

TDS has obligations payable under non-cancellable contracts, commitments for device purchases, network facilities and transport services, agreements for software licensing, long-term marketing programs, as well as certain agreements to purchase goods or services. Where applicable, TDS calculates its obligation based on termination fees that can be paid to exit the contract. Future minimum payments required under these commitments are as follows:

	Purchase Obligations
(Dollars in millions)	
2018	\$ 1,258
2019	671
2020	79
2021	45
2022	22
Thereafter	35
Total	\$ 2,110

Leases

TDS and its subsidiaries have leases for certain plant facilities, office space, retail store sites, cell sites, data centers and data-processing equipment which are accounted for as operating leases. Certain leases have renewal options and/or fixed rental increases. Renewal options that are reasonably assured of exercise are included in determining the lease term. Any rent abatements or lease incentives, in addition to fixed rental increases, are included in the calculation of rent expense and calculated on a straight-line basis over the defined lease term. For 2017, 2016 and 2015, rent expense for noncancellable long-term leases was \$183 million, \$177 million and \$168 million, respectively; and rent expense under cancellable short-term leases was \$12 million, \$12 million and \$11 million, respectively.

TDS and its subsidiaries are also the lessors for tower and colocation space and certain plant facilities which are accounted for as operating leases. The leased assets are included in Property, plant and equipment on the Consolidated Balance Sheet.

As of December 31, 2017, future minimum rental payments required under operating leases and rental receipts expected under operating leases that have noncancellable lease terms in excess of one year were as follows:

	Operating Leases Future Minimum Rental Payments	Operating Leases Future Minimum Rental Receipts
(Dollars in millions)		
2018	\$ 160	\$ 80
2019	149	62
2020	136	35
2021	121	22
2022	106	9
Thereafter	766	6
Total	\$ 1,438	\$ 216

Indemnifications

TDS enters into agreements in the normal course of business that provide for indemnification of counterparties. The terms of the indemnifications vary by agreement. The events or circumstances that would require TDS to perform under these indemnities are transaction specific; however, these agreements may require TDS to indemnify the counterparty for costs and losses incurred from litigation or claims arising from the underlying transaction. TDS is unable to estimate the maximum potential liability for these types of indemnifications as the amounts are dependent on the outcome of future events, the nature and likelihood of which cannot be determined at this time. Historically, TDS has not made any significant indemnification payments under such agreements.

Legal Proceedings

TDS is involved or may be involved from time to time in legal proceedings before the FCC, other regulatory authorities, and/or various state and federal courts. If TDS believes that a loss arising from such legal proceedings is probable and can be reasonably estimated, an amount is accrued in the financial statements for the estimated loss. If only a range of loss can be determined, the best estimate within that range is accrued; if none of the estimates within that range is better than another, the low end of the range is accrued. The assessment of the expected outcomes of legal proceedings is a highly subjective process that requires judgments about future events. The legal proceedings are reviewed at least quarterly to determine the adequacy of accruals and related financial statement disclosures. The ultimate outcomes of legal proceedings could differ materially from amounts accrued in the financial statements.

TDS has accrued \$1 million and less than \$1 million with respect to legal proceedings and unasserted claims as of December 31, 2017 and 2016, respectively. TDS has not accrued any amount for legal proceedings if it cannot estimate the amount of the possible loss or range of loss. TDS is unable to estimate any contingent loss in excess of the amounts accrued.

NOTE 14 VARIABLE INTEREST ENTITIES

Consolidated VIEs

TDS consolidates variable interest entities (VIEs) in which it has a controlling financial interest as defined by GAAP and is therefore deemed the primary beneficiary. A controlling financial interest will have both of the following characteristics: (a) the power to direct the VIE activities that most significantly impact economic performance and (b) the obligation to absorb the VIE losses and right to receive benefits that are significant to the VIE. TDS reviews these criteria initially at the time it enters into agreements and subsequently when events warranting reconsideration occur. These VIEs have risks similar to those described in the "Risk Factors" in TDS' Form 10-K for the year ended December 31, 2017.

During 2017, U.S. Cellular formed USCC EIP LLC (Seller/Sub-Servicer), USCC Receivables Funding LLC (Transferor) and the Trust, special purpose entities (SPEs), to facilitate a securitized borrowing using its equipment installment plan receivables. Under a Receivables Sale Agreement, U.S. Cellular wholly-owned, majority-owned and unconsolidated entities, collectively referred to as "affiliated entities", transfer device equipment installment contracts to USCC EIP LLC. The Seller/Sub-Servicer will aggregate device equipment installment plan contracts, perform servicing, collection and all other administrative activities related to accounting for equipment installment plan contracts. The Seller/Sub-Servicer will sell the eligible equipment installment plan receivables to the Transferor, a bankruptcy remote entity, which will subsequently sell the receivables to the Trust. The Trust, which is bankruptcy remote and isolated from the creditors of U.S. Cellular, will be responsible for issuing asset-backed variable funding notes (Notes), which are collateralized by the equipment installment plan receivables owned by the Trust. Given that U.S. Cellular has the power to direct the activities of these SPEs, and that these SPEs lack sufficient equity to finance their activities, U.S. Cellular is deemed to have a controlling financial interest in the SPEs and, therefore, consolidates them. All transactions with third parties (e.g. issuance of the asset-backed variable funding notes) will be accounted for as a secured borrowing due to the pledging of equipment installment contracts as collateral, significant continuing involvement in the transferred assets, subordinated interests of the cash flows, and continued evidence of control of the receivables. Refer to Note 11 — Debt, Receivables Securitization Facility for additional details regarding the securitization facility for which these entities were established.

The following VIEs were formed to participate in FCC auctions of wireless spectrum and to fund, establish, and provide wireless service with respect to any FCC licenses won in the auctions:

- Advantage Spectrum, L.P. (Advantage Spectrum) and Sunshine Spectrum, Inc. (Sunshine Spectrum), the general partner of Advantage Spectrum (former general partner was Frequency Advantage, L.P. (Frequency Advantage));
- Aquinas Wireless, L.P. (Aquinas Wireless); and
- King Street Wireless, L.P. (King Street Wireless) and King Street Wireless, Inc., the general partner of King Street Wireless.

These particular VIEs are collectively referred to as designated entities. The power to direct the activities that most significantly impact the economic performance of these VIEs is shared. Specifically, the general partner of these VIEs has the exclusive right to manage, operate and control the limited partnerships and make all decisions to carry on the

business of the partnerships. The general partner of each partnership needs the consent of the limited partner, an indirect TDS subsidiary, to sell or lease certain licenses, to make certain large expenditures, admit other partners or liquidate the limited partnerships. Although the power to direct the activities of these VIEs is shared, TDS has the most significant level of exposure to the variability associated with the economic performance of the VIEs, indicating that TDS is the primary beneficiary of the VIEs. Therefore, in accordance with GAAP, these VIEs are consolidated.

In January 2017, Sunshine Spectrum and the other owner of Frequency Advantage (the previous general partner of Advantage Spectrum) completed a series of transactions whereby Frequency Advantage was dissolved and Sunshine Spectrum became the new general partner of Advantage Spectrum. Consistent with its previous treatment of Frequency Advantage and in accordance with GAAP, TDS consolidates Sunshine Spectrum in its financial statements.

In March 2015, King Street Wireless made a \$60 million distribution to its owners. Of this distribution, \$6 million was provided to King Street Wireless, Inc. and \$54 million was provided to U.S. Cellular.

FCC Auction 97 ended in January 2015. TDS participated in Auction 97 indirectly through its interest in Advantage Spectrum. An indirect subsidiary of U.S. Cellular is a limited partner in Advantage Spectrum. Advantage Spectrum applied as a "designated entity," and received bid credits with respect to spectrum purchased in Auction 97. Advantage Spectrum was the winning bidder for 124 licenses for an aggregate bid of \$338 million, after its designated entity discount of 25%. This amount is classified as Licenses in TDS' Consolidated Balance Sheet at December 31, 2017 and 2016. Advantage Spectrum's bid amount, less the initial deposit of \$60 million paid in 2014, plus certain other charges totaling \$2 million, was paid to the FCC in March 2015. These licenses were granted by the FCC in July 2016.

TDS also consolidates other VIEs that are limited partnerships that provide wireless service. A limited partnership is a variable interest entity unless the limited partners hold substantive participating rights or kick-out rights over the general partner. For certain limited partnerships, U.S. Cellular is the general partner and manages the operations. In these partnerships, the limited partners do not have substantive kick-out or participating rights and, further, such limited partners do not have the authority to remove the general partner. Therefore, these limited partnerships are also recognized as VIEs and are consolidated under the variable interest model.

The following table presents the classification and balances of the consolidated VIEs' assets and liabilities in TDS' Consolidated Balance Sheet.

December 31,	2017	2016
(Dollars in millions)		
Assets		
Cash and cash equivalents	\$ 3	\$ 2
Accounts receivable	473	39
Other current assets	7	6
Licenses	648	649
Property, plant and equipment, net	89	93
Other assets and deferred charges	304	15
Total assets	\$ 1,524	\$ 804
Liabilities		
Current liabilities	\$ 36	\$ 18
Deferred liabilities and credits	12	12
Total liabilities	\$ 48	\$ 30

Unconsolidated VIEs

TDS manages the operations of and holds a variable interest in certain other limited partnerships, but is not the primary beneficiary of these entities and, therefore, does not consolidate them under the variable interest model.

TDS' total investment in these unconsolidated entities was \$4 million and \$6 million at December 31, 2017 and 2016, respectively, and is included in Investments in unconsolidated entities in TDS' Consolidated Balance Sheet. The maximum exposure from unconsolidated VIEs is limited to the investment held by TDS in those entities.

Other Related Matters

TDS made contributions, loans and/or advances to its VIEs totaling \$821 million, of which \$790 million is related to USCC EIP LLC as discussed above, \$98 million and \$281 million, during 2017, 2016 and 2015, respectively. TDS may agree to make additional capital contributions and/or advances to these or other VIEs and/or to their general partners to provide additional funding for operations or the development of licenses granted in various auctions. TDS may finance such amounts with a combination of cash on hand, borrowings under its revolving credit agreement and/or other long-term debt. There is no assurance that TDS will be able to obtain additional financing on commercially reasonable terms or at all to provide such financial support.

The limited partnership agreements of Advantage Spectrum, Aquinas Wireless and King Street Wireless also provide the general partner with a put option whereby the general partner may require the limited partner, a subsidiary of U.S. Cellular, to purchase its interest in the limited partnership. The general partner's put options related to its interests in King Street Wireless and Aquinas Wireless will become exercisable in 2019 and 2020, respectively. The general partner's put options related to its interest in Advantage Spectrum will become exercisable in 2021 and 2022. The put option price is determined pursuant to a formula that takes into consideration fixed interest rates and the market value of U.S. Cellular's Common Shares. Upon exercise of the put option, the general partner is required to repay borrowings due to U.S. Cellular. If the general partner does not elect to exercise its put option, the general partner may trigger an appraisal process in which the limited partner (a subsidiary of U.S. Cellular) may have the right, but not the obligation, to purchase the general partner's interest in the limited partnership at a price and on other terms and conditions specified in the limited partnership agreement. In accordance with requirements under GAAP, TDS is required to calculate a theoretical redemption value for all of the put options assuming they are exercisable at the end of each reporting period, even though such exercise is not contractually permitted. Pursuant to GAAP, this theoretical redemption value, net of amounts payable to U.S. Cellular for loans and accrued interest thereon made by U.S. Cellular to the general partners (net put value), was \$1 million at December 31, 2017 and 2016. The net put value is recorded as Noncontrolling interests with redemption features in TDS' Consolidated Balance Sheet. Also in accordance with GAAP, changes in the redemption value of the put options, net of interest accrued on the loans, are recorded as a component of Net income attributable to noncontrolling interests, net of tax, in TDS' Consolidated Statement of Operations.

During 2015, TDS recorded out-of-period adjustments attributable to the third quarter of 2013 through the second quarter of 2015 related to an agreement with King Street Wireless. TDS determined that these adjustments were not material to the quarterly periods or the annual results for 2015. These out-of-period adjustments had the impact of reducing Net income by \$3 million and Net income attributable to TDS shareholders by \$3 million in 2015.

NOTE 15 NONCONTROLLING INTERESTS

The following schedule discloses the effects of Net income attributable to TDS shareholders and changes in TDS' ownership interest in U.S. Cellular on TDS' equity for 2017, 2016 and 2015:

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Net income attributable to TDS shareholders	\$ 153	\$ 43	\$ 219
Transfer (to) from the noncontrolling interests			
Change in TDS' Capital in excess of par value from			
U.S. Cellular's issuance of U.S. Cellular shares	(12)	(16)	(15)
Change in TDS' Capital in excess of par value from			
U.S. Cellular's repurchase of U.S. Cellular shares	-	1	1
Net transfers (to) from noncontrolling interests	(12)	(15)	(14)
Change from net income attributable to TDS shareholders and transfers			
(to) from noncontrolling interests	\$ 141	\$ 28	\$ 205

Mandatorily Redeemable Noncontrolling Interests in Finite-Lived Subsidiaries

TDS' consolidated financial statements include certain noncontrolling interests that meet the GAAP definition of mandatorily redeemable financial instruments. These mandatorily redeemable noncontrolling interests represent interests held by third parties in consolidated partnerships, where the terms of the underlying partnership agreement provide for a

defined termination date at which time the assets of the subsidiary are to be sold, the liabilities are to be extinguished and the remaining net proceeds are to be distributed to the noncontrolling interest holders and TDS in accordance with the respective partnership agreements. The termination dates of these mandatorily redeemable noncontrolling interests range from 2085 to 2092.

The estimated aggregate amount that would be due and payable to settle all of these noncontrolling interests, assuming an orderly liquidation of the finite-lived consolidated partnerships on December 31, 2017, net of estimated liquidation costs, is \$16 million. This amount excludes redemption amounts recorded in Noncontrolling interests with redemption features in the Consolidated Balance Sheet. The estimate of settlement value was based on certain factors and assumptions which are subjective in nature. Changes in those factors and assumptions could result in a materially larger or smaller settlement amount. TDS currently has no plans or intentions relating to the liquidation of any of the related partnerships prior to their scheduled termination dates. The corresponding carrying value of the mandatorily redeemable noncontrolling interests in finite-lived consolidated partnerships at December 31, 2017, was \$5 million, and is included in Noncontrolling interests in the Consolidated Balance Sheet. The excess of the aggregate settlement value over the aggregate carrying value of these mandatorily redeemable noncontrolling interests is due primarily to the unrecognized appreciation of the noncontrolling interest holders' share of the underlying net assets in the consolidated partnerships. Neither the noncontrolling interest holders' share, nor TDS' share, of the appreciation of the underlying net assets of these subsidiaries is reflected in the consolidated financial statements.

NOTE 16 COMMON SHAREHOLDERS' EQUITY

Common Stock

As of December 31, 2017, Series A Common Shares were convertible, on a share for share basis, into Common Shares and 7,257,584 Common Shares were reserved for possible issuance upon conversion of Series A Common Shares.

The following table summarizes the number of Common and Series A Common Shares issued and repurchased.

	Common Shares	Series A Common Shares	Common Treasury Shares
(Shares in millions)			
Balance at December 31, 2014	126	7	25
Dividend reinvestment, incentive and compensation plans	–	–	(1)
Balance at December 31, 2015	126	7	24
Dividend reinvestment, incentive and compensation plans	–	–	(1)
Balance at December 31, 2016	126	7	23
Dividend reinvestment, incentive and compensation plans	–	–	(1)
Balance at December 31, 2017	126	7	22

On August 2, 2013, the Board of Directors of TDS authorized a \$250 million stock repurchase program for the purchase of TDS Common Shares from time to time pursuant to open market purchases, block transactions, private purchases or otherwise, depending on market conditions. This authorization does not have an expiration date.

In November 2009, the Board of Directors of U.S. Cellular authorized the repurchase of up to 1,300,000 Common Shares on an annual basis beginning in 2009 and continuing each year thereafter, on a cumulative basis. In December 2016, the U.S. Cellular Board amended this authorization to provide that, beginning on January 1, 2017, the authorized repurchase amount with respect to a particular year will be any amount from zero to 1,300,000, as determined by the Pricing Committee, and that if the Pricing Committee did not specify an amount for any year, such amount would be zero for such year. The Pricing Committee did not specify any amount as of January 1, 2018. The Pricing Committee also was authorized to decrease the cumulative amount of the authorization at any time, but has not taken any action to do so at this time. As a result, there was no change to the cumulative amount of the share repurchase authorization as of January 1, 2018. As of December 31, 2017, the total cumulative amount of Common Shares authorized to be purchased is 5,900,849. The authorization provides that share repurchases will be made pursuant to open market purchases, block purchases, private purchases, or otherwise, depending on market prices and other conditions. This authorization does not have an expiration date.

Tax-Deferred Savings Plan

At December 31, 2017, TDS has reserved 90,341 Common Shares for issuance under the TDS Tax-Deferred Savings Plan, a qualified profit-sharing plan pursuant to Sections 401(a) and 401(k) of the Internal Revenue Code. Participating employees have the option of investing their contributions and TDS' contributions in a TDS Common Share fund, a U.S. Cellular Common Share fund or certain unaffiliated funds.

NOTE 17 STOCK-BASED COMPENSATION**TDS Consolidated**

The following table summarizes stock-based compensation expense recognized during 2017, 2016 and 2015:

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Stock option awards	\$ 10	\$ 16	\$ 18
Restricted stock unit awards	29	24	20
Performance share awards	5	—	—
Deferred compensation bonus and matching stock unit awards	1	1	1
Awards under Non-Employee Director compensation plan	1	1	1
Total stock-based compensation, before income taxes	46	42	40
Income tax benefit	(17)	(16)	(15)
Total stock-based compensation expense, net of income taxes	\$ 29	\$ 26	\$ 25

At December 31, 2017, unrecognized compensation cost for all stock-based compensation awards was \$50 million and is expected to be recognized over a weighted average period of 1.8 years.

The following table provides a summary of the classification of stock-based compensation expense included in the Consolidated Statement of Operations for the years ended:

December 31,	2017	2016	2015
(Dollars in millions)			
Selling, general and administrative expense	\$ 42	\$ 39	\$ 37
Cost of services and products	4	3	3
Total stock-based compensation	\$ 46	\$ 42	\$ 40

TDS' tax benefits realized from the exercise of stock options and other awards totaled \$9 million in 2017.

TDS (Excluding U.S. Cellular)

The information in this section relates to stock-based compensation plans using the equity instruments of TDS. Participants in these plans are employees of TDS Corporate and TDS Telecom and Non-employee Directors of TDS. Information related to plans using the equity instruments of U.S. Cellular are shown in the U.S. Cellular section following the TDS section.

Under the TDS Long-Term Incentive Plans, TDS may grant fixed and performance based incentive and non-qualified stock options, restricted stock, restricted stock units, and deferred compensation stock unit awards to key employees.

TDS had reserved 15,702,000 Common Shares at December 31, 2017, for equity awards granted and to be granted under the TDS Long-Term Incentive Plans in effect. At December 31, 2017, the only types of awards outstanding are fixed non-qualified stock option awards, restricted stock unit awards, performance share awards and deferred compensation stock unit awards.

TDS has also established a Non-Employee Directors' compensation plan under which it has reserved 85,000 TDS Common Shares at December 31, 2017, for issuance as compensation to members of the Board of Directors who are not employees of TDS.

TDS uses treasury stock to satisfy requirements for shares issued pursuant to its various stock-based compensation plans.

Long-Term Incentive Plan – Stock Options

Stock options granted to key employees are exercisable over a specified period not in excess of ten years. Stock options generally vest over periods up to three years from the date of grant. Stock options outstanding at December 31, 2017, expire between 2018 and 2027. However, vested stock options typically expire 30 days after the effective date of an employee's termination of employment for reasons other than retirement. Employees who leave at the age of retirement have 90 days (or one year if they satisfy certain requirements) within which to exercise their vested stock options. The exercise price of options equals the market value of TDS common stock on the date of grant.

TDS estimated the fair value of stock options granted in 2017, 2016 and 2015 using the Black-Scholes valuation model and the assumptions shown in the table below:

	2017	2016	2015
Expected life	6.4 years	6.2 years	6.1 years
Expected annual volatility rate	30.4%	30.3%	30.8%
Dividend yield	2.2%	2.0%	1.9%
Risk-free interest rate	2.0%	1.3%	1.8%
Estimated annual forfeiture rate	2.5%	2.7%	3.2%

Pre-vesting forfeitures and expected life are estimated based on historical experience related to similar awards, giving considerations to the contractual terms of the stock-based awards, vesting schedules and expectations of future employee behavior. TDS believes that its historical experience provides the best estimates of future pre-vesting forfeitures and future expected life. The expected volatility assumption is based on historical volatility of TDS' common stock over a period commensurate with the expected life. The dividend yield assumption is equal to the dividends declared in the most recent year as a percentage of the share price on the date of grant. The risk-free interest rate assumption is determined using the U.S. Treasury Yield Curve Rate with a term length that approximates the expected life of the stock options.

A summary of TDS stock options (total and portion exercisable) and changes during 2017 is presented in the tables and narrative below.

Common Share Options	Number of Options	Weighted Average Exercise Prices	Aggregate Intrinsic Value (in millions)	Weighted Average Remaining Contractual Life (in years)
Outstanding at December 31, 2016	8,677,000	\$ 29.98		
(6,167,000 exercisable)		30.59		
Granted	701,000	27.79		
Exercised	(278,000)	25.05		
Forfeited	(426,000)	28.79		
Expired	(813,000)	54.39		
Outstanding at December 31, 2017	7,861,000	\$ 27.49	\$ 13	4.6
(5,927,000 exercisable)		27.04	13	3.3

The weighted average grant date fair value per share of the TDS stock options granted in 2017, 2016 and 2015 was \$7.06, \$7.24 and \$7.66, respectively. The aggregate intrinsic value of TDS stock options exercised in 2017, 2016 and 2015 was \$1 million, \$4 million and \$4 million, respectively. The aggregate intrinsic value at December 31, 2017, presented in the table above represents the total pre-tax intrinsic value (the difference between TDS' closing stock prices

and the exercise price, multiplied by the number of in-the-money options) that would have been received by option holders had all options been exercised on December 31, 2017.

Long-Term Incentive Plans – Restricted Stock Units

TDS also grants restricted stock unit awards to key employees. Each outstanding restricted stock unit is convertible into one Common Share Award. The restricted stock unit awards currently outstanding were granted in 2015, 2016 and 2017 and will vest in 2018, 2019 and 2020, respectively.

TDS estimates the fair value of restricted stock units by reducing the grant-date price of TDS' shares by the present value of the dividends expected to be paid on the underlying shares during the requisite service period, discounted at the appropriate risk-free interest rate, since employees are not entitled to dividends declared on the underlying shares while the restricted stock is unvested. The fair value is then recognized as compensation cost on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period.

A summary of TDS nonvested restricted stock units and changes during 2017 is presented in the table below:

Common Restricted Stock Units	Number	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2016	1,130,000	\$ 26.97
Granted	494,000	\$ 25.97
Vested	(322,000)	\$ 25.27
Forfeited	(127,000)	\$ 27.09
Nonvested at December 31, 2017	1,175,000	\$ 27.01

No restricted stock units vested during 2015. The total fair values as of the respective vesting dates of restricted stock units vested during 2017 and 2016 were \$9 million and \$10 million, respectively. The weighted average grant date fair value per share of the restricted stock units granted in 2017, 2016 and 2015 was \$25.97, \$27.87 and \$27.57, respectively.

Long-Term Incentive Plans – Performance Share Awards (Performance Shares)

Beginning in 2016, TDS granted performance shares, specifically performance stock units, to certain TDS executive officers. Each recipient may be entitled to shares of TDS common stock equal to 0% to 200% of a communicated target award depending on the achievement of predetermined performance-based and market-based operating targets over a three year period. Performance-based operating targets include Total Revenue and Return on Capital. Market-based operating targets are measured against TDS' total shareholder return relative to a defined peer group. Performance shares accumulate dividend equivalents, which are forfeitable if the performance metrics are not achieved.

TDS estimates fair value of performance-based operating targets using TDS' closing stock price on the date of grant. An estimate of the number of performance shares expected to vest based upon achieving the performance-based operating targets is made and the fair value is expensed on a straight-line basis over the requisite service period. Each reporting period these estimates are reviewed and stock compensation expense is adjusted accordingly to reflect the new estimates of total awards expected to vest. If any part of the performance shares does not vest as a result of the established performance-based operating targets not being achieved, the related stock compensation expense is reversed.

TDS estimates the market-based operating target's fair value using an internally developed valuation model. This estimated fair value approximated TDS' closing stock price at the date of grant for market-based share awards granted in 2017 and 2016. This market-based operating target value determined at the date of grant is expensed on a straight-line basis over the requisite service period and the stock compensation expense is not adjusted during the performance period for the subsequent changes in the value of the market-based share awards and will not be reversed even if the market-based operating target is not achieved.

A summary of TDS nonvested performance shares and changes during 2017 is presented in the table below:

Common Performance Shares	Number		Weighted Average Grant Date Fair Value
Nonvested at December 31, 2016	97,000	\$	29.45
Granted	115,000	\$	27.79
Accumulated dividend equivalents	4,000	\$	28.68
Nonvested at December 31, 2017	216,000	\$	28.56

No performance shares vested during 2017 or 2016. The weighted average grant date fair value per share of the performance shares granted in 2017 and 2016 was \$27.79 and \$29.45, respectively.

Long-Term Incentive Plans – Deferred Compensation Stock Units

Certain TDS employees may elect to defer receipt of all or a portion of their annual bonuses and to receive a company matching contribution on the amount deferred. All bonus compensation that is deferred by employees electing to participate is immediately vested and is deemed to be invested in TDS Common Share units. The amount of TDS' matching contribution depends on the portion of the annual bonus that is deferred. Participants receive a 25% stock unit match for amounts deferred up to 50% of their total annual bonus and a 33% match for amounts that exceed 50% of their total annual bonus; such matching contributions also are deemed to be invested in TDS Common Share units and vest over three years.

The total fair values of deferred compensation stock units that vested during 2017, 2016 and 2015 were less than \$1 million. The weighted average grant date fair value per share of the deferred compensation stock units granted in 2017, 2016 and 2015 was \$27.13, \$27.94 and \$25.36, respectively. As of December 31, 2017, there were 112,000 vested but unissued deferred compensation stock units valued at \$3 million.

Compensation of Non-Employee Directors

TDS issued 27,000, 27,000 and 28,000 Common Shares under its Non-Employee Director plan in 2017, 2016 and 2015, respectively.

Dividend Reinvestment Plans

TDS had reserved 1,405,000 Common Shares at December 31, 2017, for issuance under Automatic Dividend Reinvestment and Stock Purchase Plans and 247,000 Series A Common Shares for issuance under the Series A Common Share Automatic Dividend Reinvestment Plan. These plans enabled holders of TDS' Common Shares to reinvest cash dividends in Common Shares and holders of Series A Common Shares to reinvest cash dividends in Series A Common Shares. The purchase price of the shares is 95% of the market value, based on the average of the daily high and low sales prices for TDS' Common Shares on the New York Stock Exchange for the ten trading days preceding the date on which the purchase is made. These plans are considered non-compensatory plans; therefore, no compensation expense is recognized for stock issued under these plans.

U.S. Cellular

The information in this section relates to stock-based compensation plans using the equity instruments of U.S. Cellular. Participants in these plans are employees of U.S. Cellular and Non-employee Directors of U.S. Cellular. Information related to plans using the equity instruments of TDS are shown in the previous section.

U.S. Cellular has established the following stock-based compensation plans: Long-Term Incentive Plans and a Non-Employee Director compensation plan.

Under the U.S. Cellular Long-Term Incentive Plans, U.S. Cellular may grant fixed and performance based incentive and non-qualified stock options, restricted stock, restricted stock units, and deferred compensation stock unit awards to key employees. At December 31, 2017, the only types of awards outstanding are fixed non-qualified stock option awards, restricted stock unit awards, performance share awards and deferred compensation stock unit awards.

Under the Non-Employee Director compensation plan, U.S. Cellular may grant Common Shares to members of the Board of Directors who are not employees of U.S. Cellular or TDS.

At December 31, 2017, U.S. Cellular had reserved 14,449,000 Common Shares for equity awards granted and to be granted under the Long-Term Incentive Plans and 154,000 Common Shares for issuance under the Non-Employee Director compensation plan.

U.S. Cellular uses treasury stock to satisfy requirements for Common Shares issued pursuant to its various stock-based compensation plans.

Long-Term Incentive Plans – Stock Options

Stock options granted to key employees are exercisable over a specified period not in excess of ten years. Stock options generally vest over a period of three years from the date of grant. Stock options outstanding at December 31, 2017, expire between 2018 and 2026. However, vested stock options typically expire 30 days after the effective date of an employee’s termination of employment for reasons other than retirement. Employees who leave at the age of retirement have 90 days (or one year if they satisfy certain requirements) within which to exercise their vested stock options. The exercise price of options equals the market value of U.S. Cellular Common Shares on the date of grant.

U.S. Cellular did not grant stock option awards in 2017. U.S. Cellular estimated the fair value of stock options granted during 2016 and 2015 using the Black-Scholes valuation model and the assumptions shown in the table below.

	2016	2015
Expected life	4.7 years	4.6 years
Expected annual volatility rate	30.5%	30.1%
Dividend yield	0%	0%
Risk-free interest rate	1.2%	1.2%
Estimated annual forfeiture rate	9.4%	9.7%

Pre-vesting forfeitures and expected life are estimated based on historical experience related to similar awards, giving consideration to the contractual terms of the stock-based awards, vesting schedules and expectations of future employee behavior. U.S. Cellular believes that its historical experience provides the best estimates of future pre-vesting forfeitures and future expected life. The expected volatility assumption is based on the historical volatility of U.S. Cellular’s common stock over a period commensurate with the expected life. The dividend yield assumption is zero because U.S. Cellular has never paid a dividend, except a special cash dividend in June 2013, and has expressed its intention to retain all future earnings in the business. The risk-free interest rate assumption is determined using the U.S. Treasury Yield Curve Rate with a term length that approximates the expected life of the stock options.

The fair value of options is recognized as compensation cost using an accelerated attribution method over the requisite service periods of the awards, which is generally the vesting period.

A summary of U.S. Cellular stock options outstanding (total and portion exercisable) and changes during 2017 is presented in the table below:

Common Share Options	Number of Options	Weighted Average Exercise Price	Aggregate Intrinsic Value (in millions)	Weighted Average Remaining Contractual Life (in years)
Outstanding at December 31, 2016	3,973,000	\$ 41.92		
(1,937,000 exercisable)		42.54		
Exercised	(162,000)	36.21		
Forfeited	(74,000)	41.62		
Expired	(242,000)	57.67		
Outstanding at December 31, 2017	3,495,000	\$ 41.10	\$ 3	6.0
(2,475,000 exercisable)		40.79	\$ 2	5.4

The weighted average grant date fair value per share of the U.S. Cellular stock options granted in 2016 and 2015 was \$12.77 and \$9.94, respectively. The aggregate intrinsic value of U.S. Cellular stock options exercised in 2017, 2016 and 2015 was \$1 million, \$4 million and \$2 million, respectively. The aggregate intrinsic value at December 31, 2017, presented in the table above represents the total pre-tax intrinsic value (the difference between U.S. Cellular’s closing

stock price and the exercise price multiplied by the number of in-the-money options) that would have been received by option holders had all options been exercised on December 31, 2017.

Long-Term Incentive Plans – Restricted Stock Units

Restricted stock unit awards granted to key employees generally vest after three years. U.S. Cellular estimates the fair value of restricted stock units based on the closing market price of U.S. Cellular shares on the date of grant. The fair value is then recognized as compensation cost on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period.

A summary of U.S. Cellular nonvested restricted stock units at December 31, 2017, and changes during the year then ended is presented in the table below:

Common Restricted Stock Units	Number		Weighted Average Grant Date Fair Value
Nonvested at December 31, 2016	1,310,000	\$	40.74
Granted	557,000		38.04
Vested	(294,000)		41.24
Forfeited	(90,000)		40.07
Nonvested at December 31, 2017	1,483,000	\$	39.67

The total fair value of restricted stock units that vested during 2017, 2016 and 2015 was \$11 million, \$15 million and \$13 million, respectively. The weighted average grant date fair value per share of the restricted stock units granted in 2017, 2016 and 2015 was \$38.04, \$43.32 and \$37.24, respectively.

Long-Term Incentive Plans – Performance Share Awards (Performance Shares)

Beginning in 2017, U.S. Cellular granted performance shares, specifically performance stock units, to key employees. The performance shares vest after three years. Each recipient may be entitled to shares of U.S. Cellular common stock equal to 50% to 200% of a communicated target award depending on the achievement of predetermined performance-based operating targets over the performance period, which is a one year period beginning on January 1 in the year of grant to December 31 in the year of grant. The remaining time through the end of the vesting period is considered the “time-based period”. Performance-based operating targets include Simple Free Cash Flow, Consolidated Total Revenue and Postpaid Handset Voluntary Defections. Subject to vesting during the time-based period, the performance share award agreement provides that in no event shall the award be less than 50% of the target opportunity as of the grant date.

U.S. Cellular estimates the fair value of performance shares using U.S. Cellular’s closing stock price on the date of grant. An estimate of the number of performance shares expected to vest based upon achieving the performance-based operating targets is made and the aggregate fair value is expensed on a straight-line basis over the requisite service period. Each reporting period, during the performance period, the estimate of the number of performance shares expected to vest is reviewed and stock compensation expense is adjusted as appropriate to reflect the revised estimate of the aggregate fair value of the performance shares expected to vest.

A summary of U.S. Cellular’s nonvested performance shares and changes during 2017 is presented in the table below:

Common Performance Shares	Number		Weighted Average Grant Date Fair Value
Nonvested at December 31, 2016	–	\$	–
Granted	352,000	\$	36.92
Forfeited	(10,000)	\$	36.92
Nonvested at December 31, 2017	342,000	\$	36.92

Long-Term Incentive Plans – Deferred Compensation Stock Units

Certain U.S. Cellular employees may elect to defer receipt of all or a portion of their annual bonuses and to receive a company matching contribution on the amount deferred. All bonus compensation that is deferred by employees electing to participate is immediately vested and is deemed to be invested in U.S. Cellular Common Share stock units. The amount of U.S. Cellular's matching contribution depends on the portion of the annual bonus that is deferred. Participants receive a 25% match for amounts deferred up to 50% of their total annual bonus and a 33% match for amounts that exceed 50% of their total annual bonus; such matching contributions also are deemed to be invested in U.S. Cellular Common Share stock units and vest over three years.

The total fair value of deferred compensation stock units that vested during 2017, 2016 and 2015 was less than \$1 million. The weighted average grant date fair value per share of the deferred compensation stock units granted in 2017, 2016 and 2015 was \$36.02, \$41.31 and \$35.96, respectively. As of December 31, 2017, there were 21,000 vested but unissued deferred compensation stock units valued at \$1 million.

Compensation of Non-Employee Directors

U.S. Cellular issued 15,000, 13,000 and 15,000 Common Shares in 2017, 2016 and 2015, respectively, under its Non-Employee Director compensation plan.

NOTE 18 BUSINESS SEGMENT INFORMATION

U.S. Cellular and TDS Telecom are billed for all services they receive from TDS, consisting primarily of information processing, accounting and finance, and general management services. Such billings are based on expenses specifically identified to U.S. Cellular and TDS Telecom and on allocations of common expenses. Management believes the method used to allocate common expenses is reasonable and that all expenses and costs applicable to U.S. Cellular and TDS Telecom are reflected in the accompanying business segment information on a basis that is representative of what they would have been if U.S. Cellular and TDS Telecom operated on a stand-alone basis.

Financial data for TDS' reportable segments for 2017, 2016 and 2015, is as follows. See Note 1 — Summary of Significant Accounting Policies and Recent Accounting Pronouncements for additional information.

Year Ended or as of December 31, 2017	TDS Telecom						Corporate, Eliminations and Other	Total
	U.S. Cellular	Wireline	Cable	HMS	TDS Telecom Eliminations	TDS Telecom Total		
(Dollars in millions)								
Operating revenues								
Service	\$ 2,978	\$ 713	\$ 206	\$ 111	\$ (5)	\$ 1,024	\$ (23)	\$ 3,979
Equipment and product sales	912	1	—	114	—	116	37	1,065
Total operating revenues	3,890	714	206	225	(5)	1,140	14	5,044
Cost of services (excluding Depreciation, amortization and accretion expense reported below)								
Cost of equipment and products	1,071	258	98	83	(5)	434	(2)	1,164
Selling, general and administrative	1,412	2	—	95	—	97	27	1,195
Depreciation, amortization and accretion	615	191	54	42	—	286	(12)	1,686
Loss on impairment of goodwill ¹	370	151	44	28	—	222	7	844
(Gain) loss on asset disposals, net	17	—	—	35	—	35	(143)	262
(Gain) loss on sale of business and other exit costs, net	17	1	2	—	—	4	—	21
(Gain) loss on license sales and exchanges, net	(1)	—	—	—	—	—	—	(1)
(Gain) loss on license sales and exchanges, net	(22)	—	—	—	—	—	—	(22)
Operating income (loss)	(304)	111	8	(57)	—	63	136	(105)
Equity in earnings of unconsolidated entities								
Interest and dividend income	137	—	—	—	—	—	—	137
Interest expense	8	5	—	—	—	5	2	15
Other, net	(113)	—	—	(4)	—	(4)	(53)	(170)
Other, net	—	—	—	—	—	—	1	1
Income (loss) before income taxes	(272)	117	8	(60)	—	65	85	(122)
Income tax expense (benefit) ²	(287)	—	—	—	—	(24)	32	(279)
Net income	15					88	54	157
Add back:								
Depreciation, amortization and accretion	615	151	44	28	—	222	7	844
Loss on impairment of goodwill ¹	370	—	—	35	—	35	(143)	262
(Gain) loss on asset disposals, net	17	1	2	—	—	4	—	21
(Gain) loss on sale of business and other exit costs, net	(1)	—	—	—	—	—	—	(1)
(Gain) loss on license sales and exchanges, net	(22)	—	—	—	—	—	—	(22)
Interest expense	113	—	—	4	—	4	53	170
Income tax expense (benefit) ²	(287)	—	—	—	—	(24)	32	(279)
Adjusted EBITDA³	\$ 820	\$ 269	\$ 54	\$ 6	\$ —	\$ 329	\$ 3	\$ 1,152
Investments in unconsolidated entities	\$ 415	\$ 4	\$ —	\$ —	\$ —	\$ 4	\$ 34	\$ 453
Total assets	\$ 6,841	\$ 1,237	\$ 644	\$ 196	\$ —	\$ 2,077	\$ 377	\$ 9,295
Capital expenditures	\$ 469	\$ 146	\$ 55	\$ 14	\$ —	\$ 215	\$ 10	\$ 694

Year Ended or as of December 31, 2016	TDS Telecom							Corporate, Eliminations and Other	Total
	U.S. Cellular	Wireline	Cable	HMS	TDS Telecom Eliminations	TDS Telecom Total			
(Dollars in millions)									
Operating revenues									
Service	\$ 3,081	\$ 696	\$ 185	\$ 119	\$ (5)	\$ 995	\$ (26)	\$ 4,050	
Equipment and product sales	909	2	—	155	—	157	39	1,105	
Total operating revenues	3,990	698	185	273	(5)	1,151	14	5,155	
Cost of services (excluding Depreciation, amortization and accretion expense reported below)									
Cost of equipment and products	760	258	94	82	(4)	430	(1)	1,189	
Selling, general and administrative	1,081	2	—	128	—	131	28	1,240	
Depreciation, amortization and accretion	1,480	197	51	48	—	295	(16)	1,759	
(Gain) loss on asset disposals, net	618	159	37	29	—	224	8	850	
(Gain) loss on sale of business and other exit costs, net	22	2	2	—	—	4	1	27	
(Gain) loss on license sales and exchanges, net	—	—	—	—	—	—	(1)	(1)	
(Gain) loss on license sales and exchanges, net	(19)	(1)	—	—	—	(1)	—	(20)	
Operating income (loss)	48	80	2	(14)	—	67	(4)	111	
Equity in earnings of unconsolidated entities									
Interest and dividend income	140	—	—	—	—	—	—	140	
Interest expense	6	3	—	—	—	3	2	11	
Other, net	(113)	1	—	(4)	—	(3)	(54)	(170)	
Other, net	1	—	—	—	—	—	(1)	—	
Income (loss) before income taxes	82	83	2	(18)	—	67	(57)	92	
Income tax expense (benefit) ²	33	—	—	—	—	25	(18)	40	
Net income (loss)	49	—	—	—	—	42	(39)	52	
Add back:									
Depreciation, amortization and accretion	618	159	37	29	—	224	8	850	
(Gain) loss on asset disposals, net	22	2	2	—	—	4	1	27	
(Gain) loss on sale of business and other exit costs, net	—	—	—	—	—	—	(1)	(1)	
(Gain) loss on license sales and exchanges, net	(19)	(1)	—	—	—	(1)	—	(20)	
Interest expense	113	(1)	—	4	—	3	54	170	
Income tax expense (benefit) ²	33	—	—	—	—	25	(18)	40	
Adjusted EBITDA³	\$ 816	\$ 242	\$ 41	\$ 15	\$ —	\$ 298	\$ 4	\$ 1,118	
Investments in unconsolidated entities	\$ 413	\$ 4	\$ —	\$ —	\$ —	\$ 4	\$ 34	\$ 451	
Total assets	\$ 7,110	\$ 1,231	\$ 599	\$ 264	\$ —	\$ 2,094	\$ 242	\$ 9,446	
Capital expenditures	\$ 446	\$ 108	\$ 54	\$ 11	\$ —	\$ 173	\$ 11	\$ 630	

Year Ended or as of December 31, 2015	TDS Telecom							Corporate, Eliminations and Other	Total
	U.S. Cellular	Wireline	Cable	HMS	TDS Telecom Eliminations	TDS Telecom Total			
(Dollars in millions)									
Operating revenues									
Service	\$ 3,384	\$ 699	\$ 175	\$ 117	\$ (5)	\$ 986	\$ (14)	\$ 4,356	
Equipment and product sales	647	2	—	170	—	172	35	854	
Total operating revenues	4,031	701	175	287	(5)	1,158	21	5,210	
Cost of services (excluding Depreciation, amortization and accretion reported below)									
Cost of equipment and products	1,053	255	79	85	(4)	414	2	1,191	
Selling, general and administrative	1,494	2	—	143	—	145	26	1,224	
Depreciation, amortization and accretion	607	194	54	47	—	294	(7)	1,781	
(Gain) loss on asset disposals, net	607	166	35	27	—	228	9	844	
(Gain) loss on sale of business and other exit costs, net	16	5	1	—	—	6	—	22	
(Gain) loss on license sales and exchanges, net	(114)	(10)	—	—	—	(10)	(12)	(136)	
(Gain) loss on license sales and exchanges, net	(147)	—	—	—	—	—	—	(147)	
Operating income (loss)	347	89	6	(15)	—	79	5	431	
Equity in earnings of unconsolidated entities	140	—	—	—	—	—	—	140	
Interest and dividend income	2	2	—	—	—	2	1	5	
Interest expense	(86)	1	—	(2)	—	(1)	(55)	(142)	
Other, net	1	—	—	—	—	—	—	1	
Income (loss) before income taxes	404	92	7	(18)	—	81	(50)	435	
Income tax expense (benefit) ²	157	—	—	—	—	35	(20)	172	
Net income (loss)	247	—	—	—	—	46	(30)	263	
Add back:									
Depreciation, amortization and accretion	607	166	35	27	—	228	9	844	
(Gain) loss on asset disposals, net	16	5	1	—	—	6	—	22	
(Gain) loss on sale of business and other exit costs, net	(114)	(10)	—	—	—	(10)	(12)	(136)	
(Gain) loss on license sales and exchanges, net	(147)	—	—	—	—	—	—	(147)	
Interest expense	86	(1)	—	2	—	1	55	142	
Income tax expense (benefit) ²	157	—	—	—	—	35	(20)	172	
Adjusted EBITDA³	\$ 852	\$ 252	\$ 42	\$ 12	\$ —	\$ 306	\$ 2	\$ 1,160	
Investments in unconsolidated entities	\$ 363	\$ 4	\$ —	\$ —	\$ —	\$ 4	\$ 35	\$ 402	
Total assets	\$ 7,060	\$ 1,312	\$ 578	\$ 286	\$ —	\$ 2,176	\$ 186	\$ 9,422	
Capital expenditures	\$ 533	\$ 140	\$ 52	\$ 27	\$ —	\$ 219	\$ 7	\$ 759	

Numbers may not foot due to rounding.

¹ During the twelve months ended December 31, 2017, U.S. Cellular recorded a goodwill impairment of \$370 million while TDS recorded a goodwill impairment of the U.S. Cellular reporting unit of \$227 million. Prior to 2009, TDS accounted for U.S. Cellular's share repurchases as step acquisitions, allocating a portion of the share repurchase value to TDS' Goodwill. Further, goodwill of the U.S. Cellular reporting unit was impaired at the TDS level in 2003 but not at U.S. Cellular. Consequently, U.S. Cellular's goodwill on a stand-alone basis and any resulting impairments of goodwill does not equal the TDS consolidated goodwill related to U.S. Cellular. For further information on the goodwill impairment see Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements.

² Income tax expense (benefit) is not provided at the individual segment level for Wireline, Cable and HMS. TDS calculates income tax expense for "TDS Telecom Total".

³ Adjusted earnings before interest, taxes, depreciation, amortization and accretion (Adjusted EBITDA) is a segment measure reported to the chief operating decision maker for purposes of making decisions about allocating resources to the segments and assessing their performance. Adjusted EBITDA is defined as net income, adjusted for the items set forth in the reconciliation above. TDS believes Adjusted EBITDA is a useful measure of TDS' operating results before significant recurring non-cash charges, gains and losses, and other items as presented above as they provide additional relevant and useful information to investors and other users of TDS' financial data in evaluating the effectiveness of its operations and underlying business trends in a manner that is consistent with management's evaluation of business performance.

NOTE 19 SUPPLEMENTAL CASH FLOW DISCLOSURES

Following are supplemental cash flow disclosures regarding interest paid and income taxes paid.

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Interest paid	\$ 167	\$ 168	\$ 135
Income taxes paid, net of refunds received	56	(39)	57

Following are supplemental cash flow disclosures regarding transactions related to stock-based compensation awards. In certain situations, TDS and U.S. Cellular withhold shares that are issuable upon the exercise of stock options or the vesting of restricted shares to cover, and with a value equivalent to, the exercise price and/or the amount of taxes required to be withheld from the stock award holder at the time of the exercise or vesting. TDS and U.S. Cellular then pay the amount of the required tax withholdings to the taxing authorities in cash.

TDS:

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Common Shares withheld	120,560	126,747	3,163
Aggregate value of Common Shares withheld	\$ 3	\$ 4	\$ -
Cash receipts upon exercise of stock options	7	13	13
Cash disbursements for payment of taxes	(3)	(4)	-
Net cash receipts from exercise of stock options and vesting of other stock awards	\$ 4	\$ 9	\$ 13

U.S. Cellular:

Year Ended December 31,	2017	2016	2015
(Dollars in millions)			
Common Shares withheld	144,755	308,010	228,011
Aggregate value of Common Shares withheld	\$ 6	\$ 13	\$ 8
Cash receipts upon exercise of stock options	5	12	7
Cash disbursements for payment of taxes	(4)	(6)	(5)
Net cash receipts from exercise of stock options and vesting of other stock awards	\$ 1	\$ 6	\$ 2

Under the American Recovery and Reinvestment Act of 2009 (the Recovery Act), TDS Telecom was awarded and received \$94 million in federal grants and provided \$32 million of its own funds to complete 44 projects to provide broadband access in unserved areas. TDS Telecom received the remaining \$15 million in grants in 2015. These funds reduced the carrying amount of the assets to which they relate. TDS Telecom has received all funding due under this program.

NOTE 20 CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The following persons are partners of Sidley Austin LLP, the principal law firm of TDS and its subsidiaries: Walter C.D. Carlson, a trustee and beneficiary of a voting trust that controls TDS, the non-executive Chairman of the Board and member of the Board of Directors of TDS and a director of U.S. Cellular, a subsidiary of TDS; William S. DeCarlo, the General Counsel of TDS and an Assistant Secretary of TDS and certain subsidiaries of TDS; and Stephen P. Fitzell, the General Counsel of U.S. Cellular and TDS Telecommunications LLC and an Assistant Secretary of certain subsidiaries of TDS. Walter C.D. Carlson does not provide legal services to TDS or its subsidiaries. TDS, U.S. Cellular and their subsidiaries incurred legal costs from Sidley Austin LLP of \$11 million, \$9 million and \$12 million in 2017, 2016 and 2015, respectively.

The Audit Committee of the Board of Directors of TDS is responsible for the review and evaluation of all related-party transactions as such term is defined by the rules of the New York Stock Exchange.

NOTE 21 SUBSEQUENT EVENTS

TDS has re-evaluated internal reporting roles with regard to its HMS business unit and, as a result, will be changing its reportable segments. Effective January 1, 2018, HMS will be considered a non-reportable segment and will no longer be reported under TDS Telecom. This change will enable TDS Telecom to continue to successfully execute on the Wireline and Cable segments' shared strategy to be the preferred service provider in its markets. Additionally, HMS will be able to leverage TDS' corporate IT resources, to improve operations and customer service, and better position itself for growth.

Management’s Responsibility for Financial Statements

Management of Telephone and Data Systems, Inc. has the responsibility for preparing the accompanying consolidated financial statements and for their integrity and objectivity. The statements were prepared in accordance with accounting principles generally accepted in the United States of America and, in management’s opinion, were fairly presented. The financial statements included amounts that were based on management’s best estimates and judgments. Management also prepared the other information in the annual report and is responsible for its accuracy and consistency with the financial statements.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has audited these consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) and has expressed herein its unqualified opinion on these financial statements.

/s/ LeRoy T. Carlson, Jr.

LeRoy T. Carlson, Jr.
President and
Chief Executive Officer
(principal executive officer)

/s/ Douglas D. Shuma

Douglas D. Shuma
Senior Vice President - Finance and
Chief Accounting Officer
(principal financial officer and principal
accounting officer)

/s/ Anita J. Kroll

Anita J. Kroll
Vice President and Controller

Management’s Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. TDS’ internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America (GAAP). TDS’ internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the issuer; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the issuer are being made only in accordance with authorizations of management and, where required, the Board of Directors of the issuer; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the issuer’s assets that could have a material effect on the interim or annual consolidated financial statements.

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

Under the supervision and with the participation of TDS’ management, including its principal executive officer and principal financial officer, TDS conducted an evaluation of the effectiveness of its internal control over financial reporting as of December 31, 2017, based on the criteria established in the 2013 version of *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management has concluded that TDS maintained effective internal control over financial reporting as of December 31, 2017, based on criteria established in the 2013 version of *Internal Control — Integrated Framework* issued by the COSO.

The effectiveness of TDS’ internal control over financial reporting as of December 31, 2017, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in the firm’s report included herein.

/s/ LeRoy T. Carlson, Jr.

LeRoy T. Carlson, Jr.
President and
Chief Executive Officer
(principal executive officer)

/s/ Douglas D. Shuma

Douglas D. Shuma
Senior Vice President - Finance and
Chief Accounting Officer
(principal financial officer and principal
accounting officer)

/s/ Anita J. Kroll

Anita J. Kroll
Vice President and Controller

To the Board of Directors and Shareholders of Telephone and Data Systems, Inc.:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Telephone and Data Systems, Inc. and its subsidiaries ("the Company") as of December 31, 2017 and 2016, and the related consolidated statement of operations, comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2017, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control — Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, based on our audits and the report of other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control — Integrated Framework* (2013) issued by the COSO.

We did not audit the financial statements of Los Angeles SMSA Limited Partnership, a 5.5% equity investment of the Company, which is reflected in the consolidated financial statements of the Company as an equity method investment of \$244,400,000 and \$240,100,000 as of December 31, 2017 and 2016, respectively, and income from equity investments of \$66,200,000, \$71,400,000 and \$74,000,000 for each of the three years in the period ended December 31, 2017. The financial statements of Los Angeles SMSA Limited Partnership were audited by other auditors whose report thereon has been furnished to us, and our opinion on the financial statements expressed herein, insofar as it relates to the amounts included for Los Angeles SMSA Limited Partnership, is based solely on the report of the other auditors.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits and the report of other auditors provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies

and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ PricewaterhouseCoopers LLP

Chicago, Illinois
February 26, 2018

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

TELEPHONE AND DATA SYSTEMS, INC. SELECTED CONSOLIDATED FINANCIAL DATA

Year Ended or at December 31,	2017	2016	2015	2014	2013
(Dollars and shares in millions, except per share amounts)					
Statement of Operations data					
Operating revenues	\$ 5,044	\$ 5,155	\$ 5,210	\$ 5,018	\$ 4,901
Loss on impairment of goodwill	262	—	—	88	—
(Gain) loss on sale of business and other exit costs, net	(1)	(1)	(136)	(16)	(301)
(Gain) loss on license sales and exchanges, net	(22)	(20)	(147)	(113)	(255)
Operating income (loss)	(105)	111	431	(181)	235
Gain on investments	—	—	—	—	15
Income tax expense (benefit)	(279)	40	172	(5)	126
Net income (loss)	157	52	263	(147)	167
Net income (loss) attributable to noncontrolling interests, net of tax	4	9	44	(11)	25
Net income (loss) attributable to TDS shareholders	153	43	219	(136)	142
Net income (loss) available to common shareholders \$	\$ 153	\$ 43	\$ 218	\$ (136)	\$ 142
Basic weighted average shares outstanding	111	110	109	108	108
Basic earnings (loss) per share attributable to TDS shareholders \$	\$ 1.39	\$ 0.39	\$ 2.02	\$ (1.26)	\$ 1.31
Diluted weighted average shares outstanding	112	111	110	108	109
Diluted earnings (loss) per share attributable to TDS shareholders \$	\$ 1.37	\$ 0.39	\$ 1.98	\$ (1.26)	\$ 1.29
Dividends per Common, Special Common and Series A Common Share	\$ 0.62	\$ 0.59	\$ 0.56	\$ 0.54	\$ 0.51
Balance Sheet data					
Total assets	\$ 9,295	\$ 9,446	\$ 9,422	\$ 8,854	\$ 8,861
Net long-term debt, excluding current portion	2,437	2,433	2,440	1,941	1,677
Total TDS shareholders' equity	\$ 4,269	\$ 4,144	\$ 4,126	\$ 3,926	\$ 4,118

TELEPHONE AND DATA SYSTEMS, INC. CONSOLIDATED QUARTERLY INFORMATION (UNAUDITED)

2017	Quarter Ended			
	March 31	June 30	September 30	December 31
(Dollars in millions, except per share amounts)				
Operating revenues	\$ 1,238	\$ 1,247	\$ 1,251	\$ 1,308
Loss on impairment of goodwill ¹	—	—	262	—
(Gain) loss on asset disposals, net	4	6	6	5
(Gain) loss on sale of business and other exit costs, net ²	—	—	(1)	—
(Gain) loss on license sales and exchanges, net ²	(17)	(2)	—	(3)
Operating income (loss)	82	28	(232)	17
Income tax expense (benefit) ³	34	10	(5)	(319)
Net income (loss)	43	12	(231)	334
Net income (loss) attributable to TDS shareholders	\$ 37	\$ 10	\$ (181)	\$ 287
Basic weighted average shares outstanding	110	111	111	111
Basic earnings (loss) per share attributable to TDS shareholders	\$ 0.34	\$ 0.09	\$ (1.64)	\$ 2.59
Diluted weighted average shares outstanding	112	112	111	112
Diluted earnings (loss) per share attributable to TDS shareholders	\$ 0.33	\$ 0.09	\$ (1.64)	\$ 2.54
Stock price				
TDS Common Shares ⁴				
High	\$ 32.98	\$ 29.31	\$ 29.87	\$ 29.31
Low	24.84	25.57	26.33	24.57
Close	26.51	27.75	27.89	27.80
Dividends paid	\$ 0.155	\$ 0.155	\$ 0.155	\$ 0.155

2016	Quarter Ended			
	March 31	June 30	September 30	December 31
(Dollars in millions, except per share amounts)				
Operating revenues	\$ 1,254	\$ 1,295	\$ 1,314	\$ 1,293
(Gain) loss on asset disposals, net	6	6	8	7
(Gain) loss on sale of business and other exit costs, net ²	—	—	—	—
(Gain) loss on license sales and exchanges, net ²	—	(9)	(7)	(3)
Operating income (loss)	26	53	33	(1)
Net income (loss)	10	32	16	(5)
Net income (loss) attributable to TDS shareholders	\$ 8	\$ 28	\$ 13	\$ (5)
Basic weighted average shares outstanding	109	109	110	110
Basic earnings (loss) per share attributable to TDS shareholders	\$ 0.07	\$ 0.25	\$ 0.12	\$ (0.05)
Diluted weighted average shares outstanding	110	111	111	110
Diluted earnings (loss) per share attributable to TDS shareholders	\$ 0.07	\$ 0.25	\$ 0.11	\$ (0.05)
Stock price				
TDS Common Shares ⁴				
High	\$ 30.29	\$ 30.70	\$ 32.00	\$ 30.17
Low	20.83	25.54	26.46	24.12
Close	30.09	29.66	27.18	28.87
Dividends paid	\$ 0.148	\$ 0.148	\$ 0.148	\$ 0.148

Due to rounding, the sum of quarterly results may not equal the total for the year.

¹ See Note 7 — Intangible Assets for additional information on Loss on impairment of goodwill.

² See Note 6 — Acquisitions, Divestitures and Exchanges for additional information on (Gain) loss on sale of business and other exit costs, net and (Gain) loss on license sales and exchanges, net.

³ In December 2017, the Tax Act was enacted. The Tax Act reduced the federal income tax rate from 35% to 21%. See Note 4 — Income Taxes for additional information.

⁴ The high, low and closing sales prices as reported by the New York Stock Exchange (NYSE).

Stock and Dividend Information

TDS' Common Shares are listed on the New York Stock Exchange under the symbol "TDS." As of January 31, 2018, the last trading day of the month, TDS Common Shares were held by approximately 1,273 record owners, and the Series A Common Shares were held by approximately 69 record owners.

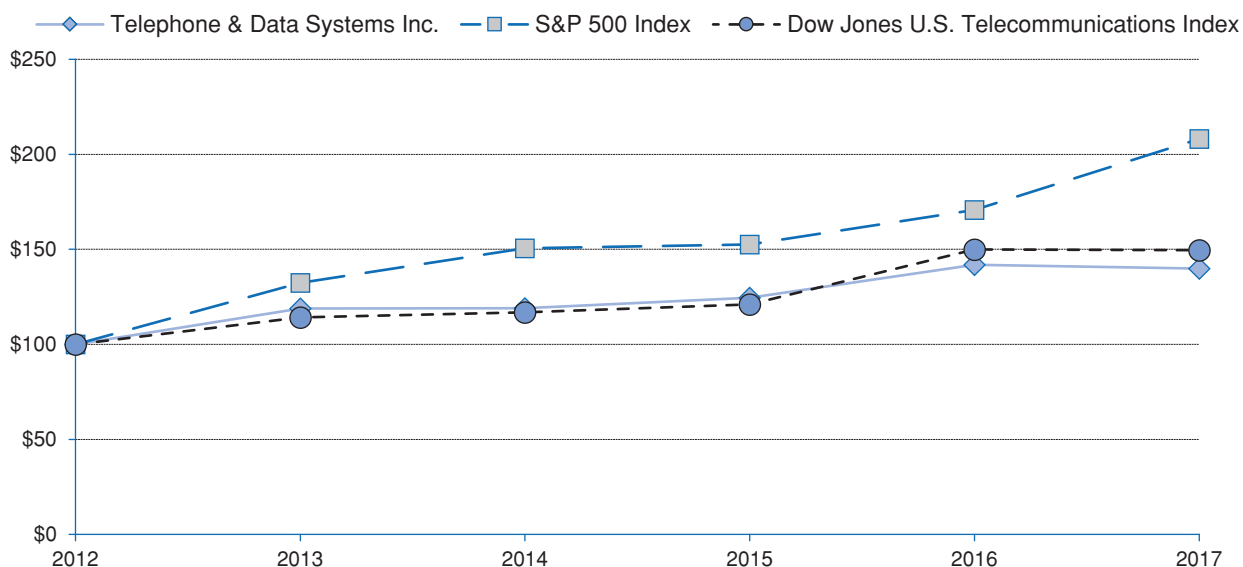
TDS has paid cash dividends on its common stock since 1974, and paid dividends of \$0.62 per Common and Series A Common Share during 2017. During 2016, TDS paid dividends of \$0.59 per Common and Series A Common Share.

The Common Shares of United States Cellular Corporation, an 83%-owned subsidiary of TDS, are listed on the NYSE under the symbol "USM."

See "Consolidated Quarterly Information (Unaudited)" for information on the high and low trading prices of the TDS Common Shares for 2017 and 2016.

Stock Performance Graph

The following chart provides a comparison of TDS' cumulative total return to shareholders (stock price appreciation plus dividends) during the previous five years to the returns of the Standard & Poor's 500 Composite Stock Price Index and the Dow Jones U.S. Telecommunications Index. As of December 31, 2017, the Dow Jones U.S. Telecommunications Index was composed of the following companies: AT&T Inc., CenturyLink Inc., Frontier Communications Corp., SBA Communications Corp., Sprint Corp., T-Mobile US Inc., Telephone and Data Systems, Inc. (TDS) and Verizon Communications Inc.



Note: Cumulative total return assumes reinvestment of dividends

	2012	2013	2014	2015	2016	2017
Telephone and Data Systems Common Shares (NYSE: TDS)	\$ 100	\$ 118.95	\$ 118.97	\$ 124.54	\$ 141.90	\$ 139.94
S&P 500 Index	100	132.39	150.51	152.59	170.84	208.14
Dow Jones U.S. Telecommunications Index	100	114.13	116.85	120.96	149.94	149.53

Assumes \$100.00 invested at the close of trading on the last trading day preceding the first day of 2012, in TDS Common Shares, S&P 500 Index and the Dow Jones U.S. Telecommunications Index.

Dividend Reinvestment Plan

TDS' dividend reinvestment plans provide its common shareholders with a convenient and economical way to participate in the future growth of TDS. Holders of record of ten (10) or more Common Shares may purchase Common Shares with

their reinvested dividends at a five percent discount from market price. Common Shares may also be purchased, at market price, on a monthly basis through optional cash payments by participants in this plan. The initial ten (10) shares cannot be purchased directly from TDS. An authorization card and prospectus will be mailed automatically by the transfer agent to all registered record holders with ten (10) or more shares. Once enrolled in the plan, there are no brokerage commissions or service charges for purchases made under the plan.

Investor relations

TDS' annual report, SEC filings and news releases are available to investors, securities analysts and other members of the investment community. These reports are provided, without charge, upon request to our Corporate Office. Investors may also access these and other reports through the Investor Relations portion of the TDS website (www.tdsinc.com).

Questions regarding lost, stolen or destroyed certificates, consolidation of accounts, transferring of shares and name or address changes should be directed to:

Julie Mathews, IRC, Director — Investor Relations
Telephone and Data Systems, Inc.
30 North LaSalle Street, Suite 4000
Chicago, IL 60602
312.592.5341
312.630.9299 (fax)
julie.mathews@tdsinc.com

General inquiries by investors, securities analysts and other members of the investment community should be directed to:

Jane W. McCahon, Senior Vice President — Corporate Relations and Corporate Secretary
Telephone and Data Systems, Inc.
30 North LaSalle Street, Suite 4000
Chicago, IL 60602
312.592.5379
312.630.9299 (fax)
jane.mccahon@tdsinc.com

Directors and executive officers

See "Election of Directors" and "Executive Officers" sections of the Proxy Statement issued in 2018 for the 2018 Annual Meeting.

Principal counsel

Sidley Austin LLP, Chicago, Illinois

Transfer agent

Computershare Trust Company, N.A.
462 South 4th Street, Suite 1600
Louisville, KY 40202
312.360.5326

Independent registered public accounting firm

PricewaterhouseCoopers LLP

Visit TDS' web site at www.tdsinc.com



Officers

LeRoy T. Carlson, Jr.
President and
Chief Executive Officer

Daniel J. Dewitt
Senior Vice President -
Human Resources

Joseph R. Hanley
Senior Vice President -
Technology, Services
and Strategy

Jane W. McCahon
Senior Vice President -
Corporate Relations
and Corporate Secretary

Peter L. Sereda
Senior Vice President -
Finance and Treasurer

Douglas D. Shuma
Senior Vice President -
Finance and Chief
Accounting Officer

Kurt B. Thaus
Senior Vice President and
Chief Information Officer

Scott H. Williamson
Senior Vice President -
Acquisitions and
Corporate Development

Michelle M. Brukwicki
Vice President -
Financial Analysis and
Strategic Planning

David D. Gillman
Vice President - Tax

Bob L. Gleisner
Chief Financial Officer -
OneNeck IT Solutions

Kenneth M. Kotylo
Vice President -
Acquisitions and
Corporate Development

Anita J. Kroll
Vice President and
Controller

Laurie A. Ruchti
Vice President -
IT Strategy, Quality
and Application Services

Peter D. Taft
Vice President -
Strategy

John M. Toomey
Vice President and
Assistant Treasurer

Thomas S. Weber
Vice President -
Internal Audit

Theodore E. Wiessing
Vice President -
IT Operational Services and
Chief Security & Privacy
Officer

William S. DeCarlo
General Counsel and
Assistant Secretary

Board of Directors

Walter C. D. Carlson
Chairman of the Board
(non-executive)
Partner - Sidley Austin LLP
*Chairman - Corporate
Governance and
Nominating Committee*

LeRoy T. Carlson, Jr.
President and
Chief Executive Officer
*Chairman - Technology
Advisory Group
Member - Corporate Governance
and Nominating Committee*

Letitia G. Carlson, MD
Physician and Associate
Clinical Professor -
George Washington University
Medical Center

Prudence E. Carlson
Private Investor

Clarence A. Davis
Former Director and
Chief Executive Officer -
Nestor, Inc.
Member - Audit Committee

Kimberly D. Dixon
Executive Vice President
and Chief Operating Officer -
FedEx Office
*Member - Compensation
Committee
Member - Technology
Advisory Group*

Kenneth R. Meyers
President and
Chief Executive Officer -
U.S. Cellular

George W. Off
Former President and
Chief Executive Officer -
Checkpoint Systems, Inc.
*Chairman - Audit Committee
Member - Compensation
Committee
Member - Technology
Advisory Group*

Christopher D. O'Leary
Senior Advisor at KKR
Former Executive Vice President
and COO - General Mills
International
*Chairman - Compensation
Committee
Member - Audit Committee
Member - Technology
Advisory Group*

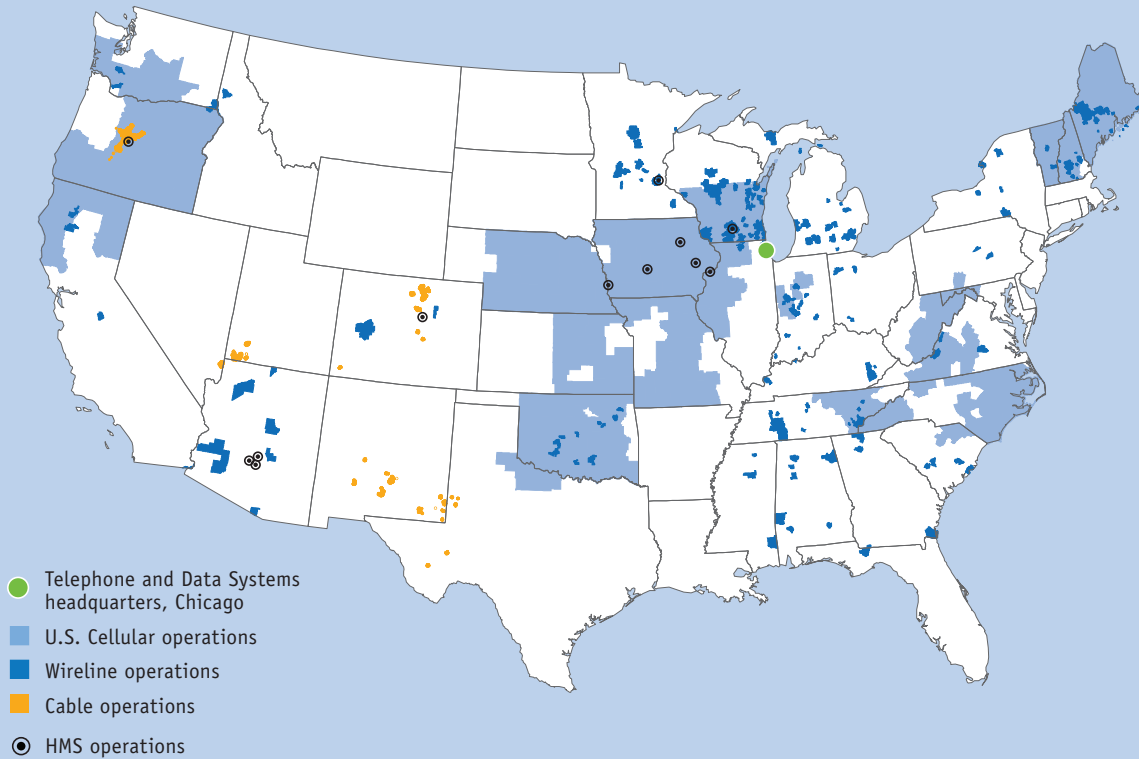
Mitchell H. Saranow
Chairman - The Saranow
Group, LLC
*Member - Audit Committee
Member - Corporate
Governance and
Nominating Committee*

Gary L. Sugarman
Managing Member -
Richfield Capital Partners
Principal - Richfield
Associates, Inc.
*Member - Compensation
Committee*

David A. Wittwer
Former President and
Chief Executive Officer -
TDS Telecom



At TDS, our mission is to provide outstanding communications services to our customers and meet the needs of our shareholders, our people, and our communities.



About Our Businesses



U.S. Cellular Provides outstanding wireless experiences to five million customers, with a high-quality network and competitive devices, plans, and pricing.



TDS Telecom Provides high-quality residential broadband, video, and voice services, and commercial VoIP (*managedIP*) phone and dedicated broadband services. TDS Telecom also manages the operations of:



bendbroadband

BendBroadband Offers an extensive range of broadband, fiber connectivity, cable TV, and voice services for residential and commercial customers.



OneNeck IT Solutions Delivers hybrid IT solutions, including cloud and hosting solutions, managed services, ERP application management, professional services, and IT hardware.

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