# EXHIBIT 5

# AUDITED CONSOLIDATED ANNUAL FINANCIAL STATEMENTS

# Financial Statements

## Telephone and Data Systems, Inc.
## Consolidated Statement of Operations

| 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) |
| | | **(3)** | | – | | (9) |
| Change in deferred income taxes | | **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 |

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

[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.

# 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 |
| (Dollars in millions) | | | | | | | | | |
| **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** |

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 |
| (Dollars in millions) | | | | | | | | | |
| **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) |
| 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** |

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 |
| (Dollars in millions) | | | | | | | | | |
| **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** |

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 |
|---|---|---|---|
| (Dollars and shares in millions, except earnings per share) | | | |
| 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:

| | | Allocation of Purchase Price | | | |
|---|---|---|---|---|---|
| | Purchase Price[1] | 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 acquistion 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:

| | | | | **December 31, 2017** | | | December 31, 2016 | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Issuance date** | **Maturity date** | **Call date (any time on or after)** | **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.

| | | TDS Telecom | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Year Ended or as of December 31, 2017** | **U.S. Cellular** | **Wireline** | **Cable** | **HMS** | **TDS Telecom Eliminations** | **TDS Telecom Total** | **Corporate, Eliminations and Other** | **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) | 732 | 258 | 98 | 83 | (5) | 434 | (2) | 1,164 |
| Cost of equipment and products | 1,071 | 2 | – | 95 | – | 97 | 27 | 1,195 |
| Selling, general and administrative | 1,412 | 191 | 54 | 42 | – | 286 | (12) | 1,686 |
| 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) |
| **Operating income (loss)** | (304) | 111 | 8 | (57) | – | 63 | 136 | (105) |
| Equity in earnings of unconsolidated entities | 137 | – | – | – | – | – | – | 137 |
| Interest and dividend income | 8 | 5 | – | – | – | 5 | 2 | 15 |
| Interest expense | (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 EBITDA[3]** | $ 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 | U.S. Cellular | TDS Telecom: Wireline | TDS Telecom: Cable | TDS Telecom: HMS | TDS Telecom: TDS Telecom Eliminations | TDS Telecom: TDS Telecom Total | Corporate, Eliminations and Other | 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) | 760 | 258 | 94 | 82 | (4) | 430 | (1) | 1,189 |
| Cost of equipment and products | 1,081 | 2 | – | 128 | – | 131 | 28 | 1,240 |
| Selling, general and administrative | 1,480 | 197 | 51 | 48 | – | 295 | (16) | 1,759 |
| 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) |
| **Operating income (loss)** | 48 | 80 | 2 | (14) | – | 67 | (4) | 111 |
| Equity in earnings of unconsolidated entities | 140 | – | – | – | – | – | – | 140 |
| Interest and dividend income | 6 | 3 | – | – | – | 3 | 2 | 11 |
| Interest expense | (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 EBITDA[3]** | $ 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 | U.S. Cellular | TDS Telecom: Wireline | TDS Telecom: Cable | TDS Telecom: HMS | TDS Telecom: TDS Telecom Eliminations | TDS Telecom: TDS Telecom Total | Corporate, Eliminations and Other | 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) | 775 | 255 | 79 | 85 | (4) | 414 | 2 | 1,191 |
| Cost of equipment and products | 1,053 | 2 | – | 143 | – | 145 | 26 | 1,224 |
| Selling, general and administrative | 1,494 | 194 | 54 | 47 | – | 294 | (7) | 1,781 |
| 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) |
| **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 EBITDA[3]** | $ 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.

# Reports of Management

## 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. | /s/ Douglas D. Shuma |
|---|---|
| LeRoy T. Carlson, Jr. | Douglas D. Shuma |
| President and | Senior Vice President - Finance and |
| Chief Executive Officer | Chief Accounting Officer |
| (principal executive officer) | (principal financial officer and principal |
| | accounting officer) |

/s/ Anita J. Kroll

Anita J. Kroll
Vice President and Controller

# Report of Independent Registered Public Accounting Firm

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.