

Selected Financial Data

		(dollars in millions, except per share amounts)			
	2018	2017	2016	2015	2014
Results of Operations					
Operating revenues	\$ 130,863	\$ 126,034	\$ 125,980	\$ 131,620	\$ 127,079
Operating income	22,278	27,425	29,249	30,615	27,144
Net income attributable to Verizon	15,528	30,101	13,127	17,879	9,625
Per common share – basic	3.76	7.37	3.22	4.38	2.42
Per common share – diluted	3.76	7.36	3.21	4.37	2.42
Cash dividends declared per common share	2.385	2.335	2.285	2.230	2.160
Net income attributable to noncontrolling interests	511	449	481	496	2,331

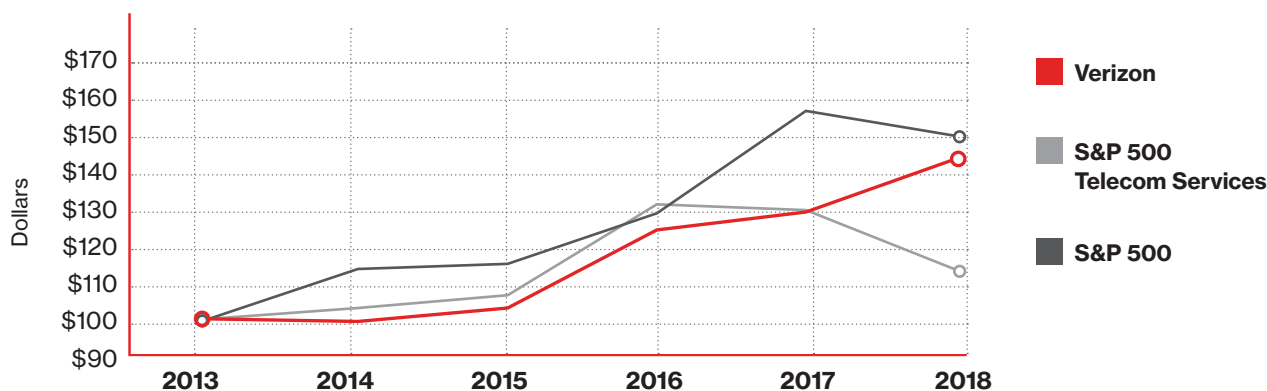
Financial Position

Total assets	\$ 264,829	\$ 257,143	\$ 244,180	\$ 244,175	\$ 232,109
Debt maturing within one year	7,190	3,453	2,645	6,489	2,735
Long-term debt	105,873	113,642	105,433	103,240	110,029
Employee benefit obligations	18,599	22,112	26,166	29,957	33,280
Noncontrolling interests	1,565	1,591	1,508	1,414	1,378
Equity attributable to Verizon	53,145	43,096	22,524	16,428	12,298

- Significant events affecting our historical earnings trends in 2016 through 2018 are described in “Special Items” in the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section.
- 2015 data includes severance, pension and benefit credits and gain on spectrum license transactions. 2014 data includes severance, pension and benefit charges, early debt redemption and other costs, gain on spectrum license transactions and wireless transaction costs.
- On January 1, 2018, we adopted several Accounting Standards Updates that were issued by the Financial Accounting Standards Board. These standards were adopted on different bases, including: (1) prospective; (2) full retrospective; and (3) modified retrospective. Based on the method of adoption, certain figures are not comparable, with full retrospective reflected in all periods. See Note 1 to the consolidated financial statements for additional information.

Stock Performance Graph

Comparison of Five-Year Total Return Among Verizon, S&P 500 and S&P 500 Telecommunications Services Index



Data Points in Dollars	2013	2014	2015	2016	2017	2018
Verizon	100.0	99.4	103.0	124.4	129.4	143.9
S&P 500	100.0	113.7	115.2	129.0	157.2	150.3
S&P 500 Telecom Services	100.0	103.0	106.5	131.5	129.9	113.6

The graph compares the cumulative total returns of Verizon, the S&P 500 Stock Index and the S&P 500 Telecommunications Services Index over a five-year period. It assumes \$100 was invested on December 31, 2013 with dividends being reinvested.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview

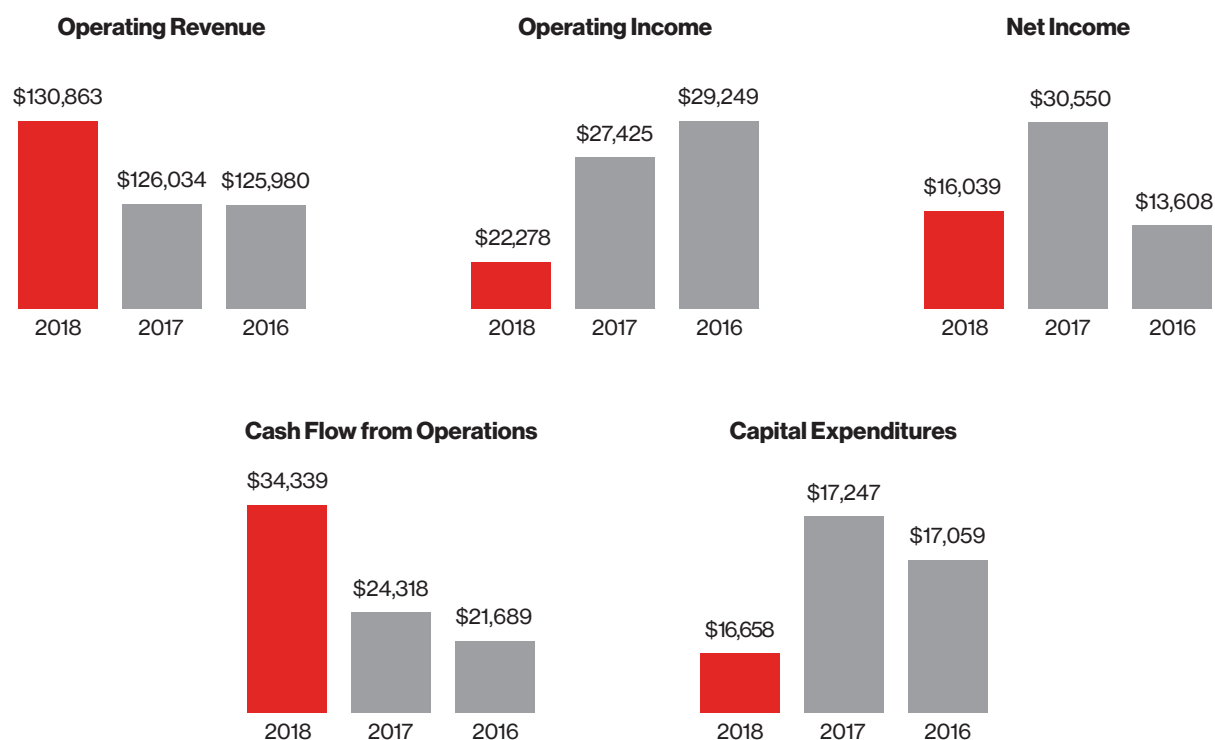
Verizon Communications Inc. (Verizon or the Company) is a holding company that, acting through its subsidiaries, is one of the world's leading providers of communications, information and entertainment products and services to consumers, businesses and governmental agencies. With a presence around the world, we offer voice, data and video services and solutions on our networks that are designed to meet customers' demand for mobility, reliable network connectivity, security and control. We have a highly diverse workforce of approximately 144,500 employees as of December 31, 2018.

To compete effectively in today's dynamic marketplace, we are focused on transforming around the capabilities of our high-performing networks with a goal of future growth based on delivering what customers want and need in the new digital world. During 2018, we focused on leveraging our network leadership, retaining and growing our high-quality customer base while balancing profitability, enhancing ecosystems in growth businesses, and driving monetization of our networks and solutions. Our strategy requires significant capital investments primarily to acquire wireless spectrum, put the spectrum into service, provide additional capacity for growth in our networks, invest in the fiber-optic network that supports our businesses, evolve and maintain our networks and develop and maintain significant advanced information technology systems and data system capabilities. We believe that steady and consistent investments in our networks and platforms will drive innovative products and services and fuel our growth.

We are consistently deploying new network architecture and technologies to extend our leadership in both fourth-generation (4G) and fifth-generation (5G) wireless networks. Our Intelligent Edge Network design allows us to realize significant efficiencies by utilizing common infrastructure within the core and providing flexibility at the edge of the network to meet customer requirements. In addition, protecting the privacy of our customers' information and the security of our systems and networks will continue to be a priority at Verizon. Our network leadership will continue to be the hallmark of our brand and provide the fundamental strength at the connectivity, platform and solutions layers upon which we build our competitive advantage.

Highlights of Our 2018 Financial Results

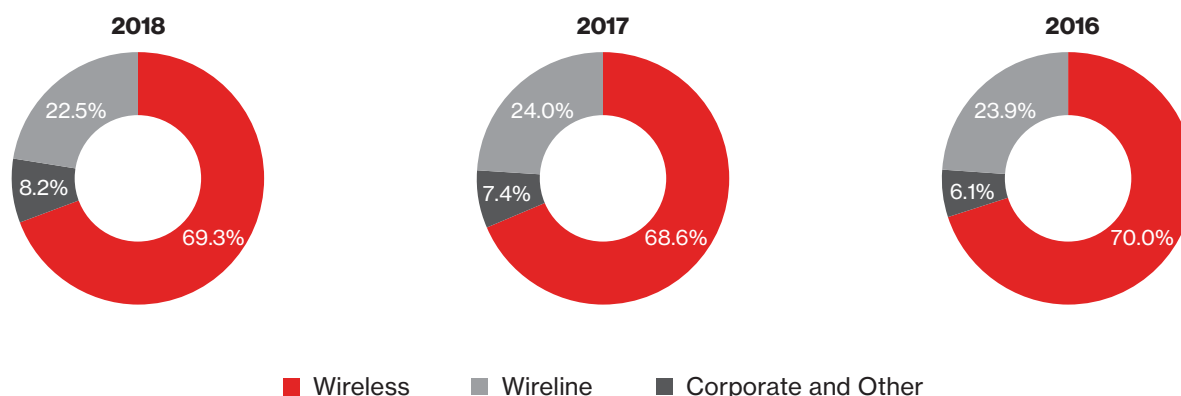
(dollars in millions)



Business Overview

We have two reportable segments, Wireless and Wireline, which we operate and manage as strategic business units and organize by products and services, and customer groups, respectively.

Revenue by Segment



Note: Excludes eliminations.

Wireless

Our Wireless segment, doing business as Verizon Wireless, provides wireless communications products and services across one of the most extensive wireless networks in the United States (U.S.). We provide these services and equipment sales to consumer, business and government customers across the U.S. on a postpaid and prepaid basis. A retail postpaid connection represents an individual line of service for a wireless device for which a customer is generally billed one month in advance for a monthly access charge in return for access to and usage of network services. Our prepaid service enables individuals to obtain wireless services without credit verification by paying for all services in advance. Our wireless customers also include other companies who resell network services to their end-users using our network. Our reseller customers are billed for services in arrears.

We are focusing our wireless capital spending on adding capacity and density to our 4G Long-Term Evolution (LTE) network. We are densifying our 4G LTE network by utilizing small cell technology, in-building solutions and distributed antenna systems. Network densification not only enables us to add capacity to address increasing mobile video consumption and the growing demand for Internet of Things (IoT) products and services, but also positions us for the deployment of 5G technology. Over the past several years, we have been leading the development of 5G wireless technology industry standards and the ecosystems for fixed and mobile 5G wireless services. We believe 5G technology can provide users with eight capabilities, or currencies. The eight currencies are peak data rates, mobile data volumes, mobility, connected devices, energy efficiency, service deployment, latency and reliability. We launched the Verizon 5G Technology Forum with key industry partners to develop 5G requirements and standards and conduct testing to accelerate the introduction of 5G technologies. We expect that 5G technology will provide higher throughput than the current 4G LTE technology, lower latency and enable our network to handle more traffic as the number of Internet-connected devices grows. During 2018, we commercially launched 5G Home, our alternative to wired home broadband, on proprietary standards in four U.S. markets; Sacramento, Los Angeles, Houston and Indianapolis. Total Wireless segment operating revenues for the year ended December 31, 2018 totaled \$91.7 billion, an increase of \$4.2 billion, or 4.8%, compared to the year ended December 31, 2017.

Wireline

Our Wireline segment provides communications products and enhanced services, including video and data services, corporate networking solutions, security and managed network services and local and long distance voice services. We provide these products and services to consumers in the U.S., as well as to carriers, businesses and government customers both in the U.S. and around the world.

In our Wireline business, to compensate for the shrinking market for traditional copper-based products (such as voice services), we continue to build our Wireline business around a fiber-based network supporting data, video and advanced business services – areas where demand for reliable high-speed connections is growing. We continue to seek ways to increase revenue, further realize operating and capital efficiencies and maximize profitability across the segment. We are reinventing our network architecture around a common fiber platform that will support both our wireless and wireline businesses. We expect our “multi-use fiber” Intelligent Edge Network initiative will create opportunities to generate revenue from fiber-based services in our Wireline business. Total Wireline segment operating revenues for the year ended December 31, 2018 totaled \$29.8 billion, a decrease of \$0.9 billion, or 3.0%, compared to the year ended December 31, 2017.

Corporate and Other

Corporate and other includes the results of our Media business, Verizon Media, which operated in 2018 under the “Oath” brand, our telematics business, branded Verizon Connect, and other businesses, investments in unconsolidated businesses, unallocated corporate expenses, pension and other employee benefit related costs and interest and financing expenses. Corporate and other also includes the historical results of divested businesses and other adjustments and gains and losses that are not allocated in assessing segment performance due to their nature. Although such transactions are excluded from the business segment results, they are included in reported consolidated earnings. Gains and losses from these transactions that are not individually significant are included in segment results as these items are included in the chief operating decision maker's assessment of segment performance.

Verizon Media, our organization that combined Yahoo! Inc.'s (Yahoo) operating business with our pre-existing Media business, includes diverse media and technology brands that engage users around the world. Our strategy is built on providing consumers with owned and operated search properties and finance, news, sports and entertainment offerings and providing other businesses and partners access to consumers through digital advertising platforms. Total operating revenues for our Media business, branded Oath and included in Corporate and other, were \$7.7 billion for the year ended, December 31, 2018. This was an increase of 28.8% from the year ended December 31, 2017, primarily due to the acquisition of Yahoo's operating business in June of 2017.

We are also building our growth capabilities in the emerging IoT market by developing business models to monetize usage on our network at the connectivity and platform layers. During the years ended December 31, 2018 and 2017, we recognized IoT revenues (including Verizon Connect) of \$1.6 billion and \$1.5 billion, an 11% and 52% increase, respectively, compared to the prior year.

Capital Expenditures and Investments

We continue to invest in our wireless network, high-speed fiber and other advanced technologies to position ourselves at the center of growth trends for the future. During the year ended December 31, 2018, these investments included \$16.7 billion for capital expenditures. See “Cash Flows Used in Investing Activities” and “Operating Environment and Trends” for additional information. We believe that our investments aimed at expanding our portfolio of products and services will provide our customers with an efficient, reliable infrastructure for competing in the information economy.

Recent Developments

In September 2018, Verizon announced a voluntary separation program for select U.S.-based management employees. Approximately 10,400 eligible employees will separate from the Company under this program by the end of June 2019, with nearly half of these employees having exited in December of 2018. Principally as a result of this program but also as a result of other headcount reduction initiatives, the Company recorded a severance charge of \$1.8 billion (\$1.4 billion after-tax) during the year ended December 31, 2018, which was recorded in Selling, general and administrative expense in our consolidated statement of income. During 2018, we also recorded \$0.3 billion in severance costs under our other existing separation plan.

In November 2018, we announced a strategic reorganization of our business. We are modifying our internal and external reporting processes, systems and internal controls to accommodate the new structure and expect to transition to the new segment reporting structure during the second quarter of 2019. We continue to report operating results to our chief operating decision maker under our current operating segments.

Consolidated Results of Operations

In this section, we discuss our overall results of operations and highlight special items that are not included in our segment results. In "Segment Results of Operations," we review the performance of our two reportable segments in more detail.

Consolidated Revenues

Years Ended December 31,	2018	2017	2016	(dollars in millions) Increase/(Decrease)			
				2018 vs. 2017		2017 vs. 2016	
Wireless	\$ 91,734	\$ 87,511	\$ 89,186	\$ 4,223	4.8%	\$ (1,675)	(1.9)%
Wireline	29,760	30,680	30,510	(920)	(3.0)	170	0.6
Corporate and other	10,942	9,387	7,778	1,555	16.6	1,609	20.7
Eliminations	(1,573)	(1,544)	(1,494)	(29)	1.9	(50)	3.3
Consolidated Revenues	\$ 130,863	\$ 126,034	\$ 125,980	\$ 4,829	3.8	\$ 54	—

2018 Compared to 2017

Consolidated revenues increased \$4.8 billion, or 3.8%, during 2018 compared to 2017 primarily due to an increase in revenues at our Wireless segment, partially offset by a decline in revenues at our Wireline segment. Also contributing to the increase in consolidated revenues during 2018 was an increase within Corporate and other. In addition, \$0.4 billion of the increase in consolidated revenues was attributable to the adoption of Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers (Topic 606).

Revenues for our segments are discussed separately below under the heading "Segment Results of Operations."

Corporate and other revenues increased \$1.6 billion, or 16.6%, during 2018 compared to 2017 primarily due to an increase of \$1.7 billion in revenues within our Media business, branded Oath, as a result of the acquisition of Yahoo's operating business on June 13, 2017, partially offset by the sale of 23 customer-facing data center sites in the U.S. and Latin America in our Wireline segment (Data Center Sale) in May 2017 and other insignificant transactions (see "Operating Results From Divested Businesses" below).

2017 Compared to 2016

Consolidated revenues remained consistent during 2017 compared to 2016 primarily due to a decline in revenues at our Wireless segment, offset by an increase in revenues within Corporate and other.

Revenues for our segments are discussed separately below under the heading "Segment Results of Operations."

Corporate and other revenues increased \$1.6 billion, or 20.7%, during 2017 compared to 2016 primarily due to an increase in revenue as a result of the acquisition of Yahoo's operating business on June 13, 2017, as well as fleet service revenue growth in our telematics business. These increases were partially offset by the sale (Access Line Sale) of our local exchange business and related landline activities in California, Florida and Texas, including Fios Internet and video customers, switched and special access lines and high-speed internet (HSI) services and long distance voice accounts in these three states, to Frontier Communications Corporation (Frontier) on April 1, 2016 and the Data Center Sale on May 1, 2017, and other insignificant transactions (see "Operating Results From Divested Businesses" below). During 2017, Oath generated \$6.0 billion in revenues which represented approximately 64% of revenues in Corporate and Other.

Consolidated Operating Expenses

Years Ended December 31,	2018	2017	2016	(dollars in millions) Increase/(Decrease)			
				2018 vs. 2017		2017 vs. 2016	
Cost of services	\$ 32,185	\$ 30,916	\$ 30,463	\$ 1,269	4.1%	\$ 453	1.5%
Wireless cost of equipment	23,323	22,147	22,238	1,176	5.3	(91)	(0.4)
Selling, general and administrative expense	31,083	28,592	28,102	2,491	8.7	490	1.7
Depreciation and amortization expense	17,403	16,954	15,928	449	2.6	1,026	6.4
Oath goodwill impairment	4,591	—	—	4,591	nm	—	—
Consolidated Operating Expenses	\$ 108,585	\$ 98,609	\$ 96,731	\$ 9,976	10.1	\$ 1,878	1.9

nm – not meaningful

Operating expenses for our segments are discussed separately below under the heading "Segment Results of Operations."

2018 Compared to 2017**Cost of Services**

Cost of services includes the following costs directly attributable to a service: salaries and wages, benefits, materials and supplies, content costs, contracted services, network access and transport costs, customer provisioning costs, computer systems support, and costs to support our outsourcing contracts and technical facilities. Aggregate customer care costs, which include billing and service provisioning, are allocated between Cost of services and Selling, general and administrative expense.

Cost of services increased \$1.3 billion, or 4.1%, during 2018 compared to 2017 primarily due to an increase in expenses as a result of the acquisition of Yahoo's operating business and an increase in rent expense at our Wireless segment and an increase in content costs associated with continued programming license fees and other direct costs at our Wireline segment.

Wireless Cost of Equipment

Wireless cost of equipment increased \$1.2 billion, or 5.3%, during 2018 compared to 2017 primarily as a result of shifts to higher priced units in the mix of devices sold, partially offset by declines in the number of smartphones sold.

Selling, General and Administrative Expense

Selling, general and administrative expense includes: salaries and wages and benefits not directly attributable to a service or product, bad debt charges, taxes other than income taxes, advertising and sales commission costs, customer billing, call center and information technology costs, regulatory fees, professional service fees, and rent and utilities for administrative space. Also included is a portion of the aggregate customer care costs as discussed in "Cost of Services" above.

Selling, general and administrative expense increased \$2.5 billion, or 8.7%, during 2018 primarily due to a net gain on the sale of divested businesses in 2017 (see "Special Items"), as well as an increase in severance expenses in 2018 primarily a result of the voluntary separation program for selected U.S.-based management employees (see "Severance, pension and benefit charges (credits)" under "Special Items"). These increases were partially offset by a decrease in acquisition and integration related charges primarily related to the acquisition of Yahoo's operating business (see "Special Items") and a decrease in commission expense at both our Wireless and Wireline segments following the adoption of Topic 606.

Depreciation and Amortization Expense

Depreciation and amortization expense increased \$0.4 billion, or 2.6%, during 2018 primarily due to an increase in depreciable assets at our Wireless segment.

Oath Goodwill Impairment

The goodwill impairment charge recorded in 2018 related to our Media business, branded Oath, and was a result of the company's annual goodwill impairment test performed in the fourth quarter (see "Critical Accounting Estimates").

2017 Compared to 2016**Cost of Services**

Cost of services increased \$0.5 billion, or 1.5%, during 2017 primarily due to an increase in expenses as a result of the acquisition of Yahoo's operating business, an increase in content costs associated with continued programming license fee increases and an increase in access costs as a result of the acquisition of XO Holdings' wireline business (XO) at our Wireline segment. These increases were partially offset by the completion of the Access Line Sale on April 1, 2016, the Data Center Sale on May 1, 2017 and other insignificant transactions (see "Operating Results From Divested Businesses"), the fact that we did not incur incremental costs in 2017 as a result of the union work stoppage that commenced on April 13, 2016 and ended on June 1, 2016 (2016 Work Stoppage).

Wireless Cost of Equipment

Wireless cost of equipment decreased \$0.1 billion, or 0.4%, during 2017, primarily as a result of a decline in the number of smartphone and Internet units sold, substantially offset by a shift to higher priced units in the mix of devices sold.

Selling, General and Administrative Expense

Selling, general and administrative expense increased \$0.5 billion, or 1.7%, during 2017 primarily due to an increase in expenses as a result of the acquisition of Yahoo's operating business on June 13, 2017, acquisition and integration charges primarily in connection with the acquisition of Yahoo's operating business, product realignment charges (see "Special Items") and an increase in expenses as a result of the acquisition of XO. These increases were partially offset by an increase in the net gain on sale of divested businesses (see "Special Items"), a decline at our Wireless segment in sales commission expense, employee related costs, bad debt expense, non-income taxes and advertising expense, and a decrease due to the Access Line Sale on April 1, 2016 and the Data Center Sale on May 1, 2017, and other insignificant transactions (see "Operating Results From Divested Businesses").

Depreciation and Amortization Expense

Depreciation and amortization expense increased \$1.0 billion, or 6.4%, during 2017 primarily due to the acquisitions of Yahoo's operating business and XO.

Operating Results From Divested Businesses

In April 2016, we completed the Access Line Sale. In May 2017, we completed the Data Center Sale. The results of operations related to these divestitures and other insignificant transactions are included within Corporate and other for all periods presented to reflect comparable segment operating results consistent with the information regularly reviewed by our chief operating decision maker. The results of operations related to these divestitures included within Corporate and other are as follows:

Years Ended December 31,	2018	(dollars in millions)	
		2017	2016
Operating Results From Divested Businesses			
Operating revenues	\$ —	\$ 368	\$ 2,115
Cost of services	—	129	747
Selling, general and administrative expense	—	68	246
Depreciation and amortization expense	—	22	127

Other Consolidated Results

Other Income (Expense), Net

Additional information relating to Other income (expense), net is as follows:

Years Ended December 31,	2018	2017	2016	(dollars in millions)			
				Increase/(Decrease)		2017 vs. 2016	
Interest income	\$ 94	\$ 82	\$ 59	\$ 12	14.6%	\$ 23	39.0%
Other components of net periodic benefit cost	3,068	(11)	(2,190)	3,079	nm	2,179	99.5
Other, net	(798)	(2,092)	(1,658)	1,294	61.9	(434)	(26.2)
Total	\$ 2,364	\$ (2,021)	\$ (3,789)	\$ 4,385	nm	\$ 1,768	46.7

nm – not meaningful

The change in Other income (expense), net during the year ended December 31, 2018, compared to the similar period in 2017, was primarily driven by pension and benefits credits of \$2.1 billion recorded during 2018, compared with pension and benefit charges of approximately \$0.9 billion recorded in 2017 (see "Special Items") as well as early debt redemption costs of \$0.7 billion recorded during 2018, compared to \$2.0 billion recorded during 2017 (see "Special Items"). The change in Other income (expense), net during the year ended December 31, 2017, compared to the similar period in 2016, was primarily driven by a decrease in components of net periodic benefit cost. The change was partially offset by early debt redemption costs of \$2.0 billion, compared to \$1.8 billion recorded during 2016 (see "Special Items"), as well as a net loss on foreign currency translation adjustments compared to a net gain in the 2016 period.

Interest Expense

Years Ended December 31,	2018	2017	2016	(dollars in millions)			
				Increase/(Decrease)		2017 vs. 2016	
Total interest costs on debt balances	\$ 5,573	\$ 5,411	\$ 5,080	\$ 162	3.0%	\$ 331	6.5%
Less capitalized interest costs	740	678	704	62	9.1	(26)	(3.7)
Total	\$ 4,833	\$ 4,733	\$ 4,376	\$ 100	2.1	\$ 357	8.2
Average debt outstanding	\$ 115,858	\$ 115,693	\$ 106,113				
Effective interest rate	4.8%	4.7%	4.8%				

Total interest costs on debt balances increased during 2018 primarily due to an increase in our effective interest rate. Total interest costs on debt balances increased during 2017 primarily due to higher average debt balances.

Provision (Benefit) for Income Taxes

Years Ended December 31,	2018	2017	2016	(dollars in millions)			
				Increase/(Decrease)			
				2018 vs. 2017		2017 vs. 2016	
Provision (benefit) for income taxes	\$ 3,584	\$ (9,956)	\$ 7,378	\$ 13,540	nm	\$ (17,334)	nm
Effective income tax rate	18.3%	(48.3)%	35.2%				

nm – not meaningful

The effective income tax rate is calculated by dividing the provision (benefit) for income taxes by income before income taxes. The effective income tax rate for 2018 was 18.3% compared to (48.3)% for 2017. The increase in the effective income tax rate and the provision for income taxes was primarily due to the non-recurring, non-cash income tax benefit of \$16.8 billion recorded in 2017 for the re-measurement of U.S. deferred tax liabilities at the lower 21% U.S. federal corporate income tax rate as a result of the enactment of the Tax Cuts and Jobs Act (TCJA) on December 22, 2017. In addition, the current period provision for income taxes includes the tax impact of the Oath goodwill impairment charge not deductible for tax purposes, offset by the current year reduction in the statutory U.S. federal corporate income tax rate from 35% to 21%, effective January 1, 2018 under the TCJA and a non-recurring deferred tax benefit of approximately \$2.1 billion as a result of an internal reorganization of legal entities within the Wireless business.

In December 2017, the Securities and Exchange Commission (SEC) staff issued Staff Accounting Bulletin (SAB) 118 to provide guidance for companies that had not completed their accounting for the income tax effects of the TCJA. Due to the complexities involved in accounting for the enactment of the TCJA, SAB 118 allowed for a provisional estimate of the impacts of the TCJA in our earnings for the year ended December 31, 2017, as well as up to a one year measurement period that ended on December 22, 2018, for any subsequent adjustments to such provisional estimate. Pursuant to SAB 118, Verizon recorded a provisional estimate of \$16.8 billion for the impacts of the TCJA, primarily due to the re-measurement of its U.S. deferred income tax liabilities at the lower 21% U.S. federal corporate income tax rate, with no significant impact from the transition tax on repatriation, the implementation of the territorial tax system, or limitations on the deduction of interest expense. Verizon has completed its analysis of the impacts of the TCJA, including analyzing the effects of any Internal Revenue Service (IRS) and U.S. Treasury guidance issued, and state tax law changes enacted, within the maximum one year measurement period resulting in no significant adjustments to the \$16.8 billion provisional amount previously recorded.

The effective income tax rate for 2017 was (48.3)% compared to 35.2% for 2016. The decrease in the effective income tax rate and the provision for income taxes was primarily due to a non-recurring, non-cash income tax benefit recorded in 2017 as a result of the enactment of the TCJA described above.

A reconciliation of the statutory federal income tax rate to the effective income tax rate for each period is included in Note 12 to the consolidated financial statements.

Consolidated Net Income, Consolidated EBITDA and Consolidated Adjusted EBITDA

Consolidated earnings before interest, taxes, depreciation and amortization expenses (Consolidated EBITDA) and Consolidated Adjusted EBITDA, which are presented below, are non-GAAP measures that we believe are useful to management, investors and other users of our financial information in evaluating operating profitability on a more variable cost basis as they exclude the depreciation and amortization expense related primarily to capital expenditures and acquisitions that occurred in prior years, as well as in evaluating operating performance in relation to Verizon's competitors. Consolidated EBITDA is calculated by adding back interest, taxes, and depreciation and amortization expenses to net income.

Consolidated Adjusted EBITDA is calculated by excluding from Consolidated EBITDA the effect of the following non-operational items: equity in losses of unconsolidated businesses and other income and expense, net, as well as the effect of special items. We believe that this measure is useful to management, investors and other users of our financial information in evaluating the effectiveness of our operations and underlying business trends in a manner that is consistent with management's evaluation of business performance. We believe that Consolidated Adjusted EBITDA is widely used by investors to compare a company's operating performance to its competitors by minimizing impacts caused by differences in capital structure, taxes and depreciation policies. Further, the exclusion of non-operational items and special items enables comparability to prior period performance and trend analysis. See "Special Items" for additional information.

It is management's intent to provide non-GAAP financial information to enhance the understanding of Verizon's GAAP financial information, and it should be considered by the reader in addition to, but not instead of, the financial statements prepared in accordance with GAAP. Each non-GAAP financial measure is presented along with the corresponding GAAP measure so as not to imply that more emphasis should be placed on the non-GAAP measure. We believe that non-GAAP measures provide relevant and useful information, which is used by management, investors and other users of our financial information as well as by our management in assessing both consolidated and segment performance. The non-GAAP financial information presented may be determined or calculated differently by other companies and may not be directly comparable to that of other companies.

Years Ended December 31,	(dollars in millions)		
	2018	2017	2016
Consolidated Net Income	\$ 16,039	\$ 30,550	\$ 13,608
Add (Less):			
Provision (benefit) for income taxes	3,584	(9,956)	7,378
Interest expense	4,833	4,733	4,376
Depreciation and amortization expense	17,403	16,954	15,928
Consolidated EBITDA*	41,859	42,281	41,290
Add (Less):			
Other (income) expense, net†	(2,364)	2,021	3,789
Equity in losses of unconsolidated businesses‡	186	77	98
Severance charges	2,157	497	421
Gain on spectrum license transaction	—	(270)	(142)
Acquisition and integration related charges§	531	879	—
Product realignment charges§	450	463	—
Oath goodwill impairment	4,591	—	—
Net gain on sale of divested businesses	—	(1,774)	(1,007)
Consolidated Adjusted EBITDA	\$ 47,410	\$ 44,174	\$ 44,449

* Prior period figures have been amended to conform to the current period's calculation of Consolidated EBITDA.

† Includes Pension and benefits mark-to-market adjustments and Early debt redemption costs, where applicable.

‡ Includes Product realignment charges, where applicable.

§ Excludes depreciation and amortization expense.

The changes in Consolidated Net Income, Consolidated EBITDA and Consolidated Adjusted EBITDA in the table above were primarily a result of the factors described in connection with operating revenues and operating expenses.

Segment Results of Operations

We have two reportable segments, Wireless and Wireline, which we operate and manage as strategic business units and organize by products and services, and customer groups, respectively. We measure and evaluate our reportable segments based on segment operating income. The use of segment operating income is consistent with the chief operating decision maker's assessment of segment performance.

Segment earnings before interest, taxes, depreciation and amortization (Segment EBITDA), which is presented below, is a non-GAAP measure and does not purport to be an alternative to operating income (loss) as a measure of operating performance. We believe this measure is useful to management, investors and other users of our financial information in evaluating operating profitability on a more variable cost basis as it excludes the depreciation and amortization expenses related primarily to capital expenditures and acquisitions that occurred in prior years, as well as in evaluating operating performance in relation to our competitors. Segment EBITDA is calculated by adding back depreciation and amortization expense to segment operating income (loss). Segment EBITDA margin is calculated by dividing Segment EBITDA by total segment operating revenues.

You can find additional information about our segments in Note 13 to the consolidated financial statements.

Wireless

Operating Revenues and Selected Operating Statistics

Years Ended December 31,	2018	2017	2016	(dollars in millions, except ARPA and I-ARPA)			
				Increase/(Decrease)		2017 vs. 2016	
				2018 vs. 2017			
Service	\$ 63,020	\$ 63,121	\$ 66,580	\$ (101)	(0.2)%	\$ (3,459)	(5.2)%
Equipment	22,258	18,889	17,515	3,369	17.8	1,374	7.8
Other	6,456	5,501	5,091	955	17.4	410	8.1
Total Operating Revenues	\$ 91,734	\$ 87,511	\$ 89,186	\$ 4,223	4.8	\$ (1,675)	(1.9)
Connections ('000): ⁽¹⁾							
Retail connections	117,999	116,257	114,243	1,742	1.5	2,014	1.8
Retail postpaid connections	113,353	110,854	108,796	2,499	2.3	2,058	1.9
Net additions in period ('000): ⁽²⁾							
Retail connections	1,769	2,041	2,155	(272)	(13.3)	(114)	(5.3)
Retail postpaid connections	2,526	2,084	2,288	442	21.2	(204)	(8.9)
Churn Rate:							
Retail connections	1.23%	1.25%	1.26%				
Retail postpaid connections	1.03%	1.01%	1.01%				
Account Statistics:							
Retail postpaid ARPA ⁽³⁾	\$ 134.49	\$ 135.99	\$ 144.32	\$ (1.50)	(1.1)	\$ (8.33)	(5.8)
Retail postpaid I-ARPA ⁽³⁾	\$ 168.61	\$ 166.28	\$ 167.70	\$ 2.33	1.4	\$ (1.42)	(0.8)
Retail postpaid accounts ('000) ⁽¹⁾	35,427	35,404	35,410	23	0.1	(6)	—
Retail postpaid connections per account ⁽¹⁾	3.20	3.13	3.07	0.07	2.2	0.06	2.0

(1) As of end of period

(2) Excluding acquisitions and adjustments

(3) ARPA and I-ARPA for periods beginning after January 1, 2018 reflect the adoption of Topic 606. ARPA and I-ARPA for periods ending prior to January 1, 2018 were calculated based on the guidance per ASC Topic 605, "Revenue Recognition." Accordingly, amounts are not calculated on a comparative basis.

2018 Compared to 2017

Wireless' total operating revenues increased \$4.2 billion, or 4.8%, during 2018 compared to 2017, primarily as a result of increases in equipment and other revenues, partially offset by a decrease in service revenues.

Accounts and Connections

Retail postpaid accounts primarily represent retail customers with Verizon Wireless that are directly served and managed by Verizon Wireless and use its branded services. Accounts include unlimited plans, shared data plans and corporate accounts, as well as legacy single connection plans and family plans. A single account may include monthly wireless services for a variety of connected devices.

Retail connections represent our retail customer device postpaid and prepaid connections. Churn is the rate at which service to connections is terminated on a monthly basis. Retail connections under an account may include those from smartphones and basic phones (collectively, phones) as well as tablets and other Internet devices, including wearables and retail IoT devices. The U.S. wireless market has achieved a high penetration of smartphones, which reduces the opportunity for new phone connection growth for the industry. Retail postpaid connection net additions increased during 2018 compared to 2017, primarily due to an increase in retail postpaid connection gross additions, including wearables.

Retail Postpaid Connections per Account

Retail postpaid connections per account is calculated by dividing the total number of retail postpaid connections by the number of retail postpaid accounts as of the end of the period. Retail postpaid connections per account increased 2.2% as of December 31, 2018 compared to December 31, 2017. The increase in retail postpaid connections per account is primarily due to an increase in Internet devices, including tablets and other connected devices, which represented 19.7% of our retail postpaid connection base as of December 31, 2018 compared to 19.0% as of December 31, 2017. The increase in Internet devices is primarily driven by other connected devices, primarily wearables, as of December 31, 2018 compared to December 31, 2017.

Service Revenue

Service revenue, which does not include recurring device payment plan billings related to the Verizon device payment program, decreased \$0.1 billion, or 0.2%, during 2018 compared to 2017, primarily due to a lower amount of revenue allocated to service revenue following the adoption of Topic 606, as well as decreased overage revenue. This decrease was partially offset by an increase in access revenue. Overage revenue pressure began in 2017, following the introduction of unlimited pricing plans, and has subsided now that the pace of transition to consumer plans with features that limit overages has reduced.

Customer migration to unsubsidized service pricing was driven in part by an increase in the activation of devices purchased under the Verizon device payment program. Phone activations under the Verizon device payment program represented approximately 78% of retail postpaid phones activated for both 2018 and 2017. At December 31, 2018, approximately 85% of our retail postpaid phone connections were on unsubsidized service pricing compared to approximately 80% at December 31, 2017. At December 31, 2018, approximately 48% of our retail postpaid phone connections had a current participation in the Verizon device payment program compared to approximately 49% at December 31, 2017. The pace of migration to unsubsidized price plans is approaching steady state, as the majority of customers are on such plans at December 31, 2018.

Service revenue plus recurring device payment plan billings related to the Verizon device payment program, which represents the total value invoiced from our wireless connections, increased \$1.5 billion, or 2.0%, during 2018 compared to 2017.

Retail postpaid ARPA (the average service revenue per account from retail postpaid accounts), which does not include recurring device payment plan billings related to the Verizon device payment program, decreased 1.1% during 2018 compared to 2017, as a result of a lower amount of revenue allocated to service revenue following the adoption of Topic 606, partially offset by an increase in service revenue driven by customers shifting to higher access plans. Retail postpaid I-ARPA (the average service revenue per account from retail postpaid accounts plus recurring device payment plan billings), which represents the monthly recurring value received on a per account basis from our retail postpaid accounts, increased 1.4% during 2018 compared to 2017. This increase was driven by an increase in recurring device payment plan billings, partially offset by a decline in service revenue, primarily as a result of a lower amount of revenue allocated to service revenue following the adoption of Topic 606.

Equipment Revenue

Equipment revenue increased \$3.4 billion, or 17.8%, during 2018 compared to 2017, as a result of a shift to higher priced units in the mix of devices sold and a higher amount of revenue allocated to equipment revenue following the adoption of Topic 606. See Notes 1 and 2 to the consolidated financial statements for additional information. These increases were partially offset by overall declines in device sales.

Other Revenue

Other revenue includes non-service revenues such as regulatory fees, cost recovery surcharges, revenues associated with our device protection package, sublease rentals and financing revenue. Other revenue increased \$1.0 billion, or 17.4%, during 2018 compared to 2017, primarily due to volume and rate-driven increases in revenues related to our device protection package.

2017 Compared to 2016

Wireless' total operating revenues decreased \$1.7 billion, or 1.9%, during 2017 compared to 2016, primarily as a result of a decline in service revenues, partially offset by an increase in equipment revenues.

Accounts and Connections

Retail postpaid connection net additions decreased 8.9% during 2017 compared to 2016, primarily due to an increase in disconnects of Internet devices, partially offset by a decline in phone disconnects.

Retail Postpaid Connections per Account

Retail postpaid connections per account increased 2.0% as of December 31, 2017 compared to December 31, 2016, primarily due to an increase in Internet devices, including tablets and other connected devices, which represented 19.0% of our retail postpaid connection base as of December 31, 2017 compared to 18.3% as of December 31, 2016.

Service Revenue

Service revenue, which does not include recurring device payment plan billings related to the Verizon device payment program, decreased \$3.5 billion, or 5.2%, during 2017 compared to 2016, primarily due to lower postpaid service revenue, including decreased overage revenue and decreased access revenue. Overage revenue pressure was primarily related to the introduction of unlimited pricing plans in 2017 and the ongoing migration to the pricing plans introduced in 2016 that feature safety mode and carryover data. Service revenue was also negatively impacted as a result of the ongoing customer migration to plans with unsubsidized service pricing.

Customer migration to unsubsidized service pricing was driven in part by an increase in the activation of devices purchased under the Verizon device payment program. For 2017, phone activations under the Verizon device payment program represented approximately 78% of retail postpaid phones activated compared to approximately 77% during 2016. At December 31, 2017, approximately 80% of our retail postpaid phone connections were on unsubsidized service pricing compared to approximately 67% at December 31, 2016. At December 31, 2017, approximately 49% of our retail postpaid phone connections participated in the Verizon device payment program compared to approximately 46% at December 31, 2016.

Operating Expenses

Service revenue plus recurring device payment plan billings related to the Verizon device payment program, which represents the total value invoiced from our wireless connections, decreased \$0.6 billion, or 0.8%, during 2017 compared to 2016.

Retail postpaid ARPA, which does not include recurring device payment plan billings related to the Verizon device payment program, decreased 5.8% during 2017 compared to 2016 as a result of customer migration to plans with unsubsidized service pricing, including our new price plans launched during 2016, which feature safety mode and carryover data, and the introduction of unlimited data plans in 2017. Retail postpaid I-ARPA, which represents the monthly recurring value received on a per account basis from our retail postpaid accounts, decreased 0.8% during 2017 compared to 2016. The decrease was driven by service revenue decline, partially offset by increasing recurring device payment plan billings.

Equipment Revenue

Equipment revenue increased \$1.4 billion, or 7.8%, during 2017 compared to 2016, as a result of an increase in the Verizon device payment program take rate and an increase in the price of devices, partially offset by an overall decline in device sales.

Other Revenue

Other revenue increased \$0.4 billion, or 8.1%, during 2017 compared to 2016, primarily due to a \$0.3 billion increase in financing revenues from our device payment program and a \$0.2 billion volume-driven increase in revenues related to our device protection package.

Years Ended December 31,	2018	2017	2016	(dollars in millions)			
				Increase/(Decrease)		2017 vs. 2016	
				2018 vs. 2017			
Cost of services	\$ 9,251	\$ 8,886	\$ 9,031	\$ 365	4.1%	\$ (145)	(1.6)%
Cost of equipment	23,323	22,147	22,238	1,176	5.3	(91)	(0.4)
Selling, general and administrative expense	16,604	17,876	18,881	(1,272)	(7.1)	(1,005)	(5.3)
Depreciation and amortization expense	9,736	9,395	9,183	341	3.6	212	2.3
Total Operating Expenses	\$ 58,914	\$ 58,304	\$ 59,333	\$ 610	1.0	\$ (1,029)	(1.7)

Cost of Services

Cost of services increased \$0.4 billion, or 4.1%, during 2018 compared to 2017, primarily due to higher rent expense as a result of adding capacity to the network to support demand, as well as new pricing and a volume-driven increase in costs related to the device protection package offered to our customers. Partially offsetting these increases were decreases in costs related to roaming and long distance.

Cost of services decreased \$0.1 billion, or 1.6%, during 2017 compared to 2016, primarily due to decreases in costs related to roaming, long distance and cost of data. Partially offsetting these decreases were higher rent expense as a result of an increase in macro and small cell sites supporting network capacity expansion and densification, as well as a volume-driven increase in costs related to the device protection package offered to our customers.

Cost of Equipment

Cost of equipment increased \$1.2 billion, or 5.3%, during 2018 compared to 2017, primarily as a result of shifts to higher priced units in the mix of devices sold, partially offset by declines in the number of smartphones sold.

Cost of equipment decreased \$0.1 billion, or 0.4%, during 2017 compared to 2016, primarily as a result of a decline in the number of smartphone and Internet units sold, substantially offset by a shift to higher priced units in the mix of devices sold.

Selling, General and Administrative Expense

Selling, general and administrative expense decreased \$1.3 billion, or 7.1%, during 2018 compared to 2017, primarily due to a \$1.2 billion decline in sales commission expense, as well as a decline of approximately \$0.1 billion in employee related costs, primarily due to lower headcount and a decrease in bad debt expense. The decline in sales commission expense during 2018 compared to 2017, was driven by decreased selling-related costs primarily arising from the deferral of commission costs following the adoption of Topic 606.

Selling, general and administrative expense decreased \$1.0 billion, or 5.3%, during 2017 compared to 2016, primarily due to a \$0.6 billion decline in sales commission expense as well as a decline of approximately \$0.2 billion in employee related costs primarily due to lower headcount, as well as a decline in bad debt expense, non-income taxes and advertising expense. The decline in sales commission expense was driven by an increase in the proportion of activations under the Verizon device payment program, which has a lower commission per unit than activations under traditional fixed-term service plans, as well as an overall decline in activations.

Depreciation and Amortization Expense

Depreciation and amortization expense increased \$0.3 billion, or 3.6%, during 2018 compared to 2017, and increased \$0.2 billion, or 2.3%, during 2017 compared to 2016, primarily driven by an increase in depreciable assets.

Segment Operating Income and EBITDA

Years Ended December 31,	2018	2017	2016	(dollars in millions)			
				Increase/(Decrease)			
				2018 vs. 2017		2017 vs. 2016	
Segment Operating Income	\$ 32,820	\$ 29,207	\$ 29,853	\$ 3,613	12.4%	\$ (646)	(2.2)%
Add Depreciation and amortization expense	9,736	9,395	9,183	341	3.6	212	2.3
Segment EBITDA	\$ 42,556	\$ 38,602	\$ 39,036	\$ 3,954	10.2	\$ (434)	(1.1)
Segment operating income margin	35.8%	33.4%	33.5%				
Segment EBITDA margin	46.4%	44.1%	43.8%				

The changes in the table above during the periods presented were primarily a result of the factors described in connection with operating revenues and operating expenses.

Wireline

In 2017, Verizon reorganized the customer groups within its Wireline segment. Previously, the customer groups in the Wireline segment consisted of Mass Markets (which included Consumer Retail and Small Business subgroups), Global Enterprise and Global Wholesale. Pursuant to the reorganization, there are now four customer groups within the Wireline segment: Consumer Markets, which includes the customers previously included in Consumer Retail; Enterprise Solutions, which includes the large business customers, including multinational corporations, and federal government customers previously included in Global Enterprise; Partner Solutions, which includes the customers previously included in Global Wholesale; and Business Markets, a new customer group, which includes U.S.-based small business customers previously included in Mass Markets and U.S.-based medium business customers, state and local government customers, and educational institutions previously included in Global Enterprise.

The operating revenues from XO are included in the Wireline segment results beginning in February 2017, following the completion of the acquisition, and are included with the Enterprise Solutions, Partner Solutions and Business Markets customer groups.

The operating results and statistics for all periods presented below exclude the results of the Data Center Sale in 2017 and other insignificant transactions (see "Operating Results From Divested Businesses"). The results were adjusted to reflect comparable segment operating results consistent with the information regularly reviewed by our chief operating decision maker.

Operating Revenues and Selected Operating Statistics

Years Ended December 31,	2018	2017	2016	(dollars in millions)			
				Increase/(Decrease)		2017 vs. 2016	
				2018 vs. 2017			
Consumer Markets	\$ 12,589	\$ 12,777	\$ 12,751	\$ (188)	(1.5)%	\$ 26	0.2%
Enterprise Solutions	8,840	9,167	9,164	(327)	(3.6)	3	—
Partner Solutions	4,692	4,917	4,927	(225)	(4.6)	(10)	(0.2)
Business Markets	3,397	3,585	3,356	(188)	(5.2)	229	6.8
Other	242	234	312	8	3.4	(78)	(25.0)
Total Operating Revenues	\$ 29,760	\$ 30,680	\$ 30,510	\$ (920)	(3.0)	\$ 170	0.6
Connections ('000): ⁽¹⁾							
Total voice connections	11,732	12,821	13,939	(1,089)	(8.5)	(1,118)	(8.0)
Total Broadband connections	6,961	6,959	7,038	2	—	(79)	(1.1)
Fios Internet subscribers	6,067	5,850	5,653	217	3.7	197	3.5
Fios video subscribers	4,451	4,619	4,694	(168)	(3.6)	(75)	(1.6)

(1) As of end of period

Wireline's revenues decreased \$0.9 billion, or 3.0%, during 2018 compared to 2017, primarily due to decreases in traditional voice, network and HSI services as a result of technology substitution and competition as well as decreases in demand for traditional linear video within our customer groups. The year ended 2018 includes one additional month of operating revenues from XO compared to the similar period in 2017.

Fios revenues were \$11.9 billion, during 2018 compared to \$11.7 billion during 2017. During 2018, our Fios Internet subscriber base increased by 3.7% and our Fios Video subscriber base decreased by 3.6%, compared to 2017, reflecting increased demand in higher broadband speeds and the ongoing shift from traditional linear video to over-the-top offerings.

Service revenues attributable to voice, Fios Video and HSI services declined, during 2018 compared to 2017, related to declines of 8.5%, 3.6% and 19.4% in connections, respectively. The decline in voice connections is primarily a result of competition and technology substitution with wireless, competing voice over Internet Protocol (IP) and cable telephony service. The decline in video connections continues to result from the shift in traditional linear video to over-the-top offerings. The increase in Fios Internet connections was driven by the continuing demand for higher speed Internet connectivity which offset the decline in HSI connections.

Consumer Markets

Consumer Markets operations provide broadband Internet and video services (including Fios Internet, Fios Video and HSI services) and local and long distance voice services to residential subscribers.

2018 Compared to 2017

Consumer Markets revenues decreased \$0.2 billion, or 1.5%, during 2018 compared to 2017, due to the continued decline of Fios Video, voice and HSI services, partially offset by increases in Fios Internet revenues due to subscriber growth and higher value customer mix.

Consumer Fios revenues increased \$0.2 billion, or 1.5%, during 2018 compared to 2017. Fios represented approximately 88% of Consumer Markets revenue during 2018 compared to approximately 85% during 2017.

The decline in voice service revenues was primarily due to an 8.5% decline in voice connections resulting primarily from competition and technology substitution with wireless and competing voice over Internet Protocol (VoIP) and cable telephony services. Total voice connections include traditional switched access lines in service, as well as Fios digital voice connections.

2017 Compared to 2016

Consumer Markets revenues increased 0.2%, during 2017 compared to 2016, due to increases in Fios revenues as a result of subscriber growth for Fios Internet services fueled by the introduction of gigabit speed data services, as well as higher pay-per-view sales due to marquee events during the third quarter of 2017, partially offset by the continued decline of voice service and HSI revenues.

Consumer Fios revenues increased \$0.4 billion, or 3.7%, during 2017 compared to 2016. Fios represented approximately 85% of Consumer Markets revenue during 2017 compared to approximately 82% during 2016.

The decline in voice service revenues was primarily due to an 8.0% decline in voice connections resulting primarily from competition and technology substitution with wireless and competing VoIP and cable telephony services. Total voice connections include traditional switched access lines in service, as well as Fios digital voice connections.

Enterprise Solutions

Enterprise Solutions provides professional and integrated managed services, delivering solutions for large businesses, including multinational corporations, and federal government customers. Enterprise Solutions offers traditional circuit-based network services, and advanced networking solutions including Private IP, Ethernet, and Software-Defined Wide Area Network, along with our traditional voice services and advanced workforce productivity and customer contact center solutions. Our Enterprise Solutions include security services to manage, monitor, and mitigate cyber-attacks.

2018 Compared to 2017

Enterprise Solutions revenues decreased \$0.3 billion, or 3.6%, during 2018 compared to 2017, primarily due to declines in traditional data and voice communication services and equipment as a result of competitive price pressures.

2017 Compared to 2016

Enterprise Solutions revenues remained consistent, during 2017 compared to 2016. Increased revenues resulting from the acquisition of XO were fully offset by declines in traditional data and voice communications services as a result of competitive price pressures.

Partner Solutions

Partner Solutions provides communications services, including data, voice and local dial tone and broadband services primarily to local, long distance and other carriers that use our facilities to provide services to their customers.

2018 Compared to 2017

Partner Solutions revenues decreased \$0.2 billion, or 4.6%, during 2018 compared to 2017, primarily due to declines in core data and traditional voice services, resulting from the effect of technology substitution and continuing contraction of market rates due to competition. Data declines were partially offset by growth in higher bandwidth services, including dark fiber transport.

Operating Expenses

Years Ended December 31,	2018	2017	2016	(dollars in millions)			
				Increase/(Decrease)			
				2018 vs. 2017		2017 vs. 2016	
Cost of services	\$ 17,701	\$ 17,922	\$ 18,353	\$ (221)	(1.2)%	\$ (431)	(2.3)%
Selling, general and administrative expense	6,151	6,274	6,476	(123)	(2.0)	(202)	(3.1)
Depreciation and amortization expense	6,181	6,104	5,975	77	1.3	129	2.2
Total Operating Expenses	\$ 30,033	\$ 30,300	\$ 30,804	\$ (267)	(0.9)	\$ (504)	(1.6)

Cost of Services

Cost of services decreased \$0.2 billion, or 1.2%, during 2018 compared to 2017, primarily due to decreases in personnel costs, cost of equipment and access costs, which were partially offset by increases in content costs associated with continued increases in the cost of programming license fees and other direct costs.

2017 Compared to 2016

Partner Solutions revenues decreased 0.2%, during 2017 compared to 2016, primarily related to declines in traditional voice revenues due to the effect of technology substitution, as well as continuing contraction of market rates due to competition, offset by revenues resulting from the acquisition of XO.

Business Markets

Business Markets offers traditional voice and networking products, Fios services, IP Networking, advanced voice solutions, security, and managed IT services to U.S.-based small and medium businesses, state and local governments, and educational institutions.

2018 Compared to 2017

Business Markets revenues decreased \$0.2 billion, or 5.2%, during 2018 compared to 2017, primarily due to revenue declines related to the loss of traditional voice services and HSI connections, as well as customer premise equipment as a result of competitive price pressures.

2017 Compared to 2016

Business Markets revenues increased \$0.2 billion, or 6.8%, during 2017 compared to 2016, primarily due to the acquisition of XO, partially offset by revenue declines related to the loss of traditional voice and HSI connections as a result of competitive price pressures.

Cost of services decreased \$0.4 billion, or 2.3%, during 2017 compared to 2016, primarily due to the fact that we did not incur incremental costs in 2017 that were incurred in 2016 as a result of the 2016 Work Stoppage, as well as a decline in net pension and postretirement benefit costs primarily driven by collective bargaining agreements ratified in June 2016. These decreases were partially offset by an increase in content costs associated with continued programming license fee increases as well as an increase in access costs as a result of the acquisition of XO.

Selling, General and Administrative Expense

Selling, general and administrative expense decreased \$0.1 billion, or 2.0%, during 2018 compared to 2017, due to decreased selling-related costs primarily arising from the deferral of commission costs following adoption of Topic 606.

Selling, general and administrative expense decreased \$0.2 billion, or 3.1%, during 2017 compared to 2016, due to a decline in net pension and postretirement benefit costs, primarily driven by collective bargaining agreements ratified in June 2016 and the fact that there were no 2016 Work Stoppage costs in 2017, partially offset by an 9.5% increase in expenses resulting from the acquisition of XO.

Depreciation and Amortization Expense

Depreciation and amortization expense increased \$0.1 billion, or 1.3%, during 2018 compared to 2017, primarily due to increases in net depreciable assets.

Depreciation and amortization expense increased \$0.1 billion, or 2.2%, during 2017 compared to 2016, primarily due to increases in net depreciable assets as a result of the acquisition of XO.

Segment Operating Income (Loss) and EBITDA

Years Ended December 31,	(dollars in millions)						
				Increase/(Decrease)			
	2018	2017	2016	2018 vs. 2017		2017 vs. 2016	
Segment Operating Income (Loss)	\$ (273)	\$ 380	\$ (294)	\$ (653)	nm	\$ 674	nm
Add Depreciation and amortization expense	6,181	6,104	5,975	77	1.3%	129	2.2%
Segment EBITDA	\$ 5,908	\$ 6,484	\$ 5,681	\$ (576)	(8.9)	\$ 803	14.1
Segment operating income (loss) margin	(0.9)%	1.2%	(1.0)%				
Segment EBITDA margin	19.9%	21.1%	18.6%				

nm - not meaningful

The changes in the table above during the periods presented were primarily a result of the factors described in connection with operating revenues and operating expenses.

Special Items

Special items included in Income Before (Provision) Benefit For Income Taxes were as follows:

Years Ended December 31,	2018	(dollars in millions)	
		2017	2016
Severance, pension and benefits charges (credits)			
Selling, general and administrative expense	\$ 2,157	\$ 497	\$ 421
Other income (expense), net	(2,107)	894	2,502
Gain on spectrum license transactions			
Selling, general and administrative expense	—	(270)	(142)
Acquisition and integration related charges			
Selling, general and administrative expense	531	879	—
Depreciation and amortization expense	22	5	—
Product realignment charges			
Cost of services	303	171	—
Selling, general and administrative expense	147	292	—
Equity in losses of unconsolidated businesses	207	(11)	—
Depreciation and amortization expense	1	219	—
Oath goodwill impairment			
Oath goodwill impairment	4,591	—	—
Net gain on sale of divested businesses			
Selling, general and administrative expense	—	(1,774)	(1,007)
Early debt redemption costs			
Other income (expense), net	725	1,983	1,822
Total	\$ 6,577	\$ 2,885	\$ 3,596

The income and expenses related to special items included in our consolidated results of operations were as follows:

Years Ended December 31,	2018	(dollars in millions)	
		2017	2016
Within Total Operating Expenses	\$ 7,752	\$ 19	\$ (728)
Within Equity in losses of unconsolidated businesses	207	(11)	—
Within Other income (expense), net	(1,382)	2,877	4,324
Total	\$ 6,577	\$ 2,885	\$ 3,596

Severance, Pension and Benefits Charges (Credits)

During 2018, we recorded net pre-tax pension and benefits credits of \$2.1 billion in accordance with our accounting policy to recognize actuarial gains and losses in the period in which they occur. The pension and benefits remeasurement credits of \$2.3 billion, which were recorded in Other income (expense), net in our consolidated statements of income, were primarily driven by an increase in our discount rate assumption used to determine the current year liabilities of our pension plans and postretirement benefit plans from a weighted-average of 3.7% at December 31, 2017 to a weighted-average of 4.4% at December 31, 2018 (\$2.6 billion), and mortality and other assumption adjustments of \$1.7 billion, \$1.6 billion of which related to healthcare claims and trend adjustments, offset by the difference between our estimated return on assets of 7.0% and our actual return on assets of (2.7)% (\$1.9 billion). The credits were partially offset by \$0.2 billion due to the effects of participants retiring under the voluntary separation program. During 2018, we also recorded net pre-tax severance charges of \$2.2 billion in Selling, general and administrative expense, primarily driven by the voluntary separation program for select U.S.-based management employees and other headcount reduction initiatives, which resulted in a severance charge of \$1.8 billion (\$1.4 billion after-tax), and \$0.3 billion in severance costs recorded under other existing separation plans.

During 2017, we recorded net pre-tax severance, pension and benefits charges of \$1.4 billion, exclusive of acquisition related severance charges, in accordance with our accounting policy to recognize actuarial gains and losses in the period in which they occur. The pension and benefits remeasurement charges of approximately \$0.9 billion, which were recorded in Other income (expense), net in our consolidated statements of income, were primarily driven by a decrease in our discount rate assumption used to determine the current year liabilities of our pension and postretirement benefit plans from a weighted-average of 4.2% at December 31, 2016 to a weighted-average of 3.7% at December 31, 2017 (\$2.6 billion). The charges were partially offset by the difference between our estimated return on assets of 7.0% and our actual return on assets of 14.0% (\$1.2 billion), a change in mortality assumptions primarily driven by the use of updated actuarial tables (MP-2017) issued by the Society of Actuaries (\$0.2 billion) and other assumption adjustments (\$0.3 billion). As part of these charges, we also recorded severance costs of \$0.5 billion under our existing separation plans, which were recorded in Selling, general and administrative expense in our consolidated statements of income.

During 2016, we recorded net pre-tax severance, pension and benefits charges of \$2.9 billion in accordance with our accounting policy to recognize actuarial gains and losses in the period in which they occur. The pension and benefits remeasurement charges of \$2.5 billion, which were recorded in Other income (expense), net, in our consolidated statements of income, were primarily driven by a decrease in our discount rate assumption used to determine the current year liabilities of our pension and other postretirement benefit plans from a weighted-average of 4.6% at December 31, 2015 to a weighted-average of 4.2% at December 31, 2016 (\$2.1 billion), updated health care trend cost assumptions (\$0.9 billion), the difference between our estimated return on assets of 7.0% and our actual return on assets of 6.0% (\$0.2 billion) and other assumption adjustments (\$0.3 billion). These charges were partially offset by a change in mortality assumptions primarily driven by the use of updated actuarial tables (MP-2016) issued by the Society of Actuaries (\$0.5 billion) and lower negotiated prescription drug pricing (\$0.5 billion). As part of these charges, we also recorded severance costs of \$0.4 billion under our existing separation plans, which were recorded in Selling, general and administrative expense in our consolidated statements of income.

The net pre-tax severance, pension and benefits charges during 2016 were comprised of a net pre-tax pension remeasurement charge of \$0.2 billion measured as of March 31, 2016 related to settlements for employees who received lump-sum distributions in one of our defined benefit pension plans, a net pre-tax pension and benefits remeasurement charge of \$0.8 billion measured as of April 1, 2016 related to curtailments in three of our defined benefit pension and one of our other postretirement plans, a net pre-tax pension and benefits remeasurement charge of \$2.7 billion measured as of May 31, 2016 in two defined benefit pension plans and three other postretirement benefit plans as a result of our accounting for the contractual healthcare caps and bargained for changes, a net pre-tax pension remeasurement charge of \$0.1 billion measured as of May 31, 2016 related to settlements for employees who received lump-sum distributions in three of our defined benefit pension plans, a net pre-tax pension remeasurement charge of \$0.6 billion measured as of August 31, 2016 related to settlements for employees who received lump-sum distributions in five of our defined benefit pension plans, and a net pre-tax pension and benefits credit of \$1.9 billion as a result of our fourth quarter remeasurement of our pension and other postretirement assets and liabilities based on updated actuarial assumptions.

Due to the presentation of the other components of net periodic benefit cost, we recognize a portion of the pension and benefits charges (credits) in Other income (expense), net, in our consolidated statements of income. The Consolidated Adjusted EBITDA non-GAAP measure presented in the Consolidated Net Income, Consolidated EBITDA and Consolidated Adjusted EBITDA discussion (see "Consolidated Results of Operations") excludes the amount of the severance, pension and benefits charges (credits) recorded in Selling, general and administrative expense in our consolidated statements of income.

Gain on Spectrum License Transactions

During the fourth quarter of 2017, we completed a license exchange transaction with affiliates of T-Mobile USA Inc. (T-Mobile USA) to exchange certain Advanced Wireless Services (AWS) and Personal Communication Services (PCS) spectrum licenses. As a result of this agreement, we received \$0.4 billion of AWS and PCS spectrum licenses at fair value and recorded a pre-tax gain of \$0.1 billion in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2017.

During the first quarter of 2017, we completed a license exchange transaction with affiliates of AT&T Inc. (AT&T) to exchange certain AWS and PCS spectrum licenses. As a result of this non-cash exchange, we received \$1.0 billion of AWS and PCS spectrum licenses at fair value and recorded a pre-tax gain of \$0.1 billion in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2017.

During the first quarter of 2016, we completed a license exchange transaction with affiliates of AT&T to exchange certain AWS and PCS spectrum licenses. As a result of this non-cash exchange, we received \$0.4 billion of AWS and PCS spectrum licenses at fair value and we recorded a pre-tax gain of approximately \$0.1 billion in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2016.

The Consolidated Adjusted EBITDA non-GAAP measure presented in the Consolidated Net Income, Consolidated EBITDA and Consolidated Adjusted EBITDA discussion (see "Consolidated Results of Operations") excludes the gains on the spectrum license transactions described above.

Acquisition and Integration Related Charges

Acquisition and integration related charges of \$0.6 billion and \$0.9 billion recorded during the years ended December 31, 2018 and 2017 primarily related to the acquisition of Yahoo's operating business in June 2017.

The Consolidated Adjusted EBITDA non-GAAP measure presented in the Consolidated Net Income, Consolidated EBITDA and Consolidated Adjusted EBITDA discussion (see "Consolidated Results of Operations") excludes the acquisition and integration related charges described above.

Product Realignment Charges

Product realignment charges of \$0.7 billion recorded during the year ended December 31, 2018 primarily related to the discontinuation of the go90 platform and associated content during the second quarter of 2018.

Product realignment charges of \$0.7 billion recorded during the year ended December 31, 2017 primarily related to charges taken against certain early-stage developmental technologies during the fourth quarter of 2017.

The Consolidated Adjusted EBITDA non-GAAP measure presented in the Consolidated Net Income, Consolidated EBITDA and Consolidated Adjusted EBITDA discussion (see "Consolidated Results of Operations") excludes the product realignment costs described above.

Oath Goodwill Impairment

The Oath goodwill impairment charge of \$4.6 billion recorded during the year ended December 31, 2018 for our Media business, branded Oath, was a result of the company's annual goodwill impairment test performed in the fourth quarter (see "Critical Accounting Estimates").

The Consolidated Adjusted EBITDA non-GAAP measure presented in the Consolidated Net Income, Consolidated EBITDA and Consolidated Adjusted EBITDA discussion (see "Consolidated Results of Operations") excludes the goodwill impairment charge described above.

Net Gain on Sale of Divested Businesses

The net gain on the sale of divested businesses of \$1.8 billion recorded during 2017 related to the Data Center Sale in May 2017 and other insignificant transactions.

The net gain on the sale of divested businesses of \$1.0 billion recorded during 2016 related to the Access Line Sale. The gain recorded included a \$0.5 billion pension and postretirement benefit curtailment gain due to the elimination of the accrual of pension and other postretirement benefits for some or all future services of a significant number of employees covered in three of our defined benefit pension plans and one of our other postretirement benefit plans.

The Consolidated Adjusted EBITDA non-GAAP measure presented in the Consolidated Net Income, Consolidated EBITDA and Consolidated Adjusted EBITDA discussion (see "Consolidated Results of Operations") excludes the gains on the Data Center Sale and other insignificant transactions and the Access Line Sale described above.

Early Debt Redemption Costs

During 2018, 2017, and 2016, we recorded losses on early debt redemptions of \$0.7 billion, \$2.0 billion, and \$1.8 billion respectively.

We recognize losses on early debt redemptions in Other income (expense), net in our consolidated statements of income. See Note 7 to the consolidated financial statements for additional information related to our early debt redemptions.

Operating Environment and Trends

The industries that we operate in are highly competitive, which we expect to continue particularly as traditional and non-traditional service providers seek increased market share. We believe that our high-quality customer base and networks differentiate us from our competitors and give us the ability to plan and manage through changing economic and competitive conditions. We remain focused on executing on the fundamentals of the business: maintaining a high-quality customer base, delivering strong financial and operating results and strengthening our balance sheet. We will continue to invest for growth, which we believe is the key to creating value for our shareholders. We continue to lead in 4G LTE performance while building momentum for our 5G network. We believe that our strategy lays the foundation for the future through investments in our Intelligent Edge Network that enable efficiencies throughout our core infrastructure and deliver flexibility to meet customer requirements at the edge of the network.

The U.S. wireless market has achieved a high penetration of smartphones, which reduces the opportunity for new phone connection growth for the industry. We expect future revenue growth in the industry to be driven by expanding existing customer relationships, increasing the number of ways customers can connect with wireless networks and services and increasing the penetration of other connected devices including wearables, tablets and IoT devices. We expect 5G technology will provide a significant opportunity for growth in the industry in 2020 and beyond. Current and potential competitors in the U.S. wireless market include other national wireless service providers, various regional wireless service providers, wireless resellers and cable companies, as well as other communications and technology companies providing wireless products and services.

Service and equipment pricing play an important role in the wireless competitive landscape. We compete in this area by offering our customers services and devices that we believe they will regard as the best available value for the price. As the demand for wireless services continues to grow, we and other wireless service providers are offering service plans at competitive prices that include voice services, data access and text messaging, in some cases on an unlimited basis. These service offerings will vary from time to time as part of promotional offers or in response to market circumstances.

Many wireless service providers, as well as equipment manufacturers, also offer device payment options, which provide consumers with the ability to pay for their device over a period of time, and device leasing arrangements. We expect future service revenue growth opportunities to arise from increased access revenue as customers shift to higher access plans, as well as from increased connections per account. Future service revenue growth opportunities will be dependent on expanding the penetration of our services and increasing the number of ways that our customers can connect with our network and services and the development of new ecosystems.

Current and potential competitors to our Wireline businesses include cable companies, wireless service providers, domestic and foreign telecommunications providers, satellite television companies, Internet service providers, over-the-top providers and other companies that offer network services and managed enterprise solutions.

In addition, companies with a global presence increasingly compete with our wireline businesses. A relatively small number of telecommunications and integrated service providers with global operations serve customers in the global enterprise market and, to a lesser extent, the global wholesale market. We compete with these providers for large contracts to provide integrated services to global enterprises. Many of these companies have strong market presence, brand recognition and existing customer relationships, all of which contribute to intensifying competition that may affect our future revenue growth.

Despite this challenging environment, we expect that we will be able to grow key aspects of our Wireline segment by providing network reliability, offering consumers products, including broadband Internet access, digital television and voice services, offering business and government customers more robust IP products and services, and accelerating our IoT strategies.

The online advertising market continues to evolve as online users are migrating from traditional desktop to mobile and multiple-device usage. Also, there is a continued shift towards programmatic advertising which presents opportunities to connect online advertisers with the appropriate online users in a rapid environment. Our Media business competes with other online search engines, advertising platforms, digital video services and social networks. We are experiencing pressure from search and desktop usage and believe the pressure in these sectors will continue. We will implement initiatives to realize synergies across all of our media assets and build services around our core content pillars to diversify revenue and return to growth.

We will also continue to focus on cost efficiencies to attempt to offset adverse impacts from unfavorable economic conditions and competitive pressures.

2019 Connection Trends

In our Wireless segment, we expect to continue to attract and maintain the loyalty of high-quality retail postpaid customers, capitalizing on demand for data services and bringing our customers new ways of using wireless services in their daily lives. We expect that future connection growth will be driven by smartphones, tablets and other connected devices such as wearables. We believe the overall customer experience of matching the unlimited plan with our high-quality network continues to attract and retain higher value retail postpaid connections, contributes to continued increases in the penetration of data services and helps us remain competitive with other wireless carriers. We expect to manage churn by providing a consistent, reliable experience on our wireless network and focusing on improving the customer experience through simplified pricing and better execution in our distribution channels.

In our Wireline segment, we have experienced continuing access line losses as customers have disconnected both primary and secondary lines and switched to alternative technologies such as wireless, VoIP and cable for voice and data services. We expect to continue to experience access line losses as customers continue to switch to alternate technologies. We expect to continue to grow our Fios Internet connections as we seek to increase our penetration rates within our Fios service areas. In Fios video, the business continues to face ongoing pressure as observed throughout the linear television market. We expect to expand our existing business through our Intelligent Edge Network, our multi-use platform.

2019 Operating Revenue Trends

In our Wireless segment, we expect to see a continuation of the service revenue trends from 2018 as customers shift to higher access plans and increase the number of ways they connect with our network and services. Equipment revenues are largely dependent on wireless device sales volumes, the mix of devices, promotions and upgrade cycles, which are subject to device lifecycles, iconic device launches and competition within the wireless industry.

In our Wireline segment, we expect segment revenue pressures as growth in our high-quality fiber-based products continues to be offset by technology shifts and ongoing secular declines from legacy technologies and competition. We expect Consumer Markets revenue to experience near term declines to be driven by legacy core declines and cord-cutting only partially offset by Fios broadband growth. We expect a continued decline in core revenues for our Business Markets, Enterprise Solutions and Partner Solutions customer offerings; however, we expect revenue growth from advanced business and fiber-based services, including the expansion of our fiber footprint, to partially, and in some cases fully, mitigate these declines for the customer groups.

Our Media business, Verizon Media, which operated in 2018 under the "Oath" brand, is primarily made up of digital advertising products. We are experiencing revenue pressure from search and desktop usage and believe the pressure in those sectors will continue. We are focused on returning to revenue growth by implementing initiatives to realize synergies across all of our media assets and building services around our core content pillars. We are experiencing positive growth in mobile usage and video products.

2019 Operating Expense and Cash Flow from Operations Trends

We expect our consolidated operating income margin and adjusted consolidated EBITDA margin to remain strong as we continue to undertake initiatives to reduce our overall cost structure by improving productivity and gaining efficiency in our operations throughout the business in 2019 and beyond. Business Excellence initiatives include the adoption of the zero-based budgeting methodology, driving capital efficiencies from network restructuring, evolving our Information Technology strategy and offering the voluntary separation program. The goal of the Business Excellence initiative is to take \$10 billion of cumulative cash outflows out of the business over four years, beginning with 2018. As part of this initiative, we are focusing on both operating expenses and capital expenditures. Our Business Excellence initiatives have produced cumulative cash savings of \$2.3 billion in 2018 from a mix of capital and operational expenditure activities. The program remains on track to achieve our goal. Expenses related to newly acquired businesses and programs funded through the reinvestment of program savings are expected to apply offsetting pressures to our margins.

The implementation of Topic 606, resulted in the deferral of commission expense in both our Wireless and Wireline segments. In 2019 and 2020, we expect a smaller benefit from the adoption of the standard due to the deferral of commissions costs as compared to 2018.

Due to the implementation of Accounting Standard Codification Topic 842 related to leasing on January 1, 2019, we estimate the impact to operating expense for the full year 2019 will be an increase due to certain initial direct costs that can no longer be deferred under the new accounting guidance.

We create value for our shareholders by investing the cash flows generated by our business in opportunities and transactions that support continued profitable growth, thereby increasing customer satisfaction and usage of our products and services. In addition, we have used our cash flows to maintain and grow our dividend payout to shareholders. Verizon's Board of Directors increased the Company's quarterly dividend by 2.1% during 2018, making this the twelfth consecutive year in which we have raised our dividend.

Our goal is to use our cash to create long-term value for our shareholders. We will continue to look for investment opportunities that will help us to grow the business, strengthen our balance sheet, acquire spectrum licenses (see "Cash Flows from Investing Activities"), pay dividends to our shareholders and, when appropriate, buy back shares of our outstanding common stock (see "Cash Flows from Financing Activities").

Capital Expenditures

Our 2019 capital program includes capital to fund advanced networks and services, including expanding our core networks, adding capacity and density to our 4G LTE network in order to stay ahead of our customers' increasing data demands and deploying our 5G network, transforming our structure to deploy the Intelligent Edge Network while reducing the cost to deliver services to our customers and pursuing other opportunities to drive operating efficiencies. We expect that the new network architecture will simplify operations by eliminating legacy network elements, improve our 4G LTE coverage, speed the deployment of 5G technology, deliver high-speed Fios broadband to homes and businesses, and create new enterprise opportunities in the business market. The level and the timing of the Company's capital expenditures within these broad categories can vary significantly as a result of a variety of factors outside of our control, such as material weather events. Capital expenditures for 2019 are expected to be in the range of \$17.0 billion to \$18.0 billion, including the continued investment in our 5G network. Capital expenditures were \$16.7 billion in 2018 and \$17.2 billion in 2017. We believe that we have significant discretion over the amount and timing of our capital expenditures on a Company-wide basis as we are not subject to any agreement that would require significant capital expenditures on a designated schedule or upon the occurrence of designated events.

Consolidated Financial Condition

		(dollars in millions)	
Years Ended December 31,	2018	2017	2016
Cash flows provided by (used in)			
Operating activities	\$ 34,339	\$ 24,318	\$ 21,689
Investing activities	(17,934)	(18,456)	(9,874)
Financing activities	(15,377)	(6,151)	(13,376)
Increase (decrease) in cash, cash equivalents and restricted cash	\$ 1,028	\$ (289)	\$ (1,561)

We use the net cash generated from our operations to fund network expansion and modernization, service and repay external financing, pay dividends, invest in new businesses and, when appropriate, buy back shares of our outstanding common stock. Our sources of funds, primarily from operations and, to the extent necessary, from external financing arrangements, are sufficient to meet ongoing operating and investing requirements. We expect that our capital spending requirements will continue to be financed primarily through internally generated funds. Debt or equity financing may be needed to fund additional investments or development activities or to maintain an appropriate capital structure to ensure our financial flexibility. Our cash and cash equivalents are held both domestically and internationally, and are invested to maintain principal and provide liquidity. See "Market Risk" for additional information regarding our foreign currency risk management strategies.

Our available external financing arrangements include an active commercial paper program, credit available under credit facilities and other bank lines of credit, vendor financing arrangements, issuances of registered debt or equity securities, U.S. retail medium-term notes and other capital market securities that are privately-placed or offered overseas. In addition, we monetize our device payment plan agreement receivables through asset-backed debt transactions.

On January 1, 2018, we adopted ASU 2016-18 and ASU 2016-15. As required by ASU 2016-18, we included restricted cash in the statement of cash flows for all periods presented. In addition, as required by ASU 2016-15, we retrospectively reclassified approximately \$0.6 billion of collections of deferred purchase price related to off-balance sheet securitization from Cash flows from operating activities to Cash flows from investing activities in our consolidated statement of cash flows for the year ended December 31, 2017, and \$1.1 billion for the year ended December 31, 2016.

Cash Flows Provided By Operating Activities

Our primary source of funds continues to be cash generated from operations. Net cash provided by operating activities during 2018 increased by \$10.0 billion primarily due to an improvement in working capital which includes a decrease in cash income taxes, an increase of \$4.0 billion in earnings, and a lower amount of discretionary contributions to qualified employee benefit plans in 2018 compared to 2017. We made \$1.7 billion and \$3.4 billion in discretionary employee benefits contributions during 2018 and 2017, respectively, primarily to our defined benefit pension plan. As a result of the discretionary pension contributions in 2018 and a \$0.3 billion discretionary contribution in January 2019, we expect that there will be no required pension funding until 2024, which will benefit future cash flows. Further, the funded status of our qualified pension plan improved as a result of the contributions.

Net cash provided by operating activities during 2017 increased by \$2.6 billion primarily due to an increase in earnings and changes in working capital, partially offset by our discretionary contributions to qualified pension plans of \$3.4 billion (approximately \$2.1 billion, net of tax benefit) and the change in the method in which we monetize device payment plan receivables, as discussed below.

During 2016, we changed the strategic method by which we monetize device payment plan receivables from sales of device payment plan receivables, which were recorded within cash flows provided by operating activities, to asset-backed debt transactions that are recorded in cash flows from financing activities. During 2016, we received proceeds related to sales of wireless device payment plan agreement receivables of approximately \$2.0 billion. See Note 8 to the consolidated financial statements for additional information. During 2018, 2017 and 2016, we received proceeds from asset-backed debt transactions of approximately \$4.8 billion, \$4.3 billion and \$5.0 billion, respectively. See Note 7 to the consolidated financial statements and "Cash Flows Used in Financing Activities" for additional information.

Cash Flows Used In Investing Activities

Capital Expenditures

Capital expenditures continue to relate primarily to the use of capital resources to facilitate the introduction of new products and services, enhance responsiveness to competitive challenges, maintain the existing infrastructure and increase the operating efficiency and productivity of our networks.

Capital expenditures, including capitalized software, were as follows:

Years Ended December 31,	(dollars in millions)		
	2018	2017	2016
Wireless	\$ 8,486	\$ 10,310	\$ 11,240
Wireline	6,255	5,339	4,504
Other	1,917	1,598	1,315
	\$ 16,658	\$ 17,247	\$ 17,059
Total as a percentage of revenue	12.7%	13.7%	13.5%

Capital expenditures decreased at Wireless in 2018 primarily due to capital efficiencies from our business excellence initiatives. Capital expenditures increased at Wireline in 2018, primarily due to an increase in investments to support multi-use fiber assets, which support the densification of our 4G LTE network and a continued focus on 5G technology deployment. Our investments primarily related to network equipment to support the business. Capital expenditures decreased at Wireless in 2017 primarily due to the shift in investments to fiber assets. Capital expenditures increased at Wireline in 2017 primarily as a result of an increase in investments to support our multi-use fiber deployment.

Acquisitions

During 2018, 2017 and 2016, we invested \$1.4 billion, \$0.6 billion and \$0.5 billion, respectively, in acquisitions of wireless licenses. During 2018, 2017 and 2016, we also invested \$0.2 billion, \$5.9 billion and \$3.8 billion, respectively, in acquisitions of businesses, net of cash acquired.

In January 2018, Verizon acquired NextLink Wireless LLC (NextLink) from a wholly-owned subsidiary of XO for approximately \$0.5 billion, subject to certain adjustments, of which \$0.3 billion, an option exercise price to acquire NextLink, was prepaid in the first quarter of 2017. The option exercise price represented the fair value of the option. The remaining cash consideration was paid at the closing of the transaction. The spectrum acquired as part of the transaction is being used for our 5G technology deployment.

In February 2018, Verizon acquired Straight Path Communications Inc. (Straight Path), a holder of millimeter wave spectrum configured for 5G wireless services for total consideration reflecting an enterprise value of approximately \$3.1 billion, which was primarily settled with Verizon shares but also included transaction costs payable in cash of approximately \$0.7 billion, consisting primarily of a fee paid to the Federal Communications Commission (FCC). The spectrum acquired as part of the transaction is being used for our 5G technology deployment.

In February 2017, Verizon acquired XO, which owned and operated one of the largest fiber-based IP and Ethernet networks, for total cash consideration of approximately \$1.5 billion, of which \$0.1 billion was paid in 2015.

In June 2017, Verizon acquired Yahoo's operating business for cash consideration of approximately \$4.7 billion, including cash acquired of \$0.2 billion.

In December 2017, Verizon purchased certain fiber-optic network assets in the Chicago market from WideOpenWest, Inc. (WOW!) for cash consideration of approximately \$0.2 billion.

In July 2016, we acquired Telogis, Inc. (Telogis), a global cloud-based mobile enterprise management business, for \$0.9 billion of cash consideration.

In November 2016, we acquired Fleetmatics Group PLC (Fleetmatics), a leading global provider of fleet and mobile workforce management solutions, for \$60.00 per ordinary share in cash. The aggregate merger consideration was approximately \$2.5 billion, including cash acquired of \$0.1 billion.

During 2018, 2017 and 2016, we acquired various other businesses and investments for cash consideration that was not significant.

See "Acquisitions and Divestitures" for additional information on our acquisitions.

Dispositions

During 2017, we received net cash proceeds of \$3.5 billion in connection with the Data Center Sale on May 1, 2017. We also completed other insignificant transactions during 2017.

During 2016, we received cash proceeds of \$9.9 billion in connection with the completion of the Access Line Sale on April 1, 2016.

See "Acquisitions and Divestitures" for additional information on our dispositions.

Cash Flows Used In Financing Activities

We seek to maintain a mix of fixed and variable rate debt to lower borrowing costs within reasonable risk parameters and to protect against earnings and cash flow volatility resulting from changes in market conditions. During 2018, 2017 and 2016, net cash used in financing activities was \$15.4 billion, \$6.2 billion and \$13.4 billion, respectively.

2018

During 2018, our net cash used in financing activities of \$15.4 billion was primarily driven by:

- \$14.6 billion used for repayments, redemptions and repurchases of long-term borrowings and capital lease obligations, which included \$3.6 billion used for prepayments and repayments of asset-backed long-term borrowings; and
- \$9.8 billion used for dividend payments.

These uses of cash were partially offset by proceeds from long-term borrowings of \$10.8 billion, which included \$4.8 billion of proceeds from our asset-backed debt transactions.

Proceeds from and Repayments, Redemptions, and Repurchases of Long-Term Borrowings

At December 31, 2018, our total debt decreased to \$113.1 billion as compared to \$117.1 billion at December 31, 2017. Our effective interest rate was 4.8% and 4.7% during the years ended December 31, 2018 and 2017, respectively. The substantial majority of our total debt portfolio consists of fixed rate indebtedness, therefore, changes in interest rates do not have a material effect on our interest payments. See also "Market Risk" and Note 7 to the consolidated financial statements for additional information.

At December 31, 2018, approximately \$17.1 billion or 15.1% of the aggregate principal amount of our total debt portfolio consisted of foreign denominated debt, primarily the Euro and British Pound Sterling. We have entered into cross currency swaps on a majority of our foreign denominated debt in order to fix our future interest and principal payments in U.S. dollars and mitigate the impact of foreign currency transaction gains or losses. See "Market Risk" for additional information.

Verizon may continue to repurchase debt securities issued by Verizon and its affiliates in the future through open market purchases, privately negotiated transactions, tender offers, exchange offers, or otherwise, upon such terms and at such prices as Verizon may from time to time determine for cash or other consideration.

Other, net

Other, net financing activities during 2018 included early debt redemption costs, see "Special Items" for additional information, as well as cash paid on debt exchanges and derivative-related transactions.

Dividends

The Verizon Board of Directors assesses the level of our dividend payments on a periodic basis taking into account such factors as long-term growth opportunities, internal cash requirements and the expectations of our shareholders. During the third quarter of 2018, the Board increased our quarterly dividend payment 2.1% to \$0.6025 from \$0.5900 per share in the prior period. This is the twelfth consecutive year that Verizon's Board of Directors has approved a quarterly dividend increase.

As in prior periods, dividend payments were a significant use of capital resources. During 2018, we paid \$9.8 billion in dividends.

2017

During 2017, our net cash used in financing activities of \$6.2 billion was primarily driven by:

- \$24.2 billion used for repayments, redemptions and repurchases of long-term borrowings and capital lease obligations, which included \$0.4 billion used for prepayments of asset-backed long-term borrowings; and
- \$9.5 billion used for dividend payments.

These uses of cash were partially offset by proceeds from long-term borrowings of \$32.0 billion, which included \$4.3 billion of proceeds from our asset-backed debt transactions.

Proceeds from and Repayments, Redemptions, and Repurchases of Long-Term Borrowings

At December 31, 2017, our total debt increased to \$117.1 billion as compared to \$108.1 billion at December 31, 2016. Our effective interest rate was 4.7% and 4.8% during the years ended December 31, 2017 and 2016, respectively. The substantial majority of our total debt portfolio consisted of fixed rate indebtedness, therefore, changes in interest rates did not have a material effect on our interest payments. See also "Market Risk" and Note 7 to the consolidated financial statements for additional information.

At December 31, 2017, approximately \$18.0 billion or 15.3% of the aggregate principal amount of our total debt portfolio consisted of foreign denominated debt, primarily the Euro and British Pound Sterling. We have entered into cross currency swaps on a majority of our foreign denominated debt in order to fix our future interest and principal payments in U.S. dollars and mitigate the impact of foreign currency transaction gains or losses. See "Market Risk" for additional information.

Other, net

Other, net financing activities during 2017, included early debt redemption costs. See "Special Items" for additional information related to the early debt redemption costs incurred during the year ended December 31, 2017.

Dividends

During the third quarter of 2017, the Board increased our quarterly dividend payment 2.2% to \$0.5900 from \$0.5775 per share in the prior period.

As in prior periods, dividend payments were a significant use of capital resources. During 2017, we paid \$9.5 billion in dividends.

2016

During 2016, our net cash used in financing activities of \$13.4 billion was primarily driven by:

- \$19.2 billion used for repayments, redemptions and repurchases of long-term borrowings and capital lease obligations; and
- \$9.3 billion used for dividend payments.

These uses of cash were partially offset by proceeds from long-term borrowings of \$18.0 billion, which included \$5.0 billion of proceeds from our asset-backed debt transactions.

Proceeds from and Repayments, Redemptions, and Repurchases of Long-Term Borrowings

At December 31, 2016, our total debt decreased to \$108.1 billion as compared to \$109.7 billion at December 31, 2015. Our effective interest rate was 4.8% during the year ended December 31, 2016. The substantial majority of our total debt portfolio consisted of fixed rate indebtedness, therefore, changes in interest rates did not have a material effect on our interest payments. See also "Market Risk" for additional information.

At December 31, 2016, approximately \$11.6 billion or 10.7% of the aggregate principal amount of our total debt portfolio consisted of foreign denominated debt, primarily the Euro and British Pound Sterling. We have entered into cross currency swaps on a majority of our foreign denominated debt in order to fix our future interest and principal payments in U.S. dollars and mitigate the impact of foreign currency transaction gains or losses. See "Market Risk" for additional information.

Other, net

Other, net financing activities during 2016, included early debt redemption costs of \$1.8 billion. See "Special Items" for additional information related to the early debt redemption costs incurred during the year ended December 31, 2016.

Dividends

During the third quarter of 2016, the Board increased our quarterly dividend payment 2.2% to \$0.5775 from \$0.565 per share in the prior period.

As in prior periods, dividend payments were a significant use of capital resources. During 2016, we paid \$9.3 billion in dividends.

Asset-Backed Debt

As of December 31, 2018, the carrying value of our asset-backed debt was \$10.1 billion. Our asset-backed debt includes notes (the Asset-Backed Notes) issued to third-party investors (Investors) and loans (ABS Financing Facilities) received from banks and their conduit facilities (collectively, the Banks). Our consolidated asset-backed debt bankruptcy remote legal entities (each, an ABS Entity or collectively, the ABS Entities) issue the debt or are otherwise party to the transaction documentation in connection with our asset-backed debt transactions. Under the terms of our asset-backed debt, we transfer device payment plan agreement receivables from Cellco Partnership (Cellco) and certain other affiliates of Verizon (collectively, the Originators) to one of the ABS Entities, which in turn transfers such receivables to another ABS Entity that issues the debt. Verizon entities retain the equity interests in the ABS Entities, which represent the rights to all funds not needed to make required payments on the asset-backed debt and other related payments and expenses.

Our asset-backed debt is secured by the transferred device payment plan agreement receivables and future collections on such receivables. The device payment plan agreement receivables transferred to the ABS Entities and related assets, consisting primarily of restricted cash, will only be available for payment of asset-backed debt and expenses related thereto, payments to the Originators in respect of additional transfers of device payment plan agreement receivables, and other obligations arising from our asset-backed debt transactions, and will not be available to pay other obligations or claims of Verizon's creditors until the associated asset-backed debt and other obligations are satisfied. The Investors or Banks, as applicable, which hold our asset-backed debt have legal recourse to the assets securing the debt, but do not have any recourse to Verizon with respect to the payment of principal and interest on the debt. Under a parent support agreement, Verizon has agreed to guarantee certain of the payment obligations of Cellco and the Originators to the ABS Entities.

Cash collections on the device payment plan agreement receivables collateralizing our asset-backed debt securities are required at certain specified times to be placed into segregated accounts. Deposits to the segregated accounts are considered restricted cash and are included in Prepaid expenses and other, and Other assets in our consolidated balance sheets.

Proceeds from our asset-backed debt transactions are reflected in Cash flows from financing activities in our condensed consolidated statements of cash flows. The asset-backed debt issued and the assets securing this debt are included in our consolidated balance sheets.

During September 2016 and May 2017, we entered into loan agreements through an ABS Entity with a number of financial institutions. Under these ABS loan agreements, we have the right to prepay all or a portion of the loans at any time without penalty, but in certain cases, with breakage costs. The two year revolving period of the two loan agreements ended in September 2018. In 2018, we made a \$1.5 billion drawdown and an aggregate amount of \$3.0 billion of prepayments and repayments. We made a \$0.4 billion prepayment in December 2017.

In May 2018, we entered into a second device payment plan agreement financing facility with a number of financial institutions (2018 ABS Financing Facility). Under the terms of the 2018 ABS Financing Facility, the financial institutions made advances under asset-backed loans backed by device payment plan agreement receivables of business customers for proceeds of \$0.5 billion.

Credit Facilities

In April 2018, we amended our \$9.0 billion credit facility to increase the capacity to \$9.5 billion and extend its maturity to April 4, 2022. As of December 31, 2018, the unused borrowing capacity under our \$9.5 billion credit facility was approximately \$9.4 billion. The credit facility does not require us to comply with financial covenants or maintain specified credit ratings, and it permits us to borrow even if our business has incurred a material adverse change. We use the credit facility for the issuance of letters of credit and for general corporate purposes.

In March 2016, we entered into a \$1.0 billion credit facility insured by Eksportkreditnamnden Stockholm, Sweden, the Swedish export credit agency. As of December 31, 2018, the outstanding balance was \$0.7 billion. We used this credit facility to finance network equipment-related purchases.

In July 2017, we entered into credit facilities insured by various export credit agencies providing us with the ability to borrow up to \$4.0 billion to finance equipment-related purchases. The facilities have borrowings available, portions of which extend through October 2019, contingent upon the amount of eligible equipment-related purchases that we make. During 2018, we drew down \$3.0 billion from these facilities, and \$2.8 billion remained outstanding as of December 31, 2018. In January 2019, we drew down an additional \$0.4 billion from these facilities.

Common Stock

Common stock has been used from time to time to satisfy some of the funding requirements of employee and shareholder plans. During the years ended December 31, 2018, 2017 and 2016, we issued 3.5 million, 2.8 million and 3.5 million common shares from Treasury stock, respectively, which had an insignificant aggregate value.

In March 2017, the Verizon Board of Directors authorized a share buyback program to repurchase up to 100 million shares of the Company's common stock. The program will terminate when the aggregate number of shares purchased reaches 100 million, or at the close of business on February 28, 2020, whichever is sooner. The program permits Verizon to repurchase shares over time, with the amount and timing of repurchases depending on market conditions and corporate needs. There were no repurchases of common stock during 2018, 2017 or 2016.

Credit Ratings

Verizon's credit ratings did not change in 2018, 2017 or 2016.

Securities ratings assigned by rating organizations are expressions of opinion and are not recommendations to buy, sell or hold securities. A securities rating is subject to revision or withdrawal at any time by the assigning rating organization. Each rating should be evaluated independently of any other rating.

Covenants

Our credit agreements contain covenants that are typical for large, investment grade companies. These covenants include requirements to pay interest and principal in a timely fashion, pay taxes, maintain insurance with responsible and reputable insurance companies, preserve our corporate existence, keep appropriate books and records of financial transactions, maintain our properties, provide financial and other reports to our lenders, limit pledging and disposition of assets and mergers and consolidations, and other similar covenants.

We and our consolidated subsidiaries are in compliance with all of our restrictive covenants in our debt agreements.

Change In Cash, Cash Equivalents and Restricted Cash

Our Cash and cash equivalents at December 31, 2018 totaled \$2.7 billion, a \$0.7 billion increase compared to Cash and cash equivalents at December 31, 2017 primarily as a result of the factors discussed above. Our Cash and cash equivalents at December 31, 2017 totaled \$2.1 billion, a \$0.8 billion decrease compared to Cash and cash equivalents at December 31, 2016 primarily as a result of the factors discussed above.

Restricted cash at December 31, 2018 totaled \$1.2 billion, a \$0.4 billion increase compared to restricted cash at December 31, 2017 primarily due to cash collections on the device payment plan agreement receivables that are required at certain specified times to be placed into segregated accounts. Restricted cash at December 31, 2017 totaled \$0.8 billion, a \$0.5 billion increase compared to restricted cash at December 31, 2016 primarily related to cash collections on the device payment plan agreement receivables that are required at certain specified times to be placed into segregated accounts.

Free Cash Flow

Free cash flow is a non-GAAP financial measure that reflects an additional way of viewing our liquidity that, when viewed with our GAAP results, provides a more complete understanding of factors and trends affecting our cash flows. Free cash flow is calculated by subtracting capital expenditures from net cash provided by operating activities. We believe it is a more conservative measure of cash flow since purchases of fixed assets are necessary for ongoing operations. Free cash flow has limitations due to the fact that it does not represent the residual cash flow available for discretionary expenditures. For example, free cash flow does not incorporate payments made on capital lease obligations or cash payments for business acquisitions. Therefore, we believe it is important to view free cash flow as a complement to our entire consolidated statements of cash flows.

The following table reconciles net cash provided by operating activities to Free cash flow:

Years Ended December 31,	2018	(dollars in millions)	
		2017	2016
Net cash provided by operating activities	\$ 34,339	\$ 24,318	\$ 21,689
Less Capital expenditures (including capitalized software)	16,658	17,247	17,059
Free cash flow	\$ 17,681	\$ 7,071	\$ 4,630

The changes in free cash flow during 2018, 2017 and 2016 were a result of the factors described in connection with net cash provided by operating activities and capital expenditures. The change in free cash flow during 2018 was primarily due to an improvement in working capital which includes a decrease in cash income taxes, an increase of \$4.0 billion in earnings, and a lower amount of discretionary contributions to qualified employee benefit plans in 2018 compared to 2017. We made \$1.7 billion and \$3.4 billion in discretionary employee benefits contributions during 2018 and 2017, respectively, primarily to our defined benefit pension plan. As a result of the discretionary pension contributions in 2018 and a \$0.3 billion discretionary contribution in January 2019, we expect that there will be no required pension funding until 2024, which will benefit future cash flows. Further, the funded status of our qualified pension plan improved as a result of the contributions. Capital expenditures decreased during 2018 compared to 2017, primarily due to capital expenditure efficiencies from our Business Excellence initiatives.

The change in free cash flow during 2017 was primarily due to an increase in earnings and changes in working capital, partially offset by our discretionary contributions to qualified pension plans of \$3.4 billion (approximately \$2.1 billion, net of tax benefit) and the change in the method in which we monetize device payment plan receivables, as discussed below.

During 2016, we changed the strategic method by which we monetize device payment plan receivables from sales of device payment plan receivables, which were recorded within cash flows provided by operating activities, to asset-backed debt transactions that are recorded in cash flows from financing activities. During 2016, we received proceeds related to sales of wireless device payment plan agreement receivables of approximately \$2.0 billion. See Note 8 to the consolidated financial statements for additional information. During 2018, 2017 and 2016, we received proceeds from asset-backed debt transactions of approximately \$4.8 billion, \$4.3 billion and \$5.0 billion, respectively. See Note 7 to the consolidated financial statements and "Cash Flows Used in Financing Activities" for additional information.

Employee Benefit Plan Funded Status and Contributions

Employer Contributions

We operate numerous qualified and nonqualified pension plans and other postretirement benefit plans. These plans primarily relate to our domestic business units. During 2018, 2017 and 2016, contributions to our qualified pension plans were \$1.0 billion, \$4.0 billion and \$0.8 billion, respectively. We made no contribution to our nonqualified pension plans in 2018, and contributed \$0.1 billion in both 2017 and 2016. In January 2019, we made a \$0.3 billion discretionary contribution to our qualified pension plans.

The company's overall investment strategy is to achieve a mix of assets that allows us to meet projected benefit payments while taking into consideration risk and return. In an effort to reduce the risk of our portfolio strategy and better align assets with liabilities, we have adopted a liability driven pension strategy that seeks to better match cash flows from investments with projected benefit payments. We expect that the strategy will reduce the likelihood that assets will decline at a time when liabilities increase (referred to as liability hedging), with the goal to reduce the risk of underfunding to the plan and its participants and beneficiaries; however, we also expect the strategy to result in lower asset returns. Nonqualified pension contributions are estimated to be approximately \$0.1 billion in 2019.

Contributions to our other postretirement benefit plans generally relate to payments for benefits on an as-incurred basis since these other postretirement benefit plans do not have funding requirements similar to the pension plans. We contributed \$0.7 billion, \$1.3 billion and \$1.1 billion to our other postretirement benefit plans in 2018, 2017 and 2016, respectively. Contributions to our other postretirement benefit plans are estimated to be approximately \$0.5 billion in 2019.

Leasing Arrangements

See Note 6 to the consolidated financial statements for a discussion of leasing arrangements.

Contractual Obligations

The following table provides a summary of our contractual obligations and commercial commitments at December 31, 2018. Additional detail about these items is included in the notes to the consolidated financial statements.

	(dollars in millions)				
	Payments Due By Period				
Contractual Obligations	Total	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years
Long-term debt ⁽¹⁾	\$ 112,548	\$ 6,744	\$ 14,019	\$ 13,441	\$ 78,344
Capital lease obligations ⁽²⁾	905	314	360	136	95
Total long-term debt, including current maturities	113,453	7,058	14,379	13,577	78,439
Interest on long-term debt ⁽¹⁾	82,117	5,048	9,364	8,474	59,231
Operating leases ⁽²⁾	26,593	4,043	6,950	5,393	10,207
Purchase obligations ⁽³⁾	22,179	8,764	9,098	2,137	2,180
Other long-term liabilities ⁽⁴⁾	4,405	474	1,872	2,059	—
Finance obligations ⁽⁵⁾	1,819	276	569	592	382
Total contractual obligations	\$ 250,566	\$ 25,663	\$ 42,232	\$ 32,232	\$ 150,439

⁽¹⁾ Items included in long-term debt with variable coupon rates exclude unamortized debt issuance costs, and are described in Note 7 to the consolidated financial statements.

⁽²⁾ See Note 6 to the consolidated financial statements for additional information.

⁽³⁾ Items included in purchase obligations are primarily commitments to purchase content and network services, equipment, software and marketing services, which will be used or sold in the ordinary course of business. These amounts do not represent our entire anticipated purchases in the future, but represent only those items that are the subject of contractual obligations. We also purchase products and services as needed with no firm commitment. For this reason, the amounts presented in this table alone do not provide a reliable indicator of our expected future cash outflows or changes in our expected cash position. See Note 16 to the consolidated financial statements for additional information.

⁽⁴⁾ Other long-term liabilities represent estimated postretirement benefit and qualified pension plan contributions. Estimated qualified pension plan contributions include expected minimum funding contributions, which commence in 2024 based on the plan's current funded status. Estimated postretirement benefit payments include expected future postretirement benefit payments. These estimated amounts: (1) are subject to change based on changes to assumptions and future plan performance, which could impact the timing or amounts of these payments; and (2) exclude expectations beyond 5 years due to uncertainty of the timing and amounts. See Note 11 to the consolidated financial statements for additional information.

⁽⁵⁾ Represents future minimum payments under the sublease arrangement for our tower transaction. See Note 6 to the consolidated financial statements for additional information.

We are not able to make a reasonable estimate of when the unrecognized tax benefits balance of \$2.9 billion and related interest and penalties will be settled with the respective taxing authorities until issues or examinations are further developed. See Note 12 to the consolidated financial statements for additional information.

Guarantees

We guarantee the debentures of our operating telephone company subsidiaries as well as the debt obligations of GTE LLC, as successor in interest to GTE Corporation, that were issued and outstanding prior to July 1, 2003. See Note 7 to the consolidated financial statements for additional information.

As a result of the closing of the Access Line Sale on April 1, 2016, GTE Southwest Inc., Verizon California Inc. and Verizon Florida LLC are no longer wholly-owned subsidiaries of Verizon, and the guarantees of \$0.6 billion aggregate principal amount of debentures and first mortgage bonds of those entities have terminated pursuant to their terms.

In connection with the execution of agreements for the sale of businesses and investments, Verizon ordinarily provides representations and warranties to the purchasers pertaining to a variety of nonfinancial matters, such as ownership of the securities being sold, as well as financial losses. See Note 16 to the consolidated financial statements for additional information.

As of December 31, 2018, letters of credit totaling approximately \$0.6 billion, which were executed in the normal course of business and support several financing arrangements and payment obligations to third parties, were outstanding. See Note 16 to the consolidated financial statements for additional information.

Market Risk

We are exposed to various types of market risk in the normal course of business, including the impact of interest rate changes, foreign currency exchange rate fluctuations, changes in investment, equity and commodity prices and changes in corporate tax rates. We employ risk management strategies, which may include the use of a variety of derivatives including cross currency swaps, forward starting interest rate swaps, interest rate swaps, interest rate caps and foreign exchange forwards. We do not hold derivatives for trading purposes.

It is our general policy to enter into interest rate, foreign currency and other derivative transactions only to the extent necessary to achieve our desired objectives in optimizing exposure to various market risks. Our objectives include maintaining a mix of fixed and variable rate debt to lower borrowing costs within reasonable risk parameters and to protect against earnings and cash flow volatility resulting from changes in market conditions. We do not hedge our market risk exposure in a manner that would completely eliminate the effect of changes in interest rates and foreign exchange rates on our earnings.

Counterparties to our derivative contracts are major financial institutions with whom we have negotiated derivatives agreements (ISDA master agreements) and credit support annex (CSA) agreements which provide rules for collateral exchange. Our CSA agreements entered into prior to the fourth quarter of 2017 generally require collateralized arrangements with our counterparties in connection with uncleared derivatives. During 2017, we paid an insignificant amount of cash to extend amendments to certain of our collateral exchange arrangements, which eliminated the requirement to post collateral for a specified period of time. Additionally, during the fourth quarter of 2017, we began negotiating and executing new ISDA master agreements and CSA agreements with our counterparties. The negotiations and executions of new agreements continued in 2018. The newly executed CSA agreements contain rating based thresholds such that we or our counterparties may be required to hold or post collateral based upon changes in outstanding positions as compared to established thresholds and changes in credit ratings. At December 31, 2018, we posted collateral of approximately \$0.1 billion related to derivative contracts under collateral exchange arrangements, which were recorded as Prepaid expenses and other in our consolidated balance sheet. We did not post any collateral at December 31, 2017. While we may be exposed to credit losses due to the nonperformance of our counterparties, we consider the risk remote and do not expect that any such nonperformance would result in a significant effect on our results of operations or financial condition due to our diversified pool of counterparties. See Note 9 to the consolidated financial statements for additional information regarding the derivative portfolio.

Interest Rate Risk

We are exposed to changes in interest rates, primarily on our short-term debt and the portion of long-term debt that carries floating interest rates. As of December 31, 2018, approximately 78% of the aggregate principal amount of our total debt portfolio consisted of fixed rate indebtedness, including the effect of interest rate swap agreements designated as hedges. The impact of a 100-basis-point change in interest rates affecting our floating rate debt would result in a change in annual interest expense, including our interest rate swap agreements that are designated as hedges, of approximately \$0.3 billion. The interest rates on our existing long-term debt obligations are unaffected by changes to our credit ratings.

The table that follows summarizes the fair values of our long-term debt, including current maturities, and interest rate swap derivatives as of December 31, 2018 and 2017. The table also provides a sensitivity analysis of the estimated fair values of these financial instruments assuming 100-basis-point upward and downward shifts in the yield curve. Our sensitivity analysis does not include the fair values of our commercial paper and bank loans, if any, because they are not significantly affected by changes in market interest rates.

(dollars in millions)

Long-term debt and related derivatives	Fair Value	Fair Value assuming + 100 basis point shift	Fair Value assuming - 100 basis point shift
At December 31, 2018	\$ 119,195	\$ 111,250	\$ 128,957
At December 31, 2017	128,867	119,235	140,216

Interest Rate Swaps

We enter into interest rate swaps to achieve a targeted mix of fixed and variable rate debt. We principally receive fixed rates and pay variable rates based on the London Interbank Offered Rate, resulting in a net increase or decrease to Interest expense. These swaps are designated as fair value hedges and hedge against interest rate risk exposure of designated debt issuances. At December 31, 2018, the fair value of the asset and liability of these contracts was insignificant and \$0.8 billion, respectively. At December 31, 2017, the fair value of the asset and liability of these contracts were \$0.1 billion and \$0.4 billion, respectively. At December 31, 2018 and 2017, the total notional amount of the interest rate swaps was \$19.8 billion and \$20.2 billion, respectively.

Forward Starting Interest Rate Swaps

We have entered into forward starting interest rate swaps designated as cash flow hedges in order to manage our exposure to interest rate changes on future forecasted transactions. At December 31, 2018, the fair value of the liability of these contracts was \$0.1 billion. At December 31, 2018, the total notional amount of the forward starting interest rate swaps was \$4.0 billion.

Interest Rate Caps

We also have interest rate caps which we use as an economic hedge but for which we have elected not to apply hedge accounting. We enter into interest rate caps to mitigate our interest exposure to interest rate increases on our ABS Financing Facility and Asset-Backed Notes. The fair value of the asset and liability of these contracts were insignificant at both December 31, 2018 and 2017. At December 31, 2018 and 2017, the total notional value of these contracts was \$2.2 billion and \$2.8 billion, respectively.

Foreign Currency Translation

The functional currency for our foreign operations is primarily the local currency. The translation of income statement and balance sheet amounts of our foreign operations into U.S. dollars is recorded as cumulative translation adjustments, which are included in Accumulated other comprehensive income in our consolidated balance sheets. Gains and losses on foreign currency transactions are recorded in the consolidated statements of income in Other income (expense), net. At December 31, 2018, our primary translation exposure was to the British Pound Sterling, Euro, Australian Dollar and Japanese Yen.

Cross Currency Swaps

We have entered into cross currency swaps designated as cash flow hedges to exchange our British Pound Sterling, Euro, Swiss Franc and Australian Dollar-denominated cash flows into U.S. dollars and to fix our cash payments in U.S. dollars, as well as to mitigate the impact of foreign currency transaction gains or losses. The fair value of the asset of these contracts was \$0.2 billion and \$0.5 billion at December 31, 2018 and 2017, respectively. At December 31, 2018 and 2017, the fair value of the liability of these contracts was \$0.5 billion and insignificant respectively. At both December 31, 2018 and 2017, the total notional amount of the cross currency swaps was \$16.6 billion.

Foreign Exchange Forwards

We also have foreign exchange forwards which we use as an economic hedge but for which we have elected not to apply hedge accounting. We enter into British Pound Sterling and Euro foreign exchange forwards to mitigate our foreign exchange rate risk related to non-functional currency denominated monetary assets and liabilities of international subsidiaries. At December 31, 2018, the total notional amount of the foreign exchange forwards was \$0.6 billion.

Critical Accounting Estimates and Recently Issued Accounting Standards

Critical Accounting Estimates

A summary of the critical accounting estimates used in preparing our financial statements is as follows:

- Wireless licenses and Goodwill are a significant component of our consolidated assets. Both our wireless licenses and goodwill are treated as indefinite-lived intangible assets and, therefore are not amortized, but rather are tested for impairment annually in the fourth fiscal quarter, unless there are events requiring an earlier assessment or changes in circumstances during an interim period providing impairment indicators are present. We believe our estimates and assumptions are reasonable and represent appropriate marketplace considerations as of the valuation date. Although we use consistent methodologies in developing the assumptions and estimates underlying the fair value calculations used in our impairment tests, these estimates and assumptions are uncertain by nature, may change over time and can vary from actual results. It is possible that in the future there may be changes in our estimates and assumptions, including the timing and amount of future cash flows, margins, growth rates, market participant assumptions, comparable benchmark companies and related multiples and discount rates, which could result in different fair value estimates. Significant and adverse changes to any one or more of the above-noted estimates and assumptions could result in a goodwill impairment for one or more of our reporting units.

Wireless Licenses

The carrying value of our wireless licenses was approximately \$94.1 billion as of December 31, 2018. We aggregate our wireless licenses into one single unit of accounting, as we utilize our wireless licenses on an integrated basis as part of our nationwide wireless network. Our wireless licenses provide us with the exclusive right to utilize certain radio frequency spectrum to provide wireless communication services. There are currently no legal, regulatory, contractual, competitive, economic or other factors that limit the useful life of our wireless licenses.

In 2018, our quantitative impairment test consisted of comparing the estimated fair value of our aggregate wireless licenses to the aggregated carrying amount as of the test date.

In 2017 and 2016, we performed a qualitative impairment assessment to determine whether it is more likely than not that the fair value of our wireless licenses was less than the carrying amount. As part of our assessment we considered several qualitative factors including the business enterprise value of Wireless, macroeconomic conditions (including changes in interest rates and discount rates), industry and market considerations (including industry revenue and EBITDA margin projections), the projected financial performance of Wireless, as well as other factors.

Our impairment tests in 2018, 2017 and 2016 indicated that the fair value of our wireless licenses significantly exceeded their carrying value and, therefore, did not result in an impairment.

Under our quantitative assessment, we estimated the fair value of our wireless licenses using the Greenfield approach. The Greenfield approach is an income based valuation approach that values the wireless licenses by calculating the cash flow generating potential of a hypothetical start-up company that goes into business with no assets except the wireless licenses to be valued. A discounted cash flow analysis is used to estimate what a marketplace participant would be willing to pay to purchase the aggregated wireless licenses as of the valuation date. As a result, we were required to make significant estimates about future cash flows specifically associated with our wireless licenses, an appropriate discount rate based on the risk associated with those estimated cash flows and assumed terminal value and growth rates. We considered current and expected future economic conditions, current and expected availability of wireless network technology and infrastructure and related equipment and the costs thereof as well as other relevant factors in estimating future cash flows. The discount rate represented our estimate of the weighted-average cost of capital (WACC), or expected return, that a marketplace participant would have required as of the valuation date. We developed the discount rate based on our consideration of the cost of debt and equity of a group of guideline companies as of the valuation date. Accordingly, our discount rate incorporated our estimate of the expected return a marketplace participant would have required as of the valuation date, including the risk premium associated with the current and expected economic conditions as of the valuation date. The terminal value growth rate represented our estimate of the marketplace's long-term growth rate.

Goodwill

At December 31, 2018, the balance of our goodwill was approximately \$24.6 billion, of which \$18.4 billion was in our Wireless reporting unit, \$3.9 billion was in our Wireline reporting unit, \$0.2 billion was in our Media reporting unit and \$2.1 billion was in our Connect reporting unit. To determine if goodwill is potentially impaired, we have the option to perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. If we elect to bypass the qualitative assessment or if indications of a potential impairment exist, the determination of whether an impairment has occurred requires the determination of the fair value of each respective reporting unit.

We performed a quantitative impairment assessment for all of our reporting units in 2018 and for all of our reporting units, except for our Wireless reporting unit, in 2017 and 2016 for which a qualitative assessment was completed. For 2018, 2017 and 2016, our impairment tests indicated that the fair value for each of our Wireless, Wireline and Connect reporting units exceeded their respective carrying value and, therefore, did not result in an impairment. For details on our Media reporting unit, refer to the discussion below.

Under our quantitative assessment, the fair value of the reporting unit is calculated using a market approach and a discounted cash flow method. The market approach includes the use of comparative multiples to corroborate discounted cash flow results. The discounted cash flow method is based on the present value of two components—projected cash flows and a terminal value. The terminal value represents the expected normalized future cash flows of the reporting unit beyond the cash flows from the discrete projection period. The fair value of the reporting unit is calculated based on the sum of the present value of the cash flows from the discrete period and the present value of the terminal value. The discount rate represented our estimate of the WACC, or expected return, that a marketplace participant would have required as of the valuation date. The application of our goodwill impairment test required key assumptions underlying our valuation model. The discounted cash flow analysis factored in assumptions on discount rates and terminal growth rates to reflect risk profiles of key strategic revenue and cost initiatives, as well as revenue and EBITDA growth relative to history and market trends and expectations. The market multiples approach incorporated significant judgment involved in the selection of comparable public company multiples and benchmarks. The selection of companies was influenced by differences in growth and profitability, and volatility in market prices of peer companies. Similar assumptions were made by management for all of our reporting units. These valuation inputs are inherently uncertain, and an adverse change in one or a combination of these inputs could trigger a goodwill impairment loss in the future.

The fair value of our Wireless and Connect reporting units significantly exceeded their respective carrying value for the impairment tests performed for 2018, 2017 and 2016.

Our Wireline reporting unit has experienced increasing market pressures that have resulted in lower than expected revenues and earnings and these pressures may persist over the near term. A projected sustained decline in a reporting unit's revenues and earnings could have a significant negative impact on its fair value and may result in impairment charges in the future. Such a decline could be driven by, among other things: (1) further anticipated decreases in service pricing, sales volumes and long-term growth rate as a result of competitive pressures or other factors; or (2) the inability to achieve or delays in achieving the goals in strategic initiatives. Also, adverse changes to macroeconomic factors, such as increases to long-term interest rates, would also negatively impact the fair value of the reporting unit.

At the goodwill impairment measurement date of October 31, 2018, 2017 and 2016, our Wireline reporting unit had fair value that exceeded its carrying amount by 5%, 14% and 20%, respectively. See Note 4 to the consolidated financial statements for additional information. As a result of our goodwill assessment, management believes there is an increasing risk that our Wireline reporting unit may be required to recognize an impairment charge in the future.

Our Media business, which operated under the "Oath" brand during 2018 and is now referred to as Verizon Media, experienced increased competitive and market pressures throughout 2018 that resulted in lower than expected revenues and earnings. These pressures are expected to continue and have resulted in a loss of market positioning to our competitors in the digital advertising business. Oath also achieved lower than expected benefits from the integration of the Yahoo Inc. and AOL Inc. (AOL) businesses.

As of August 2018, Hans Vestberg became Chief Executive Officer of Verizon, and as of October 2018, K. Guru Gowrappan was appointed Chief Executive Officer of our Media business. In connection with Verizon's annual budget process in the fourth quarter of 2018, the new leadership at both Oath and Verizon completed a comprehensive five-year strategic planning review of Oath's business prospects resulting in unfavorable adjustments to Oath's financial projections. These revised projections were used as a key input into Oath's annual goodwill impairment test performed in the fourth quarter.

Consistent with our accounting policy, we applied a combination of a market approach and a discounted cash flow method reflecting current assumptions and inputs, including our revised projections, discount rate and expected growth rates, which resulted in determination that the fair value of the Media reporting unit was less than its carrying amount. As a result, we recorded a non-cash goodwill impairment charge of approximately \$4.6 billion (\$4.5 billion after-tax) in the fourth quarter of 2018 in our consolidated statement of income. The goodwill balance of the Media reporting unit was approximately \$4.8 billion prior to the incurrence of this impairment charge. For 2017 and 2016, our impairment test indicated that the fair value of our Media reporting unit exceeded its carrying value and, therefore, did not result in an impairment.

Pension and Other Postretirement Benefit Plans

We maintain benefit plans for most of our employees, including, for certain employees, pension and other postretirement benefit plans. At December 31, 2018, in the aggregate, pension plan benefit obligations exceeded the fair value of pension plan assets, which will result in future pension plan expense. Other postretirement benefit plans have larger benefit obligations than plan assets, resulting in expense. Significant benefit plan assumptions, including the discount rate used, the long-term rate of return on plan assets, the determination of the substantive plan and health care trend rates are periodically updated and impact the amount of benefit plan income, expense, assets and obligations.

Changes to one or more of these assumptions could significantly impact our accounting for pension and other postretirement benefits. A sensitivity analysis of the impact of changes in these assumptions on the benefit obligations and expense (income) recorded, as well as on the funded status due to an increase or a decrease in the actual versus expected return on plan assets as of December 31, 2018 and for the year then ended pertaining to Verizon's pension and postretirement benefit plans, is provided in the table below.

(dollars in millions)	Percentage point change	Increase/(decrease) at December 31, 2018*
Pension plans discount rate	+0.50	\$ (926)
	-0.50	1,025
Rate of return on pension plan assets	+1.00	(185)
	-1.00	185
Postretirement plans discount rate	+0.50	(798)
	-0.50	893
Rate of return on postretirement plan assets	+1.00	(9)
	-1.00	9
Health care trend rates	+1.00	462
	-1.00	(485)

* In determining its pension and other postretirement obligation, the Company used a weighted-average discount rate of 4.4%. The rate was selected to approximate the composite interest rates available on a selection of high-quality bonds available in the market at December 31, 2018. The bonds selected had maturities that coincided with the time periods during which benefits payments are expected to occur, were non-callable and available in sufficient quantities to ensure marketability (at least \$0.3 billion par outstanding).

The annual measurement date for both our pension and other postretirement benefits is December 31. Effective January 1, 2016, we adopted the full yield curve approach to estimate the interest cost component of net periodic benefit cost for pension and other postretirement benefits.

We accounted for this change as a change in accounting estimate and, accordingly, accounted for it prospectively beginning in the first quarter of 2016. Prior to this change, we estimated the interest cost component utilizing a single weighted-average discount rate derived from the yield curve used to measure the benefit obligation at the beginning of the period.

The full yield curve approach refines our estimate of interest cost by applying the individual spot rates from a yield curve composed of the rates of return on several hundred high-quality fixed income corporate bonds available at the measurement date. These individual spot rates align with the timing of each future cash outflow for benefit payments and therefore provide a more precise estimate of interest cost.

Income Taxes

- Our current and deferred income taxes and associated valuation allowances are impacted by events and transactions arising in the normal course of business as well as in connection with the adoption of new accounting standards, changes in tax laws and rates, acquisitions and dispositions of businesses and non-recurring items. As a global commercial enterprise, our income tax rate and the classification of income taxes can be affected by many factors, including estimates of the timing and realization of deferred income tax assets and the timing and amount of income tax payments. We account for tax benefits taken or expected to be taken in our tax returns in accordance with the accounting standard relating to the uncertainty in income taxes, which requires the use of a two-step approach for recognizing and measuring tax benefits taken or expected to be taken in a tax return. We review and adjust our liability for unrecognized tax benefits based on our best judgment given the facts, circumstances and information available at each reporting date. To the extent that the final outcome of these tax positions is different than the amounts recorded, such differences may impact income tax expense and actual tax payments. We recognize any interest and penalties accrued related to unrecognized tax benefits in income tax expense. Actual tax payments may materially differ from estimated liabilities as a result of changes in tax laws as well as unanticipated transactions impacting related income tax balances. See Note 12 to the consolidated financial statements for additional information.

Property, Plant and Equipment

- Our Property, plant and equipment balance represents a significant component of our consolidated assets. We record Property, plant and equipment at cost. We depreciate Property, plant and equipment on a straight-line basis over the estimated useful life of the assets. We expect that a one-year increase in estimated useful lives of our Property, plant and equipment would result in a decrease to our 2018 depreciation expense of \$2.9 billion and that a one-year decrease would result in an increase of approximately \$4.9 billion in our 2018 depreciation expense.

Accounts Receivable

- We maintain allowances for uncollectible accounts receivable, including our direct-channel device payment plan agreement receivables, for estimated losses resulting from the failure or inability of our customers to make required payments. Indirect-channel device payment loans are considered financial instruments and are initially recorded at fair value net of imputed interest, and credit losses are recorded as incurred. However, loan balances are assessed quarterly for impairment and an allowance is recorded if the loan is considered impaired. Our allowance for uncollectible accounts receivable is based on management's assessment of the collectability of specific customer accounts and includes consideration of the credit worthiness and financial condition of those customers. We record an allowance to reduce the receivables to the amount that is reasonably believed to be collectible. We also record an allowance for all other receivables based on multiple factors including historical experience with bad debts, the general economic environment and the aging of such receivables. Similar to traditional service revenue, we record direct device payment plan agreement bad debt expense based on an estimate of the percentage of equipment revenue that will not be collected. This estimate is based on a number of factors including historical write-off experience, credit quality of the customer base and other factors such as macroeconomic conditions. If there is a deterioration of our customers' financial condition or if future actual default rates on receivables in general differ from those currently anticipated, we may have to adjust our allowance for doubtful accounts, which would affect earnings in the period the adjustments are made.

Recently Issued Accounting Standards

See Note 1 to the consolidated financial statements for a discussion of recently issued accounting standard updates not yet adopted as of December 31, 2018.

Acquisitions and Divestitures**Wireless****Spectrum License Transactions**

From time to time, we enter into agreements to buy, sell or exchange spectrum licenses. We believe these spectrum license transactions have allowed us to continue to enhance the reliability of our network while also resulting in a more efficient use of spectrum. See Note 3 to the consolidated financial statements for additional information regarding our spectrum license transactions.

Straight Path

In May 2017, we entered into a purchase agreement to acquire Straight Path, a holder of millimeter wave spectrum configured for 5G wireless services, for total consideration reflecting an enterprise value of approximately \$3.1 billion. Under the terms of the purchase agreement, we agreed to pay: (1) Straight Path shareholders \$184.00 per share, payable in Verizon shares; and (2) certain transaction costs payable in cash of approximately \$0.7 billion, consisting primarily of a fee to be paid to the FCC. The transaction closed in February 2018 at which time we issued approximately 49 million shares of Verizon common stock, valued at approximately \$2.4 billion, and paid the associated cash consideration. See Note 3 to the consolidated financial statements for additional information.

Wireline**Access Line Sale**

In February 2015, we entered into a definitive agreement with Frontier pursuant to which Verizon sold its local exchange business and related landline activities in California, Florida and Texas, including Fios Internet and video customers, switched and special access lines and high-speed Internet service and long distance voice accounts in these three states, for approximately \$10.5 billion (approximately \$7.3 billion net of income taxes), subject to certain adjustments and including the assumption of \$0.6 billion of indebtedness from Verizon by Frontier. The transaction, which included the acquisition by Frontier of the equity interests of Verizon's incumbent local exchange carriers in California, Florida and Texas, did not involve any assets or liabilities of Verizon Wireless. The transaction closed on April 1, 2016. See Note 3 to the consolidated financial statements for additional information.

XO Holdings

In February 2016, we entered into a purchase agreement to acquire XO, which owned and operated one of the largest fiber-based IP and Ethernet networks in the U.S. Concurrently, we entered into a separate agreement to utilize certain wireless spectrum from a wholly-owned subsidiary of XO Holdings, NextLink, that held its wireless spectrum. The agreement included an option, subject to certain conditions, to buy NextLink. In February 2017, we completed our acquisition of XO for total cash consideration of approximately \$1.5 billion, of which \$0.1 billion was paid in 2015, and we prepaid \$0.3 billion in connection with the NextLink option which represented the fair value of the option.

In April 2017, we exercised our option to buy NextLink for approximately \$0.5 billion, subject to certain adjustments, of which \$0.3 billion was prepaid in the first quarter of 2017. The transaction closed in January 2018. The acquisition of NextLink was accounted for as an asset acquisition, as substantially all of the value related to the acquired spectrum. Upon closing, we recorded approximately \$0.7 billion of wireless licenses, \$0.1 billion of a deferred tax liability and \$0.1 billion of other liabilities. The spectrum acquired as part of the transaction will be used for our 5G technology deployment. See Note 3 to the consolidated financial statements for additional information.

Data Center Sale

In December 2016, we entered into a definitive agreement, which was subsequently amended in March 2017, with Equinix Inc. pursuant to which we agreed to sell 23 customer-facing data center sites in the U.S. and Latin America for approximately \$3.6 billion, subject to certain adjustments. The transaction closed in May 2017.

WideOpenWest, Inc.

In August 2017, we entered into a definitive agreement to purchase certain fiber-optic network assets in the Chicago market from WOW!, a leading provider of communications services. The transaction closed in December 2017. In addition, the parties entered into a separate agreement pursuant to which WOW! will complete the build-out of the network assets in 2019. The total cash consideration for the transactions is approximately \$0.3 billion, of which \$0.2 billion was received in December 2017.

Other

Acquisition of AOL Inc.

In May 2015, we entered into an Agreement and Plan of Merger with AOL Inc. pursuant to which we commenced a tender offer to acquire all of the outstanding shares of common stock of AOL at a price of \$50.00 per share, net to the seller in cash, without interest and less any applicable withholding taxes.

On June 23, 2015, we completed the tender offer and merger, and AOL became a wholly-owned subsidiary of Verizon. The aggregate cash consideration paid by Verizon at the closing of these transactions was approximately \$3.8 billion. Holders of approximately 6.6 million shares exercised appraisal rights under Delaware law. In September 2018, we obtained court approval to settle this matter for total cash consideration of \$0.2 billion, of which an insignificant amount relates to interest, resulting in an insignificant gain. We paid the cash consideration in October 2018.

Acquisition of Yahoo! Inc.'s Operating Business

In July 2016, Verizon entered into a stock purchase agreement (the Purchase Agreement) with Yahoo. Pursuant to the Purchase Agreement, upon the terms and subject to the conditions thereof, we agreed to acquire the stock of one or more subsidiaries of Yahoo holding all of Yahoo's operating business for approximately \$4.83 billion in cash, subject to certain adjustments (the Transaction).

In February 2017, Verizon and Yahoo entered into an amendment to the Purchase Agreement, pursuant to which the Transaction purchase price was reduced by \$350 million to approximately \$4.48 billion in cash, subject to certain adjustments. Subject to certain exceptions, the parties also agreed that certain user security and data breaches incurred by Yahoo (and the losses arising therefrom) were to be disregarded: (1) for purposes of specified conditions to Verizon's obligations to close the Transaction; and (2) in determining whether a "Business Material Adverse Effect" under the Purchase Agreement had occurred.

In June 2017, we completed the Transaction. The aggregate purchase consideration at the closing of the Transaction was approximately \$4.7 billion, including cash acquired of \$0.2 billion.

Concurrently with the amendment of the Purchase Agreement, Yahoo and Yahoo Holdings, Inc., a wholly-owned subsidiary of Yahoo that Verizon agreed to purchase pursuant to the Transaction, also entered into an amendment to the related reorganization agreement, pursuant to which Yahoo (which has changed its name to Altaba Inc. following the closing of the Transaction) retains 50% of certain post-closing liabilities arising out of governmental or third-party investigations, litigations or other claims related to certain user security and data breaches incurred by Yahoo prior to its acquisition by Verizon, including an August 2013 data breach disclosed by Yahoo on December 14, 2016. At that time, Yahoo disclosed that more than one billion of the approximately three billion accounts existing in 2013 had likely been affected. In accordance with the original Transaction agreements, Yahoo will continue to retain 100% of any liabilities arising out of any shareholder lawsuits (including derivative claims) and investigations and actions by the SEC.

Prior to the closing of the Transaction, pursuant to a related reorganization agreement, Yahoo transferred all of the assets and liabilities constituting Yahoo's operating business to the subsidiaries that we acquired in the Transaction. The assets that we acquired did not include Yahoo's ownership interests in Alibaba, Yahoo! Japan and certain other investments, certain undeveloped land recently divested by Yahoo, certain non-core intellectual property or its cash, other than the cash from its operating business we acquired. We received for our benefit and that of our current and certain future affiliates a non-exclusive, worldwide, perpetual, royalty-free license to all of Yahoo's intellectual property that was not conveyed with the business.

In October 2017, based upon information that we received in connection with our integration of Yahoo's operating business, we disclosed that we believe that the August 2013 data breach previously disclosed by Yahoo affected all of its accounts.

Fleetmatics Group PLC

In July 2016, we entered into an agreement to acquire Fleetmatics. Fleetmatics was a leading global provider of fleet and mobile workforce management solutions. Pursuant to the terms of the agreement, we acquired Fleetmatics for \$60.00 per ordinary share in cash. The aggregate merger consideration was approximately \$2.5 billion, including cash acquired of \$0.1 billion. We completed the acquisition on November 7, 2016.

Other

In July 2016, we acquired Telogis, a global cloud-based mobile enterprise management software business, for \$0.9 billion of cash consideration.

From time to time, we enter into strategic agreements to acquire various other businesses and investments. See Note 3 to the consolidated financial statements for additional information.

Cautionary Statement Concerning Forward-Looking Statements

In this report we have made forward-looking statements. These statements are based on our estimates and assumptions and are subject to risks and uncertainties. Forward-looking statements include the information concerning our possible or assumed future results of operations. Forward-looking statements also include those preceded or followed by the words "anticipates," "believes," "estimates," "expects," "hopes" or similar expressions. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

The following important factors, along with those discussed elsewhere in this report and in other filings with the SEC, could affect future results and could cause those results to differ materially from those expressed in the forward-looking statements:

- adverse conditions in the U.S. and international economies;
- the effects of competition in the markets in which we operate;
- material changes in technology or technology substitution;
- disruption of our key suppliers' provisioning of products or services;
- changes in the regulatory environment in which we operate, including any increase in restrictions on our ability to operate our networks;
- breaches of network or information technology security, natural disasters, terrorist attacks or acts of war or significant litigation and any resulting financial impact not covered by insurance;
- our high level of indebtedness;
- an adverse change in the ratings afforded our debt securities by nationally accredited ratings organizations or adverse conditions in the credit markets affecting the cost, including interest rates, and/or availability of further financing;
- material adverse changes in labor matters, including labor negotiations, and any resulting financial and/or operational impact;
- significant increases in benefit plan costs or lower investment returns on plan assets;
- changes in tax laws or treaties, or in their interpretation;
- changes in accounting assumptions that regulatory agencies, including the SEC, may require or that result from changes in the accounting rules or their application, which could result in an impact on earnings;
- the inability to implement our business strategies; and
- the inability to realize the expected benefits of strategic transactions.

Report of Management on Internal Control Over Financial Reporting

We, the management of Verizon Communications Inc., are responsible for establishing and maintaining adequate internal control over financial reporting of the company. Management has evaluated internal control over financial reporting of the company using the criteria for effective internal control established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

Management has assessed the effectiveness of the company's internal control over financial reporting as of December 31, 2018. Based on this assessment, we believe that the internal control over financial reporting of the company is effective as of December 31, 2018. In connection with this assessment, there were no material weaknesses in the company's internal control over financial reporting identified by management. The company's financial statements included in this Annual Report have been audited by Ernst & Young LLP, independent registered public accounting firm. Ernst & Young LLP has also provided an attestation report on the company's internal control over financial reporting.



Hans E. Vestberg
Chief Executive Officer



Matthew D. Ellis
Executive Vice President and
Chief Financial Officer



Anthony T. Skiadas
Senior Vice President and Controller

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Verizon Communications Inc.:

Opinion on Internal Control over Financial Reporting

We have audited Verizon Communications Inc. and subsidiaries' (Verizon) internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Verizon maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of Verizon as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, cash flows and changes in equity for each of the three years in the period ended December 31, 2018, and the related notes and our report dated February 15, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

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

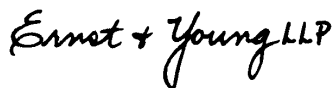
We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

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

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

The logo for Ernst & Young LLP, featuring the company name in a stylized, handwritten-style script.

Ernst & Young LLP
New York, New York

February 15, 2019

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Verizon Communications Inc.:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Verizon Communications Inc. and subsidiaries (Verizon) as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, cash flows and changes in equity for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Verizon at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), Verizon’s internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control–Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 15, 2019 expressed an unqualified opinion thereon.

Adoption of New Accounting Standards

ASU No. 2016-15

As discussed in Note 1 to the consolidated financial statements, on January 1, 2018 Verizon retrospectively changed its method of presenting certain cash receipts and cash payments in the accompanying consolidated statements of cash flows as a result of the adoption of FASB Accounting Standards Update (ASU) No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments.

ASU No. 2016-18

As discussed in Note 1 to the consolidated financial statements, on January 1, 2018 Verizon retrospectively changed its method of presenting changes in restricted cash in the accompanying consolidated statements of cash flows as a result of the adoption of ASU No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash.

ASU No. 2017-07

As discussed in Note 1 to the consolidated financial statements, on January 1, 2018 Verizon retrospectively changed its method of presenting the service cost component of net benefit cost in the accompanying consolidated statements of income as a result of the adoption of ASU No. 2017-07, Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.

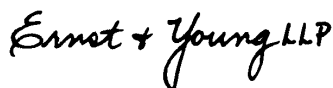
ASU No. 2014-09

As discussed in Note 1 to the consolidated financial statements, effective January 1, 2018 Verizon changed its method for recognizing revenue as a result of the adoption of ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), and the amendments in ASUs 2015-14, 2016-08, 2016-10 and 2016-12 using the modified retrospective method.

Basis for Opinion

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

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

The logo for Ernst & Young LLP, featuring the company name in a stylized, handwritten-style script.

Ernst & Young LLP

We have served as Verizon’s auditor since 2000.
New York, New York

February 15, 2019

Consolidated Statements of Income

Years Ended December 31,	(dollars in millions, except per share amounts)		
	2018	2017	2016
Operating Revenues			
Service revenues and other	\$ 108,605	\$ 107,145	\$ 108,468
Wireless equipment revenues	22,258	18,889	17,512
Total Operating Revenues	130,863	126,034	125,980
Operating Expenses			
Cost of services (exclusive of items shown below)	32,185	30,916	30,463
Wireless cost of equipment	23,323	22,147	22,238
Selling, general and administrative expense (including net gain on sale of divested businesses of \$0, \$1,774 and \$1,007, respectively)	31,083	28,592	28,102
Depreciation and amortization expense	17,403	16,954	15,928
Oath goodwill impairment	4,591	—	—
Total Operating Expenses	108,585	98,609	96,731
Operating Income	22,278	27,425	29,249
Equity in losses of unconsolidated businesses	(186)	(77)	(98)
Other income (expense), net	2,364	(2,021)	(3,789)
Interest expense	(4,833)	(4,733)	(4,376)
Income Before (Provision) Benefit For Income Taxes	19,623	20,594	20,986
(Provision) benefit for income taxes	(3,584)	9,956	(7,378)
Net Income	\$ 16,039	\$ 30,550	\$ 13,608
Net income attributable to noncontrolling interests	\$ 511	\$ 449	\$ 481
Net income attributable to Verizon	15,528	30,101	13,127
Net Income	\$ 16,039	\$ 30,550	\$ 13,608
Basic Earnings Per Common Share			
Net income attributable to Verizon	\$ 3.76	\$ 7.37	\$ 3.22
Weighted-average shares outstanding (in millions)	4,128	4,084	4,080
Diluted Earnings Per Common Share			
Net income attributable to Verizon	\$ 3.76	\$ 7.36	\$ 3.21
Weighted-average shares outstanding (in millions)	4,132	4,089	4,086

See Notes to Consolidated Financial Statements

Consolidated Statements of Comprehensive Income

Years Ended December 31,	2018	(dollars in millions)	
		2017	2016
Net Income	\$ 16,039	\$ 30,550	\$ 13,608
Other Comprehensive Income (Loss), Net of Tax (Expense) Benefit			
Foreign currency translation adjustments	(117)	245	(159)
Unrealized gain (loss) on cash flow hedges, net of tax of \$(19), \$20 and \$(168)	55	(31)	198
Unrealized gain (loss) on marketable securities, net of tax of \$0, \$10 and \$26	1	(14)	(55)
Defined benefit pension and postretirement plans, net of tax of \$284, \$144 and \$(1,339)	(858)	(214)	2,139
Other comprehensive income (loss) attributable to Verizon	(919)	(14)	2,123
Total Comprehensive Income	\$ 15,120	\$ 30,536	\$ 15,731
Comprehensive income attributable to noncontrolling interests	\$ 511	\$ 449	\$ 481
Comprehensive income attributable to Verizon	14,609	30,087	15,250
Total Comprehensive Income	\$ 15,120	\$ 30,536	\$ 15,731

See Notes to Consolidated Financial Statements

Consolidated Balance Sheets

(dollars in millions, except per share amounts)

At December 31,

2018

2017

Assets

Current assets

Cash and cash equivalents	\$ 2,745	\$ 2,079
Accounts receivable, net of allowances of \$765 and \$939	25,102	23,493
Inventories	1,336	1,034
Prepaid expenses and other	5,453	3,307

Total current assets	34,636	29,913
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Property, plant and equipment	252,835	246,498
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Less accumulated depreciation	163,549	157,930
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Property, plant and equipment, net	89,286	88,568
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Investments in unconsolidated businesses	671	1,039
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Wireless licenses	94,130	88,417
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Goodwill	24,614	29,172
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Other intangible assets, net	9,775	10,247
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Other assets	11,717	9,787
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Total assets	\$ 264,829	\$ 257,143
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Liabilities and Equity

Current liabilities

Debt maturing within one year	\$ 7,190	\$ 3,453
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Accounts payable and accrued liabilities	22,501	21,232
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Other current liabilities	8,239	8,352
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Total current liabilities	37,930	33,037
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Long-term debt	105,873	113,642
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Employee benefit obligations	18,599	22,112
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Deferred income taxes	33,795	31,232
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Other liabilities	13,922	12,433
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Total long-term liabilities	172,189	179,419
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Commitments and Contingencies (Note 16)

Equity

Series preferred stock (\$0.10 par value; 250,000,000 shares authorized; none issued)	—	—
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Common stock (\$0.10 par value; 6,250,000,000 shares authorized in each period; 4,291,433,646 and 4,242,374,240 shares issued)	429	424
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Additional paid in capital	13,437	11,101
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Retained earnings	43,542	35,635
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Accumulated other comprehensive income	2,370	2,659
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Common stock in treasury, at cost (159,400,267 and 162,897,868 shares outstanding)	(6,986)	(7,139)
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Deferred compensation – employee stock ownership plans and other	353	416
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Noncontrolling interests	1,565	1,591
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Total equity	54,710	44,687
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Total liabilities and equity	\$ 264,829	\$ 257,143
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See Notes to Consolidated Financial Statements

Consolidated Statements of Cash Flows

Years Ended December 31,	(dollars in millions)		
	2018	2017	2016
Cash Flows from Operating Activities			
Net Income	\$ 16,039	\$ 30,550	\$ 13,608
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization expense	17,403	16,954	15,928
Employee retirement benefits	(2,657)	440	2,705
Deferred income taxes	389	(14,463)	(1,063)
Provision for uncollectible accounts	980	1,167	1,420
Equity in losses of unconsolidated businesses, net of dividends received	231	117	138
Net gain on sale of divested businesses	—	(1,774)	(1,007)
Oath goodwill impairment	4,591	—	—
Changes in current assets and liabilities, net of effects from acquisition/disposition of businesses:			
Accounts receivable	(2,667)	(5,674)	(5,067)
Inventories	(324)	168	61
Prepaid expenses and other	37	27	(660)
Accounts payable and accrued liabilities and Other current liabilities	1,777	(459)	(1,089)
Discretionary employee benefits contributions	(1,679)	(3,411)	(186)
Other, net	219	676	(3,099)
Net cash provided by operating activities	34,339	24,318	21,689
Cash Flows from Investing Activities			
Capital expenditures (including capitalized software)	(16,658)	(17,247)	(17,059)
Acquisitions of businesses, net of cash acquired	(230)	(5,880)	(3,765)
Acquisitions of wireless licenses	(1,429)	(583)	(534)
Proceeds from dispositions of businesses	—	3,614	9,882
Other, net	383	1,640	1,602
Net cash used in investing activities	(17,934)	(18,456)	(9,874)
Cash Flows from Financing Activities			
Proceeds from long-term borrowings	5,967	27,707	12,964
Proceeds from asset-backed long-term borrowings	4,810	4,290	4,986
Repayments of long-term borrowings and capital lease obligations	(10,923)	(23,837)	(19,159)
Repayments of asset-backed long-term borrowings	(3,635)	(400)	—
Dividends paid	(9,772)	(9,472)	(9,262)
Other, net	(1,824)	(4,439)	(2,905)
Net cash used in financing activities	(15,377)	(6,151)	(13,376)
Increase (decrease) in cash, cash equivalents and restricted cash	1,028	(289)	(1,561)
Cash, cash equivalents and restricted cash, beginning of period	2,888	3,177	4,738
Cash, cash equivalents and restricted cash, end of period (Note 1)	\$ 3,916	\$ 2,888	\$ 3,177

See Notes to Consolidated Financial Statements

Consolidated Statements of Changes in Equity

(dollars in millions, except per share amounts, and shares in thousands)

Years Ended December 31,	2018		2017		2016	
	Shares	Amount	Shares	Amount	Shares	Amount
Common Stock						
Balance at beginning of year	4,242,374	\$ 424	4,242,374	\$ 424	4,242,374	\$ 424
Common shares issued	49,059	5	—	—	—	—
Balance at end of year	4,291,433	429	4,242,374	424	4,242,374	424
Additional Paid In Capital						
Balance at beginning of year		11,101		11,182		11,196
Other		2,336		(81)		(14)
Balance at end of year		13,437		11,101		11,182
Retained Earnings						
Balance at beginning of year		35,635		15,059		11,246
Opening balance sheet adjustment (Note 1)		2,232		—		—
Adjusted opening balance		37,867		15,059		11,246
Net income attributable to Verizon		15,528		30,101		13,127
Dividends declared (\$2.385, \$2.335, \$2.285 per share)		(9,853)		(9,525)		(9,314)
Balance at end of year		43,542		35,635		15,059
Accumulated Other Comprehensive Income						
Balance at beginning of year attributable to Verizon		2,659		2,673		550
Opening balance sheet adjustment (Note 1)		630		—		—
Adjusted opening balance		3,289		2,673		550
Foreign currency translation adjustments		(117)		245		(159)
Unrealized gain (loss) on cash flow hedges		55		(31)		198
Unrealized gain (loss) on marketable securities		1		(14)		(55)
Defined benefit pension and postretirement plans		(858)		(214)		2,139
Other comprehensive income (loss)		(919)		(14)		2,123
Balance at end of year attributable to Verizon		2,370		2,659		2,673
Treasury Stock						
Balance at beginning of year	(162,898)	(7,139)	(165,690)	(7,263)	(169,199)	(7,416)
Employee plans (Note 15)	3,494	153	2,787	124	3,439	150
Shareholder plans (Note 15)	4	—	5	—	70	3
Balance at end of year	(159,400)	(6,986)	(162,898)	(7,139)	(165,690)	(7,263)
Deferred Compensation-ESOPs and Other						
Balance at beginning of year		416		449		428
Restricted stock equity grant		162		157		223
Amortization		(225)		(190)		(202)
Balance at end of year		353		416		449
Noncontrolling Interests						
Balance at beginning of year		1,591		1,508		1,414
Opening balance sheet adjustment (Note 1)		44		—		—
Adjusted opening balance		1,635		1,508		1,414
Net income attributable to noncontrolling interests		511		449		481
Total comprehensive income		511		449		481
Distributions and other		(581)		(366)		(387)
Balance at end of year		1,565		1,591		1,508
Total Equity		\$ 54,710		\$ 44,687		\$ 24,032

See Notes to Consolidated Financial Statements

Notes to Consolidated Financial Statements

Note 1. Description of Business and Summary of Significant Accounting Policies

Description of Business

Verizon Communications Inc. (Verizon or the Company) is a holding company that, acting through its subsidiaries, is one of the world's leading providers of communications, information and entertainment products and services to consumers, businesses and governmental agencies. With a presence around the world, we offer voice, data and video services and solutions on our networks that are designed to meet customers' demand for mobility, network connectivity, security and control. We have two reportable segments, Wireless and Wireline. See Note 13 for additional information regarding our business segments.

The Wireless segment provides wireless communications products and services, including wireless voice and data services and equipment sales, across the United States (U.S.). We provide these services and equipment sales to consumer, business and government customers across the U.S. on a postpaid and prepaid basis.

The Wireline segment provides communications products and enhanced services, including video and data services, corporate networking solutions, security and managed network services and local and long distance voice services. We provide these products and services to consumers in the U.S., as well as to carriers, businesses and government customers both in the U.S. and around the world.

In November 2018, we announced a strategic reorganization of our business. We are modifying our internal and external reporting processes, systems and internal controls to accommodate the new structure and expect to transition to the new segment reporting structure during the second quarter of 2019. We continue to report operating results to our chief operating decision maker under our current operating segments.

Consolidation

The method of accounting applied to investments, whether consolidated, or equity, involves an evaluation of all significant terms of the investments that explicitly grant or suggest evidence of control or influence over the operations of the investee. The consolidated financial statements include our controlled subsidiaries, as well as variable interest entities (VIE) where we are deemed to be the primary beneficiary. For controlled subsidiaries that are not wholly-owned, the noncontrolling interests are included in Net income and Total equity. Investments in businesses that we do not control, but have the ability to exercise significant influence over operating and financial policies, are accounted for using the equity method. Equity method investments are included in Investments in unconsolidated businesses in our consolidated balance sheets. All significant intercompany accounts and transactions have been eliminated.

Basis of Presentation

We have reclassified certain prior year amounts to conform to the current year presentation.

Use of Estimates

We prepare our financial statements using U.S. generally accepted accounting principles (GAAP), which requires management to make estimates and assumptions that affect reported amounts and disclosures. Actual results could differ from those estimates.

Examples of significant estimates include the allowance for doubtful accounts, the recoverability of property, plant and equipment, the recoverability of intangible assets and other long-lived assets, fair value measurements, including those related to financial instruments, goodwill, spectrum licenses and intangible assets, unrecognized tax benefits, valuation allowances on tax assets, pension and postretirement benefit obligations, contingencies and the identification and valuation of assets acquired and liabilities assumed in connection with business combinations.

Revenue Recognition

We earn revenue from contracts with customers, primarily through the provision of telecommunications and other services and through the sale of wireless equipment. We account for these revenues under Accounting Standards Update (ASU) 2014-09, "Revenue from Contracts with Customers" (Topic 606), which we adopted on January 1, 2018, using the modified retrospective approach. This standard update, along with related subsequently issued updates, clarifies the principles for recognizing revenue and develops a common revenue standard U.S. GAAP. The standard update also amends current guidance for the recognition of costs to obtain and fulfill contracts with customers such that incremental costs of obtaining and direct costs of fulfilling contracts with customers will be deferred and amortized consistent with the transfer of the related good or service.

We also earn revenues that are not accounted for under Topic 606 from leasing arrangements (such as those for towers and equipment), captive reinsurance arrangements primarily related to wireless device insurance and the interest on equipment financed under a device payment plan agreement when sold to the customer by an authorized agent.

Wireless

Our Wireless segment earns revenue primarily by providing access to and usage of our telecommunications network and selling equipment. Performance obligations in a typical contract, as determined in accordance with Topic 606, with a customer include service and equipment.

Service

We offer our wireless services through a variety of plans on a postpaid or prepaid basis. For wireless service, we recognize revenue using an output method, either as the service allowance units are used or as time elapses, because it reflects the pattern by which we satisfy our performance obligation through the transfer of service to the customer. Monthly service is generally billed in advance, which results in a contract liability. See Note 2 for additional information. For postpaid plans where monthly usage exceeds the allowance, the overage usage represents options held by the customer for incremental services and the usage-based fee is recognized when the customer exercises the option (typically on a month-to-month basis).

Wireless Equipment

We sell wireless devices and accessories. Equipment revenue is generally recognized when the products are delivered to and accepted by the customer, as this is when control passes to the customer. In addition to offering the sale of equipment on a standalone basis, we have two primary offerings through which customers pay for a wireless device, in connection with a service contract: fixed-term plans and device payment plans.

Under a fixed-term plan, the customer is sold the wireless device without any upfront charge or at a discounted price in exchange for entering into a fixed-term service contract (typically for a term of 24 months or less).

Under a device payment plan, the customer is sold the wireless device in exchange for a non-interest bearing installment note, which is repaid by the customer, typically over a 24-month term, and concurrently enters into a month-to-month contract for wireless service. We may offer certain promotions that provide billing credits applied over a specified term, contingent upon the customer maintaining service. The credits are included in the transaction price, which are allocated to the performance obligations based on their relative selling price, and are recognized when earned.

A financing component exists in both our fixed-term plans and device payment plans because the timing of the payment for the device, which occurs over the contract term, differs from the satisfaction of the performance obligation, which occurs at contract inception upon transfer of device to the customer. We periodically assess, at the contract level, the significance of the financing component inherent in our fixed-term and device payment plan receivable based on qualitative and quantitative considerations related to our customer classes. These considerations include assessing the commercial objective of our plans, the term and duration of financing provided, interest rates prevailing in the marketplace, and credit risks of our customer classes, all of which impact our selection of appropriate discount rates. Based on current facts and circumstances, we determined that the financing component in our existing Wireless direct channel device payments and fixed-term contracts with customers is not significant and therefore is not accounted for separately. See Note 8 for additional information on the interest on equipment financed on a device payment plan agreement when sold to the customer by an authorized agent in our indirect channel.

Wireless Contracts

Total contract revenue, which represents the transaction price for wireless service and wireless equipment, is allocated between service and equipment revenue based on their estimated standalone selling prices. We estimate the standalone selling price of the device or accessory to be its retail price excluding subsidies or conditional purchase discounts. We estimate the standalone selling price of wireless service to be the price that we offer to customers on month-to-month contracts that can be cancelled at any time without penalty (i.e., when there is no fixed-term for service) or when service is procured without the concurrent purchase of a wireless device. In addition, we also assess whether the service term is impacted by certain legally enforceable rights and obligations in our contract with customers, such as penalties that a customer would have to pay to early terminate a fixed-term contract or billing credits that would cease if the month-to-month wireless service is canceled. The assessment of these legally enforceable rights and obligations involves judgment and impacts our determination of the transaction price and related disclosures.

From time to time, we may offer certain promotions that provide our customers on device payment plans with the right to upgrade to a new device after paying a specified portion of their device payment plan agreement amount and trading in their device in good working order. We account for this trade-in right as a guarantee obligation. The full amount of the trade-in right's fair value is recognized as a guarantee liability and results in a reduction to the revenue recognized upon the sale of the device. The guarantee obligation was insignificant at December 31, 2018 and 2017. The total transaction price is reduced by the guarantee obligation, which is accounted for outside the scope of Topic 606, and the remaining transaction price is allocated between the performance obligations within the contract.

Our fixed-term plans generally include the sale of a wireless device at subsidized prices. This results in the creation of a contract asset at the time of sale, which represents the recognition of equipment revenue in excess of amounts billed.

For our device payment plans, billing credits are accounted for as consideration payable to a customer and are included in the determination of total transaction price, resulting in a contract liability.

We may provide a right of return on our products and services for a short time period after a sale. These rights are accounted for as variable consideration when determining the transaction price, and accordingly we recognize revenue based on the estimated amount to which we expect to be entitled after considering expected returns. Returns and credits are estimated at contract inception and updated at the end of each reporting period as additional information becomes available. We also may provide credits or incentives on our products and services for contracts with resellers, which are accounted for as variable consideration when estimating the amount of revenue to recognize. These amounts have not been significant.

For certain bundled offerings/transactions involving third-party service providers, we evaluate gross versus net considerations by assessing indicators of control. These offerings have not been significant.

Wireline

Our Wireline segment earns revenue primarily by providing our customers with services involving access to our telecommunications network and facilities. These services include a variety of communication and connectivity services for our consumer and business customers and other carriers that use our facilities to provide services to their customers, as well as professional and integrated managed services for our large enterprises and government customers. We offer these services to customers that we categorize in the following customer groups: Consumer Markets, Enterprise Solutions, Partner Solutions and Business Markets.

Service

For Wireline service, in general, fixed monthly fees for service are billed one month in advance and service revenue is recognized over the enforceable contract term as the service is rendered, as the customer simultaneously receives and consumes the benefits of the services through network access and usage. While substantially all of our Wireline service revenues are the result of providing access to our network, revenue from services that are not fixed in amount and, instead, are based on usage are generally billed in arrears and recognized as the usage occurs.

For communication and connectivity services provided to our residential customers, which are sold to these customers on a standalone basis or as part of a bundle, we recognize service revenue over time since control over these services passes to the customer as the service is rendered. Service revenue is recognized ratably each month.

Wireline Contracts

Total consideration, for services that are bundled in a single contract, is allocated to each performance obligation based on our standalone selling price for each service. While many contracts include one or more service performance obligations, the revenue recognition pattern is generally not impacted by the allocation since the services are generally satisfied over the same period of time. We estimate the standalone selling price to be the price of the services when sold on a standalone basis without any promotional discount. In addition, we also assess whether the service term is impacted by certain legally enforceable rights and obligations in our contract with customers such as penalties that a customer would have to pay to early terminate a fixed-term contract. The assessment of these legally enforceable rights and obligations involves judgment and impacts our determination of transaction price and related disclosures.

We may provide performance-based credits or incentives on our products and services for contracts with our Enterprise Solutions, Partner Solutions and some Business Markets customers, which are accounted for as variable consideration when estimating the transaction price. Credits are estimated at contract inception and are updated at the end of each reporting period as additional information becomes available.

For certain bundled offerings/transactions involving third-party service providers, we evaluate gross versus net considerations by assessing indicators of control. These offerings have not been significant.

Other

Advertising revenues are generated through display advertising and search advertising. Display advertising revenue is generated by the display of graphical advertisements and other performance-based advertising. Search advertising revenue is generated when a consumer clicks on a text-based advertisement on their screen. Our Media business, Verizon Media, which operated in 2018 under the "Oath" brand, primarily earns revenue through display advertising on Verizon Media properties, as well as on third-party properties through our advertising platforms, search advertising and subscription arrangements. We recognize revenue at a point in time for our display and search advertising contracts and over time for our subscription contracts. We determined that we are generally the principal in transactions carried out through our advertising platforms, and therefore report gross revenue based on the amount billed to our customers. Where we are the principal, we concluded that while the control and transfer of digital advertising inventory occurs in a rapid, real-time environment, our proprietary technology enables us to identify, enhance, verify and solely control digital advertising inventory that we then sell to our customers. Our control is further supported by us being primarily responsible to our customers for fulfillment and the fact that we can exercise a level of discretion over pricing.

Verizon Connect primarily earns revenue through subscription services. We recognize revenue over time for our subscription contracts.

We report taxes collected from customers on behalf of governmental authorities on revenue-producing transactions on a net basis.

Maintenance and Repairs

We charge the cost of maintenance and repairs, including the cost of replacing minor items not constituting substantial betterments, principally to Cost of services as these costs are incurred.

Advertising Costs

Costs for advertising products and services, as well as other promotional and sponsorship costs, are charged to Selling, general and administrative expense in the periods in which they are incurred. See Note 15 for additional information.

Earnings Per Common Share

Basic earnings per common share are based on the weighted-average number of shares outstanding during the period. Where appropriate, diluted earnings per common share include the dilutive effect of shares issuable under our stock-based compensation plans.

There were a total of approximately 4 million, 5 million and 6 million outstanding dilutive securities, primarily consisting of restricted stock units, included in the computation of diluted earnings per common share for the years ended December 31, 2018, 2017 and 2016, respectively.

Cash, Cash Equivalents and Restricted Cash

We consider all highly liquid investments with an original maturity of 90 days or less when purchased to be cash equivalents. Cash equivalents are stated at cost, which approximates quoted market value and includes amounts held in money market funds.

Cash collections on the device payment plan agreement receivables collateralizing asset-backed debt securities are required at certain specified times to be placed into segregated accounts. Deposits to the segregated accounts are considered restricted cash and are included in Prepaid expenses and other and Other assets in our consolidated balance sheets.

Cash, cash equivalents and restricted cash are included in the following line items on the consolidated balance sheets:

At December 31,	2018	(dollars in millions)	
		2017	Increase
Cash and cash equivalents	\$ 2,745	\$ 2,079	\$ 666
Restricted cash:			
Prepaid expenses and other	1,047	693	354
Other assets	124	116	8
Cash, cash equivalents and restricted cash	\$ 3,916	\$ 2,888	\$ 1,028

Investments in Debt and Equity Securities

Investments in equity securities that are not accounted for under equity method accounting or result in consolidation are to be measured at fair value. For investments in equity securities without readily determinable fair values, Verizon elects the measurement alternative permitted under GAAP to measure these investments at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. For investments in debt securities without quoted prices, Verizon uses an alternative matrix pricing method. Investments in equity securities that do not result in consolidation of the investee are included in Investments in unconsolidated businesses and debt securities are included in Other assets in our consolidated balance sheets.

Allowance for Doubtful Accounts

Accounts receivable are recorded in the consolidated financial statements at cost net of an allowance for credit losses, with the exception of indirect-channel device payment plan loans. We maintain allowances for uncollectible accounts receivable, including our direct-channel device payment plan agreement receivables, for estimated losses resulting from the failure or inability of our customers to make required payments. Indirect-channel device payment loans are considered financial instruments and are initially recorded at fair value net of imputed interest, and credit losses are recorded as incurred. However, loan balances are assessed quarterly for impairment and an allowance is recorded if the loan is considered impaired. Our allowance for uncollectible accounts receivable is based on management's assessment of the collectability of specific customer accounts and includes consideration of the credit worthiness and financial condition of those customers. We record an allowance to reduce the receivables to the amount that is reasonably believed to be collectible. We also record an allowance for all other receivables based on multiple factors including historical experience with bad debts, the general economic environment and the aging of such receivables. Similar to traditional service revenue, we record direct device payment plan agreement bad debt expense based on an estimate of the percentage of equipment revenue that will not be collected. This estimate is based on a number of factors including historical write-off experience, credit quality of the customer base and other factors such as macroeconomic conditions. We monitor the aging of our accounts with device payment plan agreement receivables and write-off account balances if collection efforts are unsuccessful and future collection is unlikely.

Inventories

Inventory consists of wireless and wireline equipment held for sale, which is carried at the lower of cost (determined principally on either an average cost or first-in, first-out basis) or net realizable value.

Plant and Depreciation

Property, Plant and Equipment

We record property, plant and equipment at cost. Property, plant and equipment are generally depreciated on a straight-line basis.

Leasehold improvements are amortized over the shorter of the estimated life of the improvement or the remaining term of the related lease, calculated from the time the asset was placed in service.

When depreciable assets are retired or otherwise disposed of, the related cost and accumulated depreciation are deducted from the property, plant and equipment accounts and any gains or losses on disposition are recognized in income.

We capitalize and depreciate network software purchased or developed along with related property, plant and equipment assets. We also capitalize interest associated with the acquisition or construction of network-related assets. Capitalized interest is reported as a reduction in interest expense and depreciated as part of the cost of the network-related assets.

In connection with our ongoing review of the estimated useful lives of property, plant and equipment during 2018, we determined that the average useful lives of certain assets would be increased. These changes in estimates were applied prospectively and resulted in a decrease to depreciation expense of \$0.3 billion for the year ended 2018. In addition, during 2016 we determined that the average useful lives of certain leasehold improvements would be increased from 5 to 7 years. This change resulted in decreases to depreciation expense of \$0.1 billion, \$0.1 billion and \$0.2 billion in 2018, 2017 and 2016, respectively. We determined that changes were also necessary to the remaining estimated useful lives of certain assets as a result of technology changes, enhancements and planned retirements. These changes resulted in increases in depreciation expense of \$0.5 billion, \$0.3 billion and \$0.3 billion in 2018, 2017 and 2016, respectively. While the timing and extent of current deployment plans are subject to ongoing analysis and modification, we believe that the current estimates of useful lives are reasonable.

Computer Software Costs

We capitalize the cost of internal-use network and non-network software that has a useful life in excess of one year. Subsequent additions, modifications or upgrades to internal-use network and non-network software are capitalized only to the extent that they allow the software to perform a task it previously did not perform. Planning, software maintenance and training costs are expensed in the period in which they are incurred. Also, we capitalize interest associated with the development of internal-use network and non-network software. Capitalized non-network internal-use software costs are amortized using the straight-line method over a period of 3 to 7 years and are included in Other intangible assets, net in our consolidated balance sheets. For a discussion of our impairment policy for capitalized software costs, see "Goodwill and Other Intangible Assets" below. Also, see Note 4 for additional information of internal-use non-network software reflected in our consolidated balance sheets.

Goodwill and Other Intangible Assets

Goodwill

Goodwill is the excess of the acquisition cost of businesses over the fair value of the identifiable net assets acquired. Impairment testing for goodwill is performed annually in the fourth fiscal quarter or more frequently if impairment indicators are present.

To determine if goodwill is potentially impaired, we have the option to perform a qualitative assessment. However, we may elect to bypass the qualitative assessment and perform an impairment test even if no indications of a potential impairment exist. The quantitative impairment test for goodwill is performed at the reporting unit level and compares the fair value of the reporting unit (calculated using a combination of a market approach and a discounted cash flow method) to its carrying value. Estimated fair values of reporting units are Level 3 measures in the fair value hierarchy, see Fair Value Measurements discussion below for additional information.

Under the qualitative assessment, we consider several qualitative factors, including the business enterprise value of the reporting unit from the last quantitative test and the excess of fair value over carrying value from this test, macroeconomic conditions (including changes in interest rates and discount rates), industry and market considerations (including industry revenue and Earnings before interest, taxes, depreciation and amortization (EBITDA) margin projections), the recent and projected financial performance of the reporting unit, as well as other factors.

The market approach includes the use of comparative multiples of guideline companies to corroborate discounted cash flow results. The discounted cash flow method is based on the present value of two components, a projected cash flows and a terminal value. The terminal value represents the expected normalized future cash flows of the reporting unit beyond the cash flows from the discrete projection period. The fair value of the reporting unit is calculated based on the sum of the present value of the cash flows from the discrete period and the present value of the terminal value. The discount rate represents our estimate of the weighted-average cost of capital, or expected return, that a marketplace participant would have required as of the valuation date. If the carrying value exceeds the fair value, an impairment charge is booked for the excess carrying value over fair value, limited to the total amount of goodwill of that reporting unit. During the fourth quarter of 2018, the Company updated its five-year strategic planning review for each of its reporting units. Those plans considered current economic conditions and trends, estimated future operating results, the Company's view of growth-rates and-anticipated future economic and regulatory conditions.

See Note 4 for additional information regarding our goodwill impairment testing.

Intangible Assets Not Subject to Amortization

A significant portion of our intangible assets are wireless licenses that provide our wireless operations with the exclusive right to utilize designated radio frequency spectrum to provide wireless communication services. While licenses are issued for only a fixed time, generally ten years, such licenses are subject to renewal by the Federal Communications Commission (FCC). License renewals have occurred routinely and at nominal cost. Moreover, we have determined that there are currently no legal, regulatory, contractual, competitive, economic or other factors that limit the useful life of our wireless licenses. As a result, we treat the wireless licenses as an indefinite-lived intangible asset. We re-evaluate the useful life determination for wireless licenses each year to determine whether events and circumstances continue to support an indefinite useful life. We aggregate our wireless licenses into one single unit of accounting, as we utilize our wireless licenses on an integrated basis as part of our nationwide wireless network.

We test our wireless licenses for potential impairment annually or more frequently if impairment indicators are present. We have the option to first perform a qualitative assessment to determine whether it is necessary to perform a quantitative impairment test. However, we may elect to bypass the qualitative assessment in any period and proceed directly to performing the quantitative impairment test. Our quantitative assessment consists of comparing the estimated fair value of our aggregate wireless licenses to the aggregated carrying amount as of the test date. Using a quantitative assessment, we estimate the fair value of our aggregate wireless licenses using the Greenfield approach. The Greenfield approach is an income based valuation approach that values the wireless licenses by calculating the cash flow generating potential of a hypothetical start-up company that goes into business with no assets except the wireless licenses to be valued. A discounted cash flow analysis is used to estimate what a marketplace participant would be willing to pay to purchase the aggregated wireless licenses as of the valuation date. If the estimated fair value of the aggregated wireless licenses is less than the aggregated carrying amount of the wireless licenses, then an impairment charge is recognized. As part of our qualitative assessment, we consider several qualitative factors including the business enterprise value of our Wireless segment, macroeconomic conditions (including changes in interest rates and discount rates), industry and market considerations (including industry revenue and EBITDA), margin projections, the recent and projected financial performance of our Wireless segment, as well as other factors. See Note 4 for additional information regarding our impairment tests.

Interest expense incurred while qualifying activities are performed to ready wireless licenses for their intended use is capitalized as part of wireless licenses. The capitalization period ends when the development is discontinued or substantially completed and the license is ready for its intended use.

Intangible Assets Subject to Amortization and Long-Lived Assets

Our intangible assets that do not have indefinite lives (primarily customer lists and non-network internal-use software) are amortized over their estimated useful lives. All of our intangible assets subject to amortization, and long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. If any indications of impairment are present, we would test for recoverability by comparing the carrying amount of the asset group to the net undiscounted cash flows expected to be generated from the asset group. If those net undiscounted cash flows do not exceed the carrying amount, we would perform the next step, which is to determine the fair value of the asset and record an impairment, if any. We re-evaluate the useful life determinations for these intangible assets each year to determine whether events and circumstances warrant a revision to their remaining useful lives.

For information related to the carrying amount of goodwill, wireless licenses and other intangible assets, as well as the major components and average useful lives of our other acquired intangible assets, see Note 4.

Fair Value Measurements

Fair value of financial and non-financial assets and liabilities is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The three-tier hierarchy for inputs used in measuring fair value, which prioritizes the inputs used in the methodologies of measuring fair value for assets and liabilities, is as follows:

- Level 1 – Quoted prices in active markets for identical assets or liabilities
- Level 2 – Observable inputs other than quoted prices in active markets for identical assets and liabilities
- Level 3 – No observable pricing inputs in the market

Financial assets and financial liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurements. Our assessment of the significance of a particular input to the fair value measurements requires judgment and may affect the valuation of the assets and liabilities being measured and their categorization within the fair value hierarchy.

Income Taxes

Our effective tax rate is based on pre-tax income, statutory tax rates, tax laws and regulations and tax planning strategies available to us in the various jurisdictions in which we operate.

Deferred income taxes are provided for temporary differences in the basis between financial statement and income tax assets and liabilities. Deferred income taxes are recalculated annually at tax rates in effect for the years in which those tax assets and liabilities are expected to be realized or settled. We record valuation allowances to reduce our deferred tax assets to the amount that is more likely than not to be realized.

We use a two-step approach for recognizing and measuring tax benefits taken or expected to be taken in a tax return. The first step is recognition: we determine whether it is more likely than not that a tax position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. In evaluating whether a tax position has met the more-likely-than-not recognition threshold, we presume that the position will be examined by the appropriate taxing authority that has full knowledge of all relevant information. The second step is measurement: a tax position that meets the more-likely-than-not recognition threshold is measured to determine the amount of benefit to recognize in the financial statements. The tax position is measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement. Differences between tax positions taken in a tax return and amounts recognized in the financial statements will generally result in one or more of the following: an increase in a liability for income taxes payable, a reduction of an income tax refund receivable, a reduction in a deferred tax asset or an increase in a deferred tax liability.

Significant management judgment is required in evaluating our tax positions and in determining our effective tax rate.

Verizon has completed its analysis of the impacts of the Tax Cuts and Jobs Act (TCJA), including analyzing the effects of any Internal Revenue Service (IRS) and U.S. Treasury guidance issued, and state tax law changes enacted, within the maximum one year measurement period resulting in no significant adjustments to the \$16.8 billion provisional amount previously recorded.

Stock-Based Compensation

We measure and recognize compensation expense for all stock-based compensation awards made to employees and directors based on estimated fair values. See Note 10 for additional information.

Foreign Currency Translation

The functional currency of our foreign operations is generally the local currency. For these foreign entities, we translate income statement amounts at average exchange rates for the period, and we translate assets and liabilities at end-of-period exchange rates. We record these translation adjustments in Accumulated other comprehensive income, a separate component of Equity, in our consolidated balance sheets. We report exchange gains and losses on intercompany foreign currency transactions of a long-term nature in Accumulated other comprehensive income. Other exchange gains and losses are reported in income.

Employee Benefit Plans

Pension and postretirement health care and life insurance benefits earned during the year, as well as interest on projected benefit obligations, are accrued currently. Prior service costs and credits resulting from changes in plan benefits are generally amortized over the average remaining service period of the employees expected to receive benefits. Expected return on plan assets is determined by applying the return on assets assumption to the actual fair value of plan assets. Actuarial gains and losses are recognized in operating results in the year in which they occur. These gains and losses are measured annually as of December 31 or upon a remeasurement event. Verizon management employees no longer earn pension benefits or earn service towards the company retiree medical subsidy. See Note 11 for additional information.

We recognize a pension or a postretirement plan's funded status as either an asset or liability on the consolidated balance sheets. Also, we measure any unrecognized prior service costs and credits that arise during the period as a component of Accumulated other comprehensive income, net of applicable income tax.

Derivative Instruments

We enter into derivative transactions primarily to manage our exposure to fluctuations in foreign currency exchange rates and interest rates. We employ risk management strategies, which may include the use of a variety of derivatives including cross currency swaps, forward starting interest rate swaps, interest rate swaps, interest rate caps and foreign exchange forwards. We do not hold derivatives for trading purposes. See Note 9 for additional information.

We measure all derivatives at fair value and recognize them as either assets or liabilities on our consolidated balance sheets. Our derivative instruments are valued primarily using models based on readily observable market parameters for all substantial terms of our derivative contracts and thus are classified as Level 2. Changes in the fair values of derivative instruments not qualifying for hedge accounting are recognized in earnings in the current period. For fair value hedges, the change in the fair value of the derivative instruments is recognized in earnings, along with the change in the fair value of the hedged item. For cash flow hedges, the change in the fair value of the derivative instruments, along with the change in the fair value of the hedged item, are reported in Other comprehensive income (loss) and recognized in earnings when the hedged item is recognized in earnings. For net investment hedges of certain of our foreign operations, the change in the fair value of the derivative instruments is reported in Other comprehensive income (loss) as part of the cumulative translation adjustment and partially offset the impact of foreign currency changes on the value of our net investment.

Variable Interest Entities

VIEs are entities that lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity. We consolidate the assets and liabilities of VIEs when we are deemed to be the primary beneficiary. The primary beneficiary is the party that has the power to make the decisions that most significantly affect the economic performance of the VIE and has the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE.

Recently Adopted Accounting Standards

The following ASUs were issued by Financial Accounting Standards Board (FASB), and have been recently adopted by Verizon.

Description	Date of Adoption	Effect on Financial Statements
ASU 2014-09, Revenue from Contracts with Customers (Topic 606)		
This standard update, along with related subsequently issued updates, clarifies the principles for recognizing revenue and develops a common revenue standard for U.S. GAAP. The standard update amends current guidance for the recognition of costs to obtain and fulfill contracts with customers such that incremental costs of obtaining and direct costs of fulfilling contracts with customers will be deferred and amortized consistent with the transfer of the related good or service. The standard update intends to provide a more robust framework for addressing revenue issues; improve comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets; and provide more useful information to users of financial statements through improved disclosure requirements.	1/1/2018	We recorded the pre-tax cumulative effect of \$3.9 billion (\$2.9 billion net of tax) as an adjustment to the January 1, 2018 opening balance of Retained earnings. We adopted this standard using the modified retrospective method. The cumulative after-tax effect of the changes made to our consolidated balance sheet for the adoption of this standard are reflected in the table below. See Note 2 for additional information related to revenues and contract costs, including qualitative and quantitative disclosures required under Topic 606, as well as a reconciliation of the adjustments from the adoption of Topic 606 relative to Topic 605 on certain impacted financial statement line items.
ASU 2016-01, Financial Instruments – Overall (Subtopic 825-10)		
The amendments in this update make targeted improvements to GAAP by requiring most equity securities to be measured at fair value with changes in fair value recognized in net income. For investments in equity securities without readily determinable fair values, the cost method is eliminated. A practicability exception is available for investments in equity securities that do not have readily determinable fair values. These investments may be measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. This update simplifies the impairment assessment of equity investments without readily determinable fair values by requiring a qualitative assessment to identify impairment. When a qualitative assessment indicates impairment exists, an entity is required to measure the investment at fair value	1/1/2018	We adopted this standard update on a prospective basis resulting in an insignificant adjustment to our opening retained earnings. The amendments related to equity securities without readily determinable fair values are applied prospectively to equity investments that exist as of the date of adoption.
ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments		
This standard update addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice for these issues. This standard update requires, among other things, that cash receipts from payments on a transferor's beneficial interests in securitized trade receivables be classified as cash inflows from investing activities. The amendment relating to beneficial interests in securitization transactions impacted our presentation of collections of certain deferred purchase price from sales of wireless device payment plan agreement receivables in our consolidated statements of cash flows.	1/1/2018	We retrospectively reclassified approximately \$0.6 billion of deferred purchase price collections from Cash flows from operating activities to Cash flows from investing activities in our consolidated statement of cash flows for the year ended December 31, 2017 and \$1.1 billion for the year ended December 31, 2016. There were no other significant impacts as a result of adopting this standard.

Description	Date of Adoption	Effect on Financial Statements
ASU 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash		
The amendments in this update require that cash and cash equivalent balances in a statement of cash flows include those amounts deemed to be restricted cash and restricted cash equivalents.	1/1/2018	We have provided a reconciliation from Cash and cash equivalents as presented in our consolidated balance sheets to Cash, cash equivalents and restricted cash as reported in our consolidated statements of cash flows. We adopted the amendments in this accounting standard update on a retrospective basis. The adoption of this standard update for the year ended December 31, 2017 resulted in an increase in cash flow used in financing activities of \$0.6 billion, a decrease in cash flow provided by operating activities of \$0.1 billion and an insignificant increase in cash flow used in investing activities. There was an insignificant impact to our consolidated statements of cash flows for the year ended December 31, 2016. See “Cash, Cash Equivalents and Restricted Cash” for additional information, as well as a discussion of the nature of our restricted cash balances.
ASU 2017-07, Compensation – Retirement Benefits (Topic 715)		
The amendments in this update require an employer to report the service cost component arising from employer sponsored pension and other postretirement plans 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 benefit cost, including the recognition of prior service credits, will be presented in the consolidated statements of income separately from the service cost component and outside the subtotal of income from operations. The amendments in this update also allow only the service cost component of pension and other postretirement benefit costs to be eligible for capitalization when applicable. Verizon previously recorded service cost and other components of net periodic benefit cost in operating expenses in the consolidated statements of income. The amendments in this update allow a practical expedient that permits an employer to use the amounts disclosed in its employee benefits footnote for the prior comparative periods as the estimation basis for applying the retrospective presentation.	1/1/2018	As required by the amendments in this update, the presentation of the service cost component and other components of net periodic benefit cost in the consolidated statements of income were applied retrospectively, and the updates for the capitalization of the service cost component of net periodic benefit cost in assets were applied prospectively on and after the effective date. Verizon reclassified the other components of net periodic benefit costs from Cost of services and Selling, general and administrative expense to Other income (expense), net, which is part of non-operating expenses. The retrospective adoption of this standard update had an insignificant impact to consolidated operating income for the year ended December 31, 2017 and an increase to consolidated operating income of approximately \$2.2 billion for the year ended December 31, 2016. These impacts to consolidated operating income were fully offset by an insignificant decrease and a \$2.2 billion decrease to Other income (expense), net for the years ended December 31, 2017 and 2016, respectively. There was no impact to consolidated Net income for the years ended December 31, 2017 or 2016. Verizon utilized the practical expedient to estimate the impact on the prior comparative period information presented in the consolidated statements of income.
ASU 2018-02, Income Statement-Reporting Comprehensive Income (Topic 220)		
The amendments in this update allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from TCJA. The stranded tax effects result from the change in the federal tax rate for deferred taxes recorded to Accumulated other comprehensive income. This standard update is effective as of the first quarter of 2019; however, early adoption is permitted. Verizon has elected to early adopt this update effective January 1, 2018 and record the effects of adoption at the beginning of the period of adoption.	1/1/2018	The adoption of this standard update resulted in a charge to Retained earnings of \$0.7 billion which consists primarily of stranded tax effects related to deferred taxes for pensions and postretirement benefits. It is Verizon's policy to release income tax effects from accumulated other comprehensive income at the same time that the related unit of account affects net income. The cumulative after-tax effect of the changes made to our consolidated balance sheet for the adoption of this standard are reflected in the table below.

2018 Annual ReportNotes to Consolidated Financial Statements *continued*

The cumulative after-tax effect of the changes made to our consolidated balance sheet for the adoption of Topic 606, ASU 2018-02 and other ASUs was as follows:

(dollars in millions)	At December 31, 2017	Adjustments due to			At January 1, 2018
		Topic 606	ASU 2018-02	Other ASUs	
Accounts receivable, net of allowance	\$ 23,493	\$ 53	\$ —	\$ —	\$ 23,546
Prepaid expenses and other	3,307	2,014	—	—	5,321
Other assets	9,787	1,238	—	(59)	10,966
Investments in unconsolidated businesses	1,039	2	—	—	1,041
Other current liabilities	8,352	(541)	—	—	7,811
Deferred income taxes	31,232	1,008	—	(31)	32,209
Other liabilities	12,433	(94)	—	—	12,339
Retained earnings	35,635	2,890	(652)	(6)	37,867
Accumulated other comprehensive income	2,659	—	652	(22)	3,289
Noncontrolling interests	1,591	44	—	—	1,635

Recently Issued Accounting Standards

The following ASUs have been recently issued by the FASB.

Description	Date of Adoption	Effect on Financial Statements
ASU 2016-02, Leases (Topic 842)		
In February 2016, the FASB issued this standard update to increase transparency and improve comparability by requiring entities to recognize assets and liabilities on the balance sheet for all leases, with certain exceptions. In addition, through improved disclosure requirements, the standard update will enable users of financial statements to further understand the amount, timing, and uncertainty of cash flows arising from leases. This standard update allows for a modified retrospective application and is effective as of the first quarter of 2019; however, early adoption is permitted. Entities are allowed to apply the modified retrospective approach: (1) retrospectively to each prior reporting period presented in the financial statements with the cumulative- effect adjustment recognized at the beginning of the earliest comparative period presented; or (2) retrospectively at the beginning of the period of adoption (January 1, 2019) through a cumulative-effect adjustment. The effective date of this standard is January 1, 2019, at which time Verizon will adopt the standard using the modified retrospective approach with a cumulative- effect adjustment to opening retained earnings recorded at the beginning of the period of adoption. Therefore, upon adoption, Verizon will recognize and measure leases without revising comparative period information or disclosure. The modified retrospective approach includes a number of optional practical expedients that entities may elect to apply.	1/1/2019	We have established a cross-functional coordinated team to implement the standard update. We have completed our assessment of the transition practical expedients offered by the standard. These practical expedients lessen the transitional burden of implementing the standard update by not requiring a reassessment of certain conclusions reached under existing lease accounting guidance. Accordingly, we will apply these practical expedients and will not reassess: (1) whether an expired or existing contract is a lease or contains an embedded lease; (2) lease classification of an expired or existing lease; (3) initial direct costs for an existing lease; and (4) whether an existing or expired land easement is or contains a lease if it has not historically been accounted for as a lease. We have identified and implemented a new system solution to meet the requirements of the new standard and have identified and implemented processes and internal controls to meet the standards reporting and disclosure requirements. Upon adoption of this standard, there will be a significant impact in our consolidated balance sheet as we expect to recognize a right-of-use asset and liability related to substantially all operating lease arrangements, which we currently estimate will range between \$21.0 billion and \$23.0 billion. Verizon's current operating lease portfolio included in this range is primarily comprised of network equipment including towers, distributed antenna systems, and small cells, real estate, connectivity mediums including dark fiber, and equipment leases. In addition, pre-tax deferred gains of approximately \$0.6 billion arising from prior period sales-leaseback transactions, which would have been recognized to income over an average period of nine years, will be adjusted through opening retained earnings on January 1, 2019. Lastly, we expect a lower amount of lease costs to qualify as initial direct costs under the new standard which will result in an immediate recognition of expense instead of recognition of expense over time.
ASU 2016-13, Financial Instruments – Credit Losses (Topic 326)		
In June 2016, the FASB issued this standard update which requires certain financial assets be measured at amortized cost net of an allowance for estimated credit losses such that the net receivable represents the present value of expected cash collection. In addition, this standard update requires that certain financial assets be measured at amortized cost reflecting an allowance for estimated credit losses expected to occur over the life of the assets. The estimate of credit losses must be based on all relevant information including historical information, current conditions and reasonable and supportable forecasts that affect the collectability of the amounts. An entity will apply the update through a cumulative effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. A prospective transition approach is required for debt securities for which an other-than-temporary impairment has been recognized before the effective date. Early adoption of this standard is permitted.	1/1/2020	We are currently evaluating the impacts that this standard update will have on our various financial assets which we expect to include, but is not limited to, our device payment plan agreement receivables and service receivables. We have established a cross-functional coordinated team to address the potential impacts to our systems, processes and internal controls in order to meet the standard update's accounting and reporting requirements.

Note 2. Revenue and Contract Costs

We earn revenue from contracts with customers, primarily through the provision of telecommunications and other services and through the sale of wireless equipment. We account for these revenues under Topic 606, which we adopted on January 1, 2018, using the modified retrospective approach. We also earn revenues that are not accounted for under Topic 606 from leasing arrangements (such as those for towers and equipment), captive reinsurance arrangements primarily related to wireless device insurance and the interest on equipment financed on a device payment plan agreement when sold to the customer by an authorized agent.

We applied the new revenue recognition standard to customer contracts not completed at the date of initial adoption. For incomplete contracts that were modified before the date of adoption, the Company elected to use the practical expedient available under the modified retrospective method, which allows us to aggregate the effect of all modifications when identifying satisfied and unsatisfied performance obligations, determining the transaction price and allocating transaction price to the satisfied and unsatisfied performance obligations for the modified contract at transition. Results for reporting periods beginning after January 1, 2018 are presented under Topic 606, while amounts reported for prior periods have not been adjusted and continue to be reported under accounting standards in effect for those periods.

In our Wireless business, prior to the adoption of Topic 606, we were required to limit the revenue recognized when a wireless device was sold to the amount of consideration that was not contingent on the provision of future services, which was typically limited to the amount of consideration received from the customer at the time of sale. Under Topic 606, the total consideration in the contract is allocated between wireless equipment and service based on their relative standalone selling prices. This change primarily impacts our arrangements that include sales of wireless devices at subsidized prices in conjunction with a fixed-term plan, also known as the subsidy model, for service. Accordingly, under Topic 606, generally more equipment revenue is recognized upon sale of the equipment to the customer and less service revenue is recognized over the contract term than was previously recognized under the prior "Revenue Recognition" (Topic 605) standard. At the time the equipment is sold, this allocation results in the recognition of a contract asset equal to the difference between the amount of revenue recognized and the amount of consideration received from the customer. As of January 2017, we no longer offer consumers new fixed-term plans with subsidized equipment pricing; however, we continue to offer fixed-term plans to our business customers. At December 31, 2018 and December 31, 2017, approximately 14% and 19% of retail postpaid connections were under fixed-term plans, respectively.

Topic 606 also requires the deferral of incremental costs incurred to obtain a customer contract, which are then amortized to expense, as a component of Selling, general and administrative expense, over the respective periods of expected benefit. As a result, a significant amount of our sales commission costs, which were historically expensed as incurred by our Wireless and Wireline businesses under our previous accounting, are now deferred and amortized under Topic 606.

Finally, under Topic 605, at the time of the sale of a device, we imputed risk adjusted interest on the device payment plan agreement receivables. We recorded the imputed interest as a reduction to the related accounts receivable and interest income was recognized over the financed device payment term. Under Topic 606, while there continues to be a financing component in both the fixed-term plans and device payment plans, also known as the installment model, we have determined that this financing component for our customer classes in the Wireless direct channel plans is not significant and therefore we no longer impute interest for these contracts. This change results in additional revenue recognized upon the sale of wireless devices and no interest income recognized over the device payment term.

A reconciliation of the adjustments from the adoption of Topic 606 relative to Topic 605 on certain impacted financial statement line items in our consolidated statements of income and balance sheet were as follows:

	December 31, 2018		
(dollars in millions)	As reported	Balances without adoption of Topic 606	Adjustments
Operating Revenues			
Service revenues and other	\$ 108,605	\$ 109,964	\$ (1,359)
Wireless equipment revenues	22,258	20,474	1,784
Total Operating Revenues	130,863	130,438	425
Cost of services (exclusive of items shown below)	32,185	32,240	(55)
Wireless cost of equipment	23,323	23,189	134
Selling, general and administrative expense	31,083	32,588	(1,505)
Equity in losses of unconsolidated businesses	(186)	(187)	1
Income Before Provision For Income Taxes	19,623	17,771	1,852
Provision for income taxes	(3,584)	(3,104)	(480)
Net Income	\$ 16,039	\$ 14,667	\$ 1,372
Net income attributable to noncontrolling interests	\$ 511	\$ 481	\$ 30
Net income attributable to Verizon	15,528	14,186	1,342
Net Income	\$ 16,039	\$ 14,667	\$ 1,372

	December 31, 2018		
(dollars in millions)	As reported	Balances without adoption of Topic 606	Adjustments
Assets			
Current assets			
Accounts receivable, net of allowance	\$ 25,102	\$ 24,759	\$ 343
Prepaid expenses and other	5,453	2,902	2,551
Investments in unconsolidated businesses	671	668	3
Other assets	11,717	9,631	2,086
Liabilities and Equity			
Current liabilities			
Accounts payable and accrued liabilities	22,501	21,727	774
Other current liabilities	8,239	8,805	(566)
Deferred income taxes	33,795	33,082	713
Other liabilities	13,922	14,166	(244)
Equity			
Retained earnings	43,542	39,310	4,232
Noncontrolling interests	1,565	1,491	74

Revenue by Category

We operate and manage our business in two reportable segments, Wireless and Wireline. Revenue is disaggregated by products and services, and customer groups, respectively, which we view as the relevant categorization of revenues for these businesses. See Note 13 for additional information on revenue by segment.

Corporate and other includes the results of our Media business, Verizon Media, which operated in 2018 under the "Oath" brand, and our telematics business, branded Verizon Connect. Oath generated revenues from contracts with customers under Topic 606 of approximately \$7.7 billion for the year ended December 31, 2018. Verizon Connect generated revenues from contracts with customers under Topic 606 of approximately \$1.0 billion for the year ended December 31, 2018.

We also earn revenues, that are not accounted for under Topic 606, from leasing arrangements (such as towers and equipment), captive reinsurance arrangements primarily related to wireless device insurance and the interest on equipment financed on a device payment plan agreement when sold to the customer by an authorized agent. Revenues from arrangements that were not accounted for under Topic 606 were approximately \$4.5 billion for the year ended December 31, 2018.

Remaining Performance Obligations

When allocating the total contract transaction price to identified performance obligations, a portion of the total transaction price may relate to service performance obligations which were not satisfied or are partially satisfied as of the end of the reporting period. Below we disclose information relating to these unsatisfied performance obligations. We have elected to apply the practical expedient available under Topic 606, that provides the option to exclude the expected revenues arising from unsatisfied performance obligations related to contracts that have an original expected duration of one year or less. This situation primarily arises with respect to certain month-to-month service contracts. At December 31, 2018, month-to-month service contracts represented approximately 86% of Wireless postpaid contracts and approximately 56% of Wireline consumer and small business contracts.

Additionally, certain Wireless and Wireline contracts provide customers the option to purchase additional services. The fee related to the additional services is recognized when the customer exercises the option (typically on a month-to-month basis).

Wireless customer contracts are generally either month-to-month and cancellable at any time (typically under a device payment plan) or contain terms greater than one month (typically under a fixed-term plan). Additionally, customers may incur charges based on usage or may purchase additional optional services in conjunction with entering into a contract which can be cancelled at any time and therefore are not included in the transaction price. When a service contract is longer than one month, the service contract term will generally be two years or less. The transaction price allocated to service performance obligations, which are not satisfied or are partially satisfied as of the end of the reporting period, are generally related to our fixed-term plans.

Our wireless customers also include other telecommunications companies who utilize Verizon's network to resell wireless service to their respective end customers. Reseller arrangements occur on a month-to-month basis or include a stated contract term, which generally extends longer than two years. Arrangements with a stated contract term generally include an annual minimum revenue commitment over the term of the contract for which revenues will be recognized in future periods.

At December 31, 2018, the transaction price related to Wireless unsatisfied performance obligations expected to be recognized for 2019, 2020 and thereafter was \$10.9 billion, \$5.5 billion and \$2.2 billion, respectively.

Wireline customer contracts are either month-to-month, include a specified term with fixed monthly fees, or contain revenue commitments, and may also contain usage based services. Consumer Markets customers under contract generally have a service term of two years; however, this term may be shorter at month-to-month. Certain Enterprise Solutions, Partner Solutions and Business Markets service contracts with customers extend into future periods, contain fixed monthly fees and usage-based fees, and can include annual commitments per each year of the contract or commitments over the entire specified contract term. A significant number of contracts within these businesses have a contract term that is twelve months or less.

At December 31, 2018, the transaction price relating to Wireline unsatisfied performance obligations expected to be recognized for 2019, 2020 and thereafter was \$7.7 billion, \$3.2 billion and \$0.9 billion, respectively.

In certain Enterprise Solutions, Partner Solutions and Business Markets service contracts within Wireline and certain telematics service contracts within Corporate and other, there are customer contracts that have a contractual minimum fee over the total contract term. We cannot predict the time period when revenue will be recognized related to those contracts; thus they are excluded from the time bands above. These contracts have varying terms spanning over five years ending in June 2023 and have aggregate contract minimum payments totaling \$3.9 billion.

Accounts Receivable and Contract Balances

The timing of revenue recognition may differ from the time of billing to our customers. Receivables presented in our consolidated balance sheet represent an unconditional right to consideration. Contract balances represent amounts from an arrangement when either Verizon has performed, by transferring goods or services to the customer in advance of receiving all or partial consideration for such goods and services from the customer, or the customer has made payment to Verizon in advance of obtaining control of the goods and/or services promised to the customer in the contract.

Contract assets primarily relate to our rights to consideration for goods or services provided to the customers but for which we do not have an unconditional right at the reporting date. Under a fixed-term plan, the total contract revenue is allocated between wireless services and equipment revenues, as discussed above. In conjunction with these arrangements, a contract asset is created, which represents the difference between the amount of equipment revenue recognized upon sale and the amount of consideration received from the customer. The contract asset is reclassified as accounts receivable as wireless services are provided and billed. We have the right to bill the customer as service is provided over time, which results in our right to the payment being unconditional. The contract asset balances are presented in our consolidated balance sheet as Prepaid expenses and other and Other assets. We assess our contract assets for impairment on a quarterly basis and will recognize an impairment charge to the extent their carrying amount is not recoverable. The impairment charge related to contract assets was \$0.1 billion for the year ended December 31, 2018, and is included in Other in the table below.

Contract liabilities arise when we bill our customers and receive consideration in advance of providing the goods or services promised in the contract. We typically bill service one month in advance, which is the primary component of the contract liability balance. Contract liabilities are recognized as revenue when services are provided to the customer. The contract liability balances are presented in our consolidated balance sheet as Other current liabilities and Other liabilities.

The following table presents information about receivables from contracts with customers:

(dollars in millions)	At January 1, 2018	At December 31, 2018
Receivables ⁽¹⁾	\$ 12,073	\$ 12,104
Device payment plan agreement receivables ⁽²⁾	1,461	8,940

(1) Balances do not include receivables related to the following contracts: leasing arrangements (such as towers and equipment), captive reinsurance arrangements primarily related to wireless device insurance and the interest on equipment financed on a device payment plan agreement when sold to the customer by an authorized agent.

(2) Included in device payment plan agreement receivables presented in Note 8. Balances do not include receivables related to contracts completed prior to January 1, 2018 and receivables derived from the sale of equipment on a device payment plan through an authorized agent.

The following table represents significant changes in the contract assets balance:

(dollars in millions)	Contract Assets
Balance at January 1, 2018	\$ 38
Opening balance sheet adjustment related to Topic 606 adoption	1,132
Adjusted opening balance, January 1, 2018	1,170
Increase resulting from new contracts	1,583
Contract assets reclassified to a receivable or collected in cash	(1,575)
Other	(175)
Balance at December 31, 2018	\$ 1,003

The following table represents significant changes in the contract liabilities balance:

(dollars in millions)	Contract Liabilities
Balance at January 1, 2018 ⁽¹⁾	\$ 5,086
Opening balance sheet adjustments related to Topic 606 adoption	(634)
Adjusted opening balance, January 1, 2018	4,452
Net increase in contract liabilities	4,446
Revenue recognized related to contract liabilities existing at January 1, 2018	(3,923)
Other	(32)
Balance at December 31, 2018	\$ 4,943

(1) Prior to the adoption of Topic 606, liabilities related to contracts with customers included advanced billings and deferred revenue, which was included within Other current liabilities and Other liabilities in our consolidated balance sheet at December 31, 2017.

The balance of contract assets and contract liabilities recorded in our consolidated balance sheet were as follows:

(dollars in millions)	At December 31, 2018
Assets	
Prepaid expenses and other	\$ 757
Other assets	246
Total	\$ 1,003
Liabilities	
Other current liabilities	\$ 4,207
Other liabilities	736
Total	\$ 4,943

Contract Costs

Topic 606 requires the recognition of an asset for incremental costs to obtain a customer contract, which are then amortized to expense, over the respective periods of expected benefit.

We recognize an asset for incremental commission expenses paid to internal sales personnel and agents in conjunction with obtaining customer contracts. We only defer these costs when we have determined the commissions are, in fact, incremental and would not have been incurred absent the customer contract. Costs to obtain a contract are amortized and recorded ratably as commission expense over the period representing the transfer of goods or services to which the assets relate. Wireless costs to obtain contracts are amortized over our customers' estimated device upgrade cycles, as such costs are typically incurred each time a customer upgrades. Wireline costs to obtain contracts are amortized as expense over the estimated customer relationship period for our Consumer Markets customers. Incremental costs to obtain contracts for our Enterprise Solutions, Partner Solutions and Business Markets are insignificant. These costs are recorded in Selling, general and administrative expense.

We also defer costs incurred to fulfill contracts that: (1) relate directly to the contract; (2) are expected to generate resources that will be used to satisfy our performance obligation under the contract; and (3) are expected to be recovered through revenue generated under the contract. Contract fulfillment costs are expensed to Cost of services as we satisfy our performance obligations. These costs principally relate to direct costs that enhance our Wireline business resources, such as costs incurred to install circuits.

We determine the amortization periods for our costs incurred to obtain or fulfill a customer contract at a portfolio level due to the similarities within these customer contract portfolios.

Other costs, such as general costs or costs related to past performance obligations, are expensed as incurred.

Collectively, costs to obtain a contract and costs to fulfill a contract are referred to as Deferred contract costs, which were as follows:

(dollars in millions)	Amortization Period	At December 31, 2018
Wireless	2 to 3 years	\$ 2,989
Wireline	2 to 5 years	850
Corporate	2 to 3 years	56
Total		\$ 3,895

Deferred contract costs are classified as current or non-current within Prepaid expenses and other and Other assets, respectively. The balances of Deferred contract costs included in our consolidated balance sheet were as follows:

(dollars in millions)	At December 31, 2018
Assets	
Prepaid expenses and other	\$ 2,083
Other assets	1,812
Total	\$ 3,895

For the year ended December 31, 2018, we recognized expense of \$2.0 billion, associated with the amortization of Deferred contract costs, primarily within Selling, general and administrative expense in our consolidated statements of income.

We assess our Deferred contract costs for impairment on a quarterly basis. We recognize an impairment charge to the extent the carrying amount of a deferred cost exceeds the remaining amount of consideration we expect to receive in exchange for the goods and services related to the cost, less the expected costs related directly to providing those goods and services that have not yet been recognized as expenses. There have been no impairment charges recognized for the year ended December 31, 2018.

Note 3. Acquisitions and Divestitures

Wireless

Spectrum License Transactions

Since 2016, we have entered into or completed several strategic spectrum transactions including:

- During the fourth quarter of 2015, we entered into a license exchange agreement with affiliates of AT&T Inc. (AT&T) to exchange certain Advanced Wireless Services (AWS) and Personal Communication Services (PCS) spectrum licenses. This non-cash exchange was completed in March 2016. As a result, we received \$0.4 billion of AWS and PCS spectrum licenses at fair value and recorded a pre-tax gain of \$0.1 billion in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2016.
- During the first quarter of 2016, we entered into a license exchange agreement with affiliates of Sprint Corporation (Sprint) to exchange certain AWS and PCS spectrum licenses. This non-cash exchange was completed in September 2016. As a result, we received \$0.3 billion of AWS and PCS spectrum licenses at fair value and recorded an insignificant gain in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2016.
- During the fourth quarter of 2016, we entered into a license exchange agreement with affiliates of AT&T to exchange certain AWS and PCS spectrum licenses. This non-cash exchange was completed in February 2017. As a result, we received \$1.0 billion of AWS and PCS spectrum licenses at fair value and recorded a pre-tax gain of \$0.1 billion in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2017.
- During the first quarter of 2017, we entered into a license exchange agreement with affiliates of Sprint to exchange certain PCS spectrum licenses. This non-cash exchange was completed in May 2017. As a result, we received \$0.1 billion of PCS spectrum licenses at fair value and recorded an insignificant gain in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2017.
- During the third quarter of 2017, we entered into a license exchange agreement with affiliates of T-Mobile USA Inc. to exchange certain AWS and PCS spectrum licenses. This non-cash exchange was completed in December 2017. As a result, we received \$0.4 billion of AWS and PCS spectrum licenses at fair value and recorded a pre-tax gain of \$0.1 billion in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2017.
- During 2018, we entered into and completed various wireless license transactions, including the purchase of Straight Path Communications Inc. (Straight Path) and NextLink Wireless LLC (NextLink).

Straight Path

In May 2017, we entered into a purchase agreement to acquire Straight Path, a holder of millimeter wave spectrum configured for fifth-generation (5G) wireless services, for total consideration reflecting an enterprise value of approximately \$3.1 billion. Under the terms of the purchase agreement, we agreed to pay: (1) Straight Path shareholders \$184.00 per share, payable in Verizon shares; and (2) certain transaction costs payable in cash of approximately \$0.7 billion, consisting primarily of a fee to be paid to the FCC. The transaction closed in February 2018 at which time we issued approximately 49 million shares of Verizon common stock, valued at approximately \$2.4 billion, and paid the associated cash consideration.

The acquisition of Straight Path was accounted for as an asset acquisition, as substantially all of the value related to the acquired spectrum. Upon closing, we recorded approximately \$4.5 billion of wireless licenses and \$1.4 billion of a deferred tax liability. The spectrum acquired as part of the transaction is being used for our 5G technology deployment. See Note 4 for additional information.

Wireline

Access Line Sale

In February 2015, we entered into a definitive agreement with Frontier Communications Corporation (Frontier) pursuant to which Verizon sold its local exchange business and related landline activities in California, Florida and Texas, including Fios Internet and video customers, switched and special access lines and high-speed Internet service and long distance voice accounts in these three states, for approximately \$10.5 billion (approximately \$7.3 billion net of income taxes), subject to certain adjustments and including the assumption of \$0.6 billion of indebtedness from Verizon by Frontier. The transaction, which included the acquisition by Frontier of the equity interests of Verizon's incumbent local exchange carriers (ILECs) in California, Florida and Texas, did not involve any assets or liabilities of Verizon Wireless. The transaction closed on April 1, 2016.

The transaction resulted in Frontier acquiring approximately 3.3 million voice connections, 1.6 million Fios Internet subscribers, 1.2 million Fios video subscribers and the related ILEC businesses from Verizon. For the year ended December 31, 2016, these businesses generated revenues of approximately \$1.3 billion and operating income of \$0.7 billion for Verizon. The operating results of these businesses are excluded from our Wireline segment for all periods presented to reflect comparable segment operating results consistent with the information regularly reviewed by our chief operating decision maker.

During April 2016, Verizon used the net cash proceeds received of \$9.9 billion to reduce its consolidated indebtedness. See Note 7 for additional information. As a result of the closing of the transaction, we derecognized property, plant and equipment of \$9.0 billion, goodwill of \$1.3 billion, \$0.7 billion of defined benefit pension and other postretirement benefit plan obligations and \$0.6 billion of indebtedness assumed by Frontier.

We recorded a pre-tax gain of approximately \$1.0 billion in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2016. The pre-tax gain included a \$0.5 billion pension and postretirement benefit curtailment gain due to the elimination of the accrual of pension and other postretirement benefits for some or all future services of a significant number of employees covered by three of our defined benefit pension plans and one of our other postretirement benefit plans.

XO Holdings

In February 2016, we entered into a purchase agreement to acquire XO Holdings' wireline business (XO), which owned and operated one of the largest fiber-based Internet Protocol and Ethernet networks in the U.S. Concurrently, we entered into a separate agreement to utilize certain wireless spectrum from a wholly-owned subsidiary of XO Holdings, NextLink, that held its wireless spectrum. The agreement included an option, subject to certain conditions, to buy NextLink. In February 2017, we completed our acquisition of XO for total cash consideration of approximately \$1.5 billion, of which \$0.1 billion was paid in 2015, and we prepaid \$0.3 billion in connection with the NextLink option which represented the fair value of the option.

In April 2017, we exercised our option to buy NextLink for approximately \$0.5 billion, subject to certain adjustments, of which \$0.3 billion was prepaid in the first quarter of 2017. The transaction closed in January 2018. The acquisition of NextLink was accounted for as an asset acquisition, as substantially all of the value related to the acquired spectrum. Upon closing, we recorded approximately \$0.7 billion of wireless licenses, \$0.1 billion of a deferred tax liability and \$0.1 billion of other liabilities. The spectrum acquired as part of the transaction will be used for our 5G technology deployment.

The consolidated financial statements include the results of XO's operations from the date the acquisition closed. If the acquisition of XO had been completed as of January 1, 2016, the results of operations of Verizon would not have been significantly different than our previously reported results of operations.

The acquisition of XO was accounted for as a business combination. The consideration was allocated to the assets acquired and liabilities assumed based on their fair values as of the close of the acquisition. We recorded approximately \$1.2 billion of property, plant and equipment, \$0.1 billion of goodwill and \$0.2 billion of other intangible assets. Goodwill is calculated as the difference between the acquisition date fair value of the consideration transferred and the fair value of the net assets acquired. The goodwill included within our Wireline segment, represents future economic benefits that we expect to achieve as a result of the acquisition. See Note 4 for additional information.

Data Center Sale

In December 2016, we entered into a definitive agreement, which was subsequently amended in March 2017, with Equinix, Inc. (Equinix) pursuant to which we agreed to sell 23 customer-facing data center sites in the U.S. and Latin America for approximately \$3.6 billion, subject to certain adjustments (Data Center Sale). The transaction closed in May 2017.

For the years ended December 31, 2017 and 2016, these sites generated an insignificant amount of revenues and earnings. As a result of the closing of the transaction, we derecognized assets with a carrying value of \$1.4 billion, primarily consisting of goodwill, property, plant and equipment and other intangible assets. The liabilities associated with the sale were insignificant.

In connection with the Data Center Sale and other insignificant divestitures, we recorded a net gain on sale of divested businesses of approximately \$1.8 billion in Selling, general and administrative expense in our consolidated statement of income for the year ended December 31, 2017.

WideOpenWest, Inc.

In August 2017, we entered into a definitive agreement to purchase certain fiber-optic network assets in the Chicago market from WideOpenWest, Inc. (WOW!), a leading provider of communications services. The transaction closed in December 2017. In addition, the parties entered into a separate agreement pursuant to which WOW! will complete the build-out of the network assets in 2019. The total cash consideration for the transactions is approximately \$0.3 billion, of which \$0.2 billion was received in December 2017.

Other

Acquisition of AOL Inc.

In May 2015, we entered into an Agreement and Plan of Merger with AOL Inc. (AOL) pursuant to which we commenced a tender offer to acquire all of the outstanding shares of common stock of AOL at a price of \$50.00 per share, net to the seller in cash, without interest and less any applicable withholding taxes.

On June 23, 2015, we completed the tender offer and merger, and AOL became a wholly-owned subsidiary of Verizon. The aggregate cash consideration paid by Verizon at the closing of these transactions was approximately \$3.8 billion. Holders of approximately 6.6 million shares exercised appraisal rights under Delaware law. In September 2018, we obtained court approval to settle this matter for total cash consideration of \$0.2 billion of which an insignificant amount relates to interest, resulting in an insignificant gain. We paid the cash consideration in October 2018.

Acquisition of Yahoo! Inc.'s Operating Business

In July 2016, Verizon entered into a stock purchase agreement (the Purchase Agreement) with Yahoo! Inc. (Yahoo). Pursuant to the Purchase Agreement, upon the terms and subject to the conditions thereof, we agreed to acquire the stock of one or more subsidiaries of Yahoo holding all of Yahoo's operating business for approximately \$4.83 billion in cash, subject to certain adjustments (the Transaction).

In February 2017, Verizon and Yahoo entered into an amendment to the Purchase Agreement, pursuant to which the Transaction purchase price was reduced by \$350 million to approximately \$4.48 billion in cash, subject to certain adjustments. Subject to certain exceptions, the parties also agreed that certain user security and data breaches incurred by Yahoo (and the losses arising therefrom) were to be disregarded: (1) for purposes of specified conditions to Verizon's obligations to close the Transaction; and (2) in determining whether a "Business Material Adverse Effect" under the Purchase Agreement had occurred.

Concurrently with the amendment of the Purchase Agreement, Yahoo and Yahoo Holdings, Inc., a wholly-owned subsidiary of Yahoo that Verizon agreed to purchase pursuant to the Transaction, also entered into an amendment to the related reorganization agreement, pursuant to which Yahoo (which has changed its name to Altaba Inc. following the closing of the Transaction) retains 50% of certain post-closing liabilities arising out of governmental or third-party investigations, litigations or other claims related to certain user security and data breaches incurred by Yahoo prior to its acquisition by Verizon, including an August 2013 data breach disclosed by Yahoo on December 14, 2016. At that time, Yahoo disclosed that more than one billion of the approximately three billion accounts existing in 2013 had likely been affected. In accordance with the original Transaction agreements, Yahoo will continue to retain 100% of any liabilities arising out of any shareholder lawsuits (including derivative claims) and investigations and actions by the SEC.

In June 2017, we completed the Transaction. The aggregate purchase consideration at the closing of the Transaction was approximately \$4.7 billion, including cash acquired of \$0.2 billion.

Prior to the closing of the Transaction, pursuant to a related reorganization agreement, Yahoo transferred all of the assets and liabilities constituting Yahoo's operating business to the subsidiaries that we acquired in the Transaction. The assets that we acquired did not include Yahoo's ownership interests in Alibaba, Yahoo! Japan and certain other investments, certain undeveloped land recently divested by Yahoo, certain non-core intellectual property or its cash, other than the cash from its operating business we acquired. We received for our benefit and that of our current and certain future affiliates a non-exclusive, worldwide, perpetual, royalty-free license to all of Yahoo's intellectual property that was not conveyed with the business.

In October 2017, based upon information that we received in connection with our integration of Yahoo's operating business, we disclosed that we believe that the August 2013 data breach previously disclosed by Yahoo affected all of its accounts.

The acquisition of Yahoo's operating business has been accounted for as a business combination. The fair values of the assets acquired and liabilities assumed were determined using the income, cost, market and multiple period excess earnings approaches. The fair value measurements were primarily based on significant inputs that are not observable in the market and thus represent a Level 3 measurement as defined in Accounting Standards Codification 820, Fair Value Measurements and Disclosures, other than long-term debt assumed in the acquisition. The income approach was primarily used to value the intangible assets, consisting primarily of acquired technology and customer relationships. The income approach indicates value for an asset based on the present value of cash flow projected to be generated by the asset. Projected cash flow is discounted at a required rate of return that reflects the relative risk of achieving the cash flow and the time value of money. The cost approach, which estimates value by determining the current cost of replacing an asset with another of equivalent economic utility, was used, as appropriate, for property, plant and equipment. The cost to replace a given asset reflects the estimated reproduction or replacement cost for the property, less an allowance for loss in value due to depreciation.

In June 2018, we finalized the accounting for the Yahoo acquisition. The following table summarizes the final accounting for of the assets acquired, including cash acquired of \$0.2 billion, and liabilities assumed as of the close of the acquisition, as well as the fair value at the acquisition date of Yahoo's noncontrolling interests:

(dollars in millions)	As of December 31, 2017	Measurement- period adjustments ⁽¹⁾	Adjusted Fair Value
Cash payment to Yahoo's equity holders	\$ 4,673	\$ —	\$ 4,673
Estimated liabilities to be paid	38	—	38
Total consideration	\$ 4,711	\$ —	\$ 4,711
Assets acquired:			
Goodwill	\$ 1,929	\$ 215	\$ 2,144
Intangible assets subject to amortization	1,873	1	1,874
Property, plant, and equipment	1,805	(6)	1,799
Other	1,332	128	1,460
Total assets acquired	6,939	338	7,277
Liabilities assumed:			
Total liabilities assumed	2,178	338	2,516
Net assets acquired:	4,761	—	4,761
Noncontrolling interest	(50)	—	(50)
Total consideration	\$ 4,711	\$ —	\$ 4,711

(1) Adjustments to the fair value measurements to reflect new information obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts recognized as of that date. The most significant adjustments related to an increase in goodwill and the recognition of liabilities per certain pre-acquisition contingencies.

On the closing date of the Transaction, each unvested and outstanding Yahoo restricted stock unit award that was held by an employee who became an employee of Verizon was replaced with a Verizon restricted stock unit award, which is generally payable in cash upon the applicable vesting date. The value of those outstanding restricted stock units on the acquisition date was approximately \$1.0 billion.

Goodwill is calculated as the difference between the acquisition date fair value of the consideration transferred and the fair value of the net assets acquired. The goodwill was primarily attributable to increased synergies that were expected to be achieved from the integration of Yahoo's operating business into our Media business. The goodwill related to this acquisition is included within Corporate and other. See Note 4 for additional information.

The consolidated financial statements include the results of Yahoo's operating business from the date the acquisition closed. If the acquisition of Yahoo's operating business had been completed as of January 1, 2016, the results of operations of Verizon would not have been significantly different than our previously reported results of operations.

Acquisition and Integration Related Charges

Related to the Yahoo Transaction, we recorded \$0.5 billion of acquisition and integration related charges during the year ended December 31, 2018, of which \$0.3 billion, \$0.2 billion and an insignificant amount are related to Severance, Integration costs and Transaction costs, respectively. In connection with the Yahoo Transaction, we recorded acquisition and integration related charges of approximately \$0.8 billion during the year ended December 31, 2017, of which \$0.5 billion, \$0.2 billion and \$0.1 billion related to Severance, Integration costs and Transaction costs, respectively. These charges were recorded in Selling, general and administrative expense in our consolidated statements of income.

Fleetmatics Group PLC

In July 2016, we entered into an agreement to acquire Fleetmatics Group PLC, a public limited company incorporated in Ireland (Fleetmatics). Fleetmatics was a leading global provider of fleet and mobile workforce management solutions. Pursuant to the terms of the agreement, we acquired Fleetmatics for \$60.00 per ordinary share in cash. The aggregate merger consideration was approximately \$2.5 billion, including cash acquired of \$0.1 billion. We completed the acquisition on November 7, 2016. As a result of the transaction, Fleetmatics became a wholly-owned subsidiary of Verizon.

The consolidated financial statements include the results of Fleetmatics' operations from the date the acquisition closed. Had this acquisition been completed on January 1, 2016, the results of operations of Verizon would not have been significantly different than our previously reported results of operations. Upon closing, we recorded approximately \$1.4 billion of goodwill and \$1.1 billion of other intangibles.

The acquisition of Fleetmatics was accounted for as a business combination. The consideration was allocated to the assets acquired and liabilities assumed based on their fair values as of the close of the acquisition.

Goodwill is calculated as the difference between the acquisition date fair value of the consideration transferred and the fair value of the net assets acquired. The goodwill recorded as a result of the Fleetmatics transaction represents future economic benefits we expect to achieve as a result of the acquisition. The goodwill related to this acquisition is included within Corporate and other. See Note 4 for additional information.

Other

In July 2016, we acquired Telogis, Inc., a global cloud-based mobile enterprise management software business, for \$0.9 billion of cash consideration. Upon closing, we recorded \$0.5 billion of goodwill that is included within Corporate and other.

During 2018, we entered into and completed various other transactions for \$0.1 billion of cash consideration. During 2017 and 2016, we entered into and completed various other transactions for an insignificant amount of cash consideration.

Note 4. Wireless Licenses, Goodwill and Other Intangible Assets

Wireless Licenses

The carrying amounts of Wireless licenses are as follows:

At December 31,	(dollars in millions)	
	2018	2017
Wireless licenses	\$ 94,130	\$ 88,417

For the year ended December 31, 2018, we recorded approximately \$4.5 billion of wireless licenses in connection with the Straight Path acquisition and \$0.7 billion in connection with the NextLink acquisition. See Note 3 for additional information.

At December 31, 2018 and 2017, approximately \$8.6 billion and \$8.8 billion, respectively, of wireless licenses were under development for commercial service for which we were capitalizing interest costs. We recorded approximately \$0.5 billion of capitalized interest on wireless licenses for each of the years ended December 31, 2018 and 2017, respectively.

The average remaining renewal period of our wireless license portfolio was 4.6 years as of December 31, 2018. See Note 1 for additional information.

As discussed in Note 1, we test our wireless licenses for potential impairment annually or more frequently if impairment indicators are present. In 2018, our quantitative impairment test consisted of comparing the estimated fair value of our aggregate wireless licenses estimated using the Greenfield approach to the aggregated carrying amount of the licenses as of the test date. In 2017 and 2016, we performed a qualitative assessment to determine whether it was more likely than not that the fair value of our wireless licenses was less than the carrying amount. Our assessments in 2018, 2017 and 2016 indicated that the fair value of our wireless licenses exceeded the carrying value and, therefore, did not result in impairment.

Goodwill

Changes in the carrying amount of Goodwill are as follows:

	(dollars in millions)			
	Wireless	Wireline	Other	Total
Balance at January 1, 2017	\$ 18,393	\$ 3,746	\$ 5,066	\$ 27,205
Acquisitions (Note 3)	4	208	1,956	2,168
Reclassifications, adjustments and other	—	1	(202)	(201)
Balance at December 31, 2017	18,397	3,955	6,820	29,172
Acquisitions (Note 3)	—	(77)	225	148
Oath goodwill impairment	—	—	(4,591)	(4,591)
Reclassifications, adjustments and other	—	(7)	(108)	(115)
Balance at December 31, 2018	\$ 18,397	\$ 3,871	\$ 2,346	\$ 24,614

We recognized goodwill of \$2.1 billion within the Media reporting unit (included within Other in the table above) as a result of the acquisition of Yahoo's operating business and \$0.1 billion in Wireline as a result of the acquisition of XO. See Note 3 for additional information.

In the fourth quarter of 2018, we performed a quantitative impairment test for our Wireless, Wireline, Connect and Media reporting units. Based on our assessment, it was determined that the fair value exceeded the carrying amount of each of our reporting units except for our Media reporting unit. Our Media business, Verizon Media, which operated in 2018 under the "Oath" brand, has continued to experience increased competitive and market pressures throughout 2018 that have resulted in lower than expected revenues and earnings. These pressures are expected to continue and have resulted in a loss of market positioning to our competitors in the digital advertising business. Oath has also achieved lower than expected benefits from the integration of the Yahoo and AOL businesses.

In connection with Verizon's annual budget process in the fourth quarter, the new leadership at both Oath and Verizon completed a comprehensive five-year strategic planning review of Oath's business prospects resulting in unfavorable adjustments to Oath's financial projections. These revised projections were used as a key input into the Company's annual goodwill impairment test performed in the fourth quarter.

Consistent with our accounting policy, we applied a combination of a market approach and a discounted cash flow method reflecting current assumptions and inputs, including our revised projections, discount rate and expected growth rates, which resulted in the fair value of the Media reporting unit being less than its carrying amount. As a result, we recorded a non-cash goodwill impairment charge of approximately \$4.6 billion (\$4.5 billion after-tax) in the fourth quarter of 2018 in our consolidated statement of income. The goodwill balance of the Media reporting unit was approximately \$4.8 billion prior to the incurrence of this impairment charge.

We performed a quantitative impairment assessment for all of our reporting units in 2018 and for all of our reporting units, except for our Wireless reporting unit, in 2017 and 2016 for which a qualitative assessment was completed. For 2018, 2017 and 2016, our impairment tests indicated that the fair value for each of our Wireless, Wireline and Connect reporting units exceeded their respective carrying value and therefore, did not result in a goodwill impairment. For 2017 and 2016, our impairment tests indicated that the fair value for our Media reporting unit exceeded its carrying value and therefore, did not result in goodwill impairment.

Other Intangible Assets

The following table displays the composition of Other intangible assets, net:

At December 31,	2018			(dollars in millions) 2017		
	Gross Amount	Accumulated Amortization	Net Amount	Gross Amount	Accumulated Amortization	Net Amount
Customer lists (8 to 13 years)	\$ 3,951	\$ (1,121)	\$ 2,830	\$ 3,621	\$ (691)	\$ 2,930
Non-network internal-use software (3 to 7 years)	18,603	(12,785)	5,818	18,010	(12,374)	5,636
Other (2 to 25 years)	1,988	(861)	1,127	2,474	(793)	1,681
Total	\$ 24,542	\$ (14,767)	\$ 9,775	\$ 24,105	\$ (13,858)	\$ 10,247

During 2017, we recognized other intangible assets of \$1.9 billion in Corporate and other as a result of the acquisition of Yahoo's operating business and \$0.2 billion in Wireline as a result of the acquisition of XO. See Note 3 for additional information.

The amortization expense for Other intangible assets was as follows:

Years	(dollars in millions)
2018	\$ 2,217
2017	2,213
2016	1,701

Estimated annual amortization expense for Other intangible assets is as follows:

Years	(dollars in millions)
2019	\$ 2,145
2020	1,801
2021	1,501
2022	1,230
2023	949

Note 5. Property, Plant and Equipment

The following table displays the details of Property, plant and equipment, which is stated at cost:

At December 31,	Lives (years)	(dollars in millions)	
		2018	2017
Land	—	\$ 807	\$ 806
Buildings and equipment	7 to 45	30,468	28,914
Central office and other network equipment	3 to 50	147,250	145,093
Cable, poles and conduit	7 to 50	49,859	47,972
Leasehold improvements	5 to 20	8,580	8,394
Work in progress	—	6,362	6,139
Furniture, vehicles and other	3 to 20	9,509	9,180
		252,835	246,498
Less accumulated depreciation		(163,549)	(157,930)
Property, plant and equipment, net		\$ 89,286	\$ 88,568

Note 6. Leasing Arrangements

As Lessee

We lease certain facilities and equipment for use in our operations under both capital and operating leases. Certain operating leases contain renewal options with varying terms and conditions that may be exercised. Total rent expense under operating leases amounted to \$4.1 billion in 2018, \$3.8 billion in 2017, and \$3.6 billion in 2016.

Amortization of capital leases is included in Depreciation and amortization expense in the consolidated statements of income. Capital lease amounts included in Property, plant and equipment are as follows:

At December 31,	(dollars in millions)	
	2018	2017
Capital leases	\$ 1,756	\$ 1,463
Less accumulated amortization	(998)	(692)
Total	\$ 758	\$ 771

The aggregate minimum rental commitments under noncancelable leases for the periods shown at December 31, 2018 are as follows:

Years	(dollars in millions)	
	Capital Leases	Operating Leases
2019	\$ 343	\$ 4,043
2020	245	3,678
2021	148	3,272
2022	100	2,871
2023	52	2,522
Thereafter	115	10,207
Total minimum rental commitments	\$ 1,003	\$ 26,593
Less interest and executory costs	\$ (98)	
Present value of minimum lease payments	905	
Less current installments	(316)	
Long-term obligation at December 31, 2018	\$ 589	

Tower Monetization Transaction

During March 2015, we completed a transaction with American Tower Corporation (American Tower) pursuant to which American Tower acquired the exclusive rights to lease and operate approximately 11,300 of our wireless towers and corresponding ground leases for an upfront payment of \$5.0 billion. We have subleased capacity on the towers from American Tower for a minimum of 10 years at current market rates, with options to renew. Under this agreement, total rent payments for the towers amounted to \$0.3 billion for both the years ended December 31, 2018 and 2017. We expect to make minimum future lease payments of approximately \$1.8 billion. We continue to include the towers in Property, plant and equipment, net in our consolidated balance sheets and depreciate them accordingly. Towers related to this transaction that were included in Property, plant and equipment, net, amounted to \$0.4 billion for both the years ended December 31, 2018 and 2017. In addition, the minimum future payments for the ground leases of approximately \$2.5 billion is included in our operating lease commitments. As part of the rights obtained during the transaction, American Tower is responsible for the payment of the leases, and we do not expect to be required to make payments unless American Tower defaults.

Note 7. Debt

Outstanding long-term debt obligations as of December 31, 2018 are as follows:

		(dollars in millions)		
At December 31,	Interest Rates%	Maturities	2018	2017
Verizon Communications	1.38 – 4.00	2018 – 2042	\$ 29,651	\$ 31,370
	4.05 – 5.51	2020 – 2055	66,230	67,906
	5.82 – 6.90	2026 – 2054	5,658	5,835
	7.35 – 8.95	2029 – 2039	1,076	1,106
	Floating	2018 – 2025	4,657	6,684
VerizonWireless	6.80 – 7.88	2029 – 2032	234	234
Telephone subsidiaries – debentures	5.13 – 6.50	2028 – 2033	226	226
	7.38 – 7.88	2022 – 2032	341	341
	8.00 – 8.75	2022 – 2031	229	229
Other subsidiaries – notes payable, debentures and other	6.70 – 8.75	2018 – 2028	444	748
VerizonWireless and other subsidiaries – asset-backed debt	1.42 – 3.55	2021 – 2023	7,962	6,293
	Floating	2021 – 2023	2,139	2,620
Capital lease obligations (average rate of 4.1% and 3.6% in 2018 and 2017, respectively)			905	1,020
Unamortized discount, net of premium			(6,298)	(7,133)
Unamortized debt issuance costs			(541)	(534)
Total long-term debt, including current maturities			112,913	116,945
Less long-term debt maturing within one year			7,040	3,303
Total long-term debt			\$ 105,873	\$ 113,642
Total long-term debt, including current maturities			\$ 112,913	\$ 116,945
Plus short-term notes payable			150	150
Total debt			\$ 113,063	\$ 117,095

Maturities of long-term debt (secured and unsecured) outstanding, including current maturities, excluding unamortized debt issuance costs, at December 31, 2018 are as follows:

Years	(dollars in millions)
2019	\$ 7,058
2020	7,380
2021	6,999
2022	7,674
2023	5,903
Thereafter	78,439

During 2018, we received \$10.8 billion of proceeds from long-term borrowings, which included \$4.8 billion of proceeds from asset-backed debt transactions. The net proceeds were used for general corporate purposes including the repayment of debt. We used \$14.6 billion to repay long-term borrowings and capital lease obligations, including \$3.6 billion to prepay and repay asset-backed, long-term borrowings.

During 2017, we received \$32.0 billion of proceeds from long-term borrowings, which included \$4.3 billion of proceeds from asset-backed debt transactions. The net proceeds were used for general corporate purposes including the repayment of debt. We used \$24.2 billion to repay long-term borrowings and capital lease obligations, including \$0.4 billion to prepay asset-backed, long-term borrowings.

2018 Significant Debt Transactions

Tender Offers

(dollars in millions)	Principal Amount Purchased	Cash Consideration ⁽¹⁾
Verizon 1.750% – 5.012% notes due 2021-2055	\$ 2,881	\$ 2,829
Verizon 3.850% – 5.012% notes due 2039-2055	1,876	1,787
Total	\$ 4,757	\$ 4,616

(1) In addition to the purchase price, any accrued and unpaid interest on the purchased notes was paid to the date of purchase.

Exchange Offers and Cash Offers

(dollars in millions)	Principal Amount Exchanged/ Purchased	Principal Amount Issued/ Cash Paid in Exchange
Verizon 1.750% – 5.150% and floating rate notes due 2020 – 2024	\$ 4,633	\$ –
Verizon 4.329% notes due 2028		4,252
Cash paid in exchange and cash offer		539 ⁽¹⁾
Total	\$ 4,633	\$ 4,791

(1) In addition to the purchase price, any accrued and unpaid interest on the purchased notes was paid to the date of purchase.

Debt Redemptions, Repurchases and Repayments

(dollars in millions)	Principal Amount Redeemed/ Repurchased	% of Principal Paid
Verizon floating rate (LIBOR + 1.372%) notes due 2025	\$ 2,500	100.000%
Open market repurchase of various Verizon notes	1,481	Various
Verizon 2.550% notes due 2019	213	100.000%
Total	\$ 4,194	

In 2018, we also repaid \$0.4 billion for a Verizon floating rate note that matured in September 2018.

During February 2019, we notified investors of our intention to redeem in March 2019 in whole \$0.5 billion aggregate principal amount of 5.900% notes due 2054.

Debt Issuances

(dollars in millions)	Principal Amount Issued	Net Proceeds ⁽¹⁾
Verizon 5.320% notes due 2053	\$ 730	\$ 725
Verizon floating rate (LIBOR + 1.100%) notes due 2025	1,789	1,782
Verizon retail notes	338	328
Total	\$ 2,857	\$ 2,835

(1) Net proceeds were net of discount and issuance costs.

In February 2019, we issued \$1.0 billion aggregate principal amount of 3.875% notes due 2029, which we refer to as the “green bond.” An amount equal to the net proceeds from the green bond will be used to fund, in whole or in part, “Eligible Green Investments.” “Eligible Green Investments” include new and existing investments made by us during the period from two years prior to the issuance of the green bond through the maturity date of the green bond, in the following categories: (1) renewable energy; (2) energy efficiency; (3) green buildings; (4) sustainable water management; and (5) biodiversity and conservation.

Asset-Backed Debt

As of December 31, 2018, the carrying value of our asset-backed debt was \$10.1 billion. Our asset-backed debt includes notes (the Asset-Backed Notes) issued to third-party investors (Investors) and loans (ABS Financing Facilities) received from banks and their conduit facilities (collectively, the Banks). Our consolidated asset-backed debt bankruptcy remote legal entities (each, an ABS Entity or collectively, the ABS Entities) issue the debt or are otherwise party to the transaction documentation in connection with our asset-backed debt transactions. Under the terms of our asset-backed debt, we transfer device payment plan agreement receivables from Cellco Partnership (Cellco) and certain other affiliates of Verizon (collectively, the Originators) to one of the ABS Entities, which in turn transfers such receivables to another ABS Entity that issues the debt. Verizon entities retain the equity interests in the ABS Entities, which represent the rights to all funds not needed to make required payments on the asset-backed debt and other related payments and expenses.

Our asset-backed debt is secured by the transferred device payment plan agreement receivables and future collections on such receivables. The device payment plan agreement receivables transferred to the ABS Entities and related assets, consisting primarily of restricted cash, will only be available for payment of asset-backed debt and expenses related thereto, payments to the Originators in respect of additional transfers of device payment plan agreement receivables, and other obligations arising from our asset-backed debt transactions, and will not be available to pay other obligations or claims of Verizon's creditors until the associated asset-backed debt and other obligations are satisfied. The Investors or Banks, as applicable, which hold our asset-backed debt have legal recourse to the assets securing the debt, but do not have any recourse to Verizon with respect to the payment of principal and interest on the debt. Under a parent support agreement, Verizon has agreed to guarantee certain of the payment obligations of Cellco and the Originators to the ABS Entities.

Cash collections on the device payment plan agreement receivables collateralizing our asset-backed debt securities are required at certain specified times to be placed into segregated accounts. Deposits to the segregated accounts are considered restricted cash and are included in Prepaid expenses and other, and Other assets in our consolidated balance sheets.

Proceeds from our asset-backed debt transactions are reflected in Cash flows from financing activities in our condensed consolidated statements of cash flows. The asset-backed debt issued and the assets securing this debt are included in our consolidated balance sheets.

Asset-Backed Notes

In 2018, we completed the following major Asset-Backed Notes transactions:

	Interest Rates%	Expected Weighted-average Life to Maturity	(dollars in millions) Principal Amount Issued
March			
A-1a Senior class notes	2.820	2.49	\$ 725
A-1b Senior floating rate class notes	0.260 ⁽¹⁾	2.49	275
B Junior class notes	3.050	3.14	91
C Junior class notes	3.200	3.36	92
March total			1,183
October			
A-1a Senior class notes	3.230	2.51	1,226
A-1b Senior floating rate class notes	0.240 ⁽¹⁾	2.51	200
B Junior class notes	3.380	3.24	98
C Junior class notes	3.550	3.41	76
October total			1,600
Total			\$ 2,783

(1) Rate is the percentage presented plus one-month London Interbank Offered Rate (LIBOR), which will be reset monthly. The applicable one-month LIBOR rate at December 31, 2018 was 2.520%

Under the terms of each series of Asset-Backed Notes, there is a two year revolving period during which we may transfer additional receivables to the ABS Entity. The two year revolving period of the Asset-Backed Notes we issued in July 2016 and November 2016 ended in July 2018 and November 2018 respectively, and we began to repay principal on the 2016-1 Class A senior Asset-Backed Notes and the 2016-2 Class A senior Asset-Backed Notes in August 2018 and December 2018, respectively. During 2018, we made aggregate repayments of \$0.6 billion.

ABS Financing Facility

In May 2018, we entered into a second device payment plan agreement financing facility with a number of financial institutions (2018 ABS Financing Facility). Under the terms of the 2018 ABS Financing Facility, the financial institutions made advances under asset-backed loans backed by device payment plan agreement receivables of business customers for proceeds of \$0.5 billion. The loan agreement entered into in connection with the 2018 ABS Financing Facility has a final maturity date in December 2021 and bears interest at a floating rate. There is a one year revolving period beginning from May 2018 during which we may transfer additional receivables to the ABS Entity. Subject to certain conditions, we may also remove receivables from the ABS Entity. Under the loan agreement, we have the right to prepay all or a portion of the advances at any time without penalty, but in certain cases, with breakage costs. If we choose to prepay, the amount prepaid shall be available for further drawdowns until May 2019, except in certain circumstances. As of December 31, 2018, the 2018 ABS Financing Facility is fully drawn and the outstanding borrowing under the 2018 ABS Financing Facility was \$0.5 billion.

We entered into an ABS Financing Facility in September 2016 with a number of financial institutions (2016 ABS Financing Facility). Under the terms of the 2016 ABS Financing Facility, the financial institutions made advances under asset-backed loans backed by device payment plan agreement receivables of consumer customers. Two loan agreements were entered into in connection with the 2016 ABS Financing Facility in September 2016 and May 2017. The loan agreements have a final maturity date in March 2021 and bear interest at floating rates. The two year revolving period of the two loan agreements ended in September 2018. Under the loan agreements, we have the right to prepay all or a portion of the advances at any time without penalty, but in certain cases, with breakage costs. Subject to certain conditions, we may also remove receivables from the ABS Entity. As a result of a \$1.5 billion drawdown and an aggregate amount of \$3.0 billion of prepayments and repayments, aggregate outstanding borrowings under the two loans agreements were \$0.9 billion as of December 31, 2018.

Variable Interest Entities

The ABS Entities meet the definition of a VIE for which we have determined that we are the primary beneficiary as we have both the power to direct the activities of the entity that most significantly impact the entity's performance and the obligation to absorb losses or the right to receive benefits of the entity. Therefore, the assets, liabilities and activities of the ABS Entities are consolidated in our financial results and are included in amounts presented on the face of our consolidated balance sheets.

The assets and liabilities related to our asset-backed debt arrangements included in our consolidated balance sheets were as follows:

At December 31,	(dollars in millions)	
	2018	2017
Assets		
Accounts receivable, net	\$ 8,861	\$ 8,101
Prepaid expenses and other	989	636
Other Assets	2,725	2,680
Liabilities		
Accounts payable and accrued liabilities	7	5
Debt maturing within one year	5,352	1,932
Long-term debt	4,724	6,955

See Note 8 for additional information on device payment plan agreement receivables used to secure asset-backed debt.

Credit Facilities

In April 2018, we amended our \$9.0 billion credit facility to increase the capacity to \$9.5 billion and extend its maturity to April 4, 2022. As of December 31, 2018, the unused borrowing capacity under our \$9.5 billion credit facility was approximately \$9.4 billion. The credit facility does not require us to comply with financial covenants or maintain specified credit ratings, and it permits us to borrow even if our business has incurred a material adverse change. We use the credit facility for the issuance of letters of credit and for general corporate purposes.

In March 2016, we entered into a \$1.0 billion credit facility insured by Eksportkreditnämnden Stockholm, Sweden, the Swedish export credit agency. As of December 31, 2018, the outstanding balance was \$0.7 billion. We used this credit facility to finance network equipment-related purchases.

In July 2017, we entered into credit facilities insured by various export credit agencies providing us with the ability to borrow up to \$4.0 billion to finance equipment-related purchases. The facilities have borrowings available, portions of which extend through October 2019, contingent upon the amount of eligible equipment-related purchases that we make. During 2018, we drew down \$3.0 billion from these facilities, and \$2.8 billion remained outstanding as of December 31, 2018. In January 2019, we drew down an additional \$0.4 billion from these facilities.

Non-Cash Transaction

During the years ended December 31, 2018, 2017 and 2016, we financed, primarily through vendor financing arrangements, the purchase of approximately \$1.1 billion, \$0.5 billion, and \$0.5 billion respectively, of long-lived assets consisting primarily of network equipment. At December 31, 2018 and December 31, 2017, \$1.1 billion and \$1.2 billion, respectively, relating to these financing arrangements, including those entered into in prior years and liabilities assumed through acquisitions, remained outstanding. These purchases are non-cash financing activities and therefore not reflected within Capital expenditures in our consolidated statements of cash flows.

Early Debt Redemptions

During 2018 and 2017, we recorded losses on early debt redemptions of \$0.7 billion and \$2.0 billion, respectively.

We recognize losses on early debt redemptions in Other income (expense), net, in our consolidated statements of income and within our Net cash used in financing activities in our consolidated statements of cash flows.

Guarantees

We guarantee the debentures of our operating telephone company subsidiaries. As of December 31, 2018, \$0.8 billion aggregate principal amount of these obligations remained outstanding. Each guarantee will remain in place for the life of the obligation unless terminated pursuant to its terms, including the operating telephone company no longer being a wholly-owned subsidiary of Verizon.

We also guarantee the debt obligations of GTE LLC, as successor in interest to GTE Corporation, that were issued and outstanding prior to July 1, 2003. As of December 31, 2018, \$0.4 billion aggregate principal amount of these obligations remain outstanding.

Debt Covenants

We and our consolidated subsidiaries are in compliance with all of our restrictive covenants in our debt agreements.

Note 8. Wireless Device Payment Plans

Under the Verizon device payment program, our eligible wireless customers purchase wireless devices under a device payment plan agreement. Customers that activate service on devices purchased under the device payment program pay lower service fees as compared to those under our fixed-term service plans, and their device payment plan charge is included on their wireless monthly bill. As of January 2017, we no longer offer consumers new fixed-term subsidized service plans for phones; however, we continue to offer subsidized plans to our business customers, and we also continue to service existing fixed-term subsidized plans for consumers who have not yet purchased and activated devices under the Verizon device payment program.

Wireless Device Payment Plan Agreement Receivables

The following table displays device payment plan agreement receivables, net, that continue to be recognized in our consolidated balance sheets:

	(dollars in millions)	
At December 31,	2018	2017
Device payment plan agreement receivables, gross	\$ 19,313	\$ 17,770
Unamortized imputed interest	(546)	(821)
Device payment plan agreement receivables, net of unamortized imputed interest	18,767	16,949
Allowance for credit losses	(597)	(848)
Device payment plan agreement receivables, net	\$ 18,170	\$ 16,101
Classified in our consolidated balance sheets:		
Accounts receivable, net	\$ 12,624	\$ 11,064
Other assets	5,546	5,037
Device payment plan agreement receivables, net	\$ 18,170	\$ 16,101

Included in our device payment plan agreement receivables, net at December 31, 2018 and December 31, 2017, are net device payment plan agreement receivables of \$11.5 billion and \$10.7 billion, respectively, that have been transferred to ABS Entities and continue to be reported in our consolidated balance sheet. See Note 7 for additional information. We believe the carrying value of our installment loans receivables approximate their fair value using a Level 3 expected cash flow model.

We may offer certain promotions that allow a customer to trade in their owned device in connection with the purchase of a new device. Under these types of promotions, the customer receives a credit for the value of the trade-in device. In addition, we may provide the customer with additional future credits that will be applied against the customer's monthly bill as long as service is maintained. We recognize a liability for the trade-in device measured at fair value, which is determined by considering several factors, including the weighted-average selling prices obtained in recent resales of similar devices eligible for trade-in. Future credits are recognized when earned by the customer. Device payment plan agreement receivables, net does not reflect the trade-in device liability. At December 31, 2018 and December 31, 2017, the amount of trade-in liability was \$0.1 billion and insignificant, respectively.

From time to time, we offer certain marketing promotions that allow our customers to upgrade to a new device after paying down a certain specified portion of the required device payment plan agreement amount as well as trading in their device in good working order. When a customer enters into a device payment plan agreement with the right to upgrade to a new device, we account for this trade-in right as a guarantee obligation.

For Wireless indirect channel contracts with customers, we impute risk adjusted interest on the device payment plan agreement receivables. We record the imputed interest as a reduction to the related accounts receivable. Interest income, which is included within Service revenues and other in our consolidated statements of income, is recognized over the financed device payment term. See Note 2 for additional information on financing considerations with respect to Wireless direct channel contracts with customers.

When originating device payment plan agreements, we use internal and external data sources to create a credit risk score to measure the credit quality of a customer and to determine eligibility for the device payment program. If a customer is either new to Verizon Wireless or has less than 210 days of customer tenure with Verizon Wireless (a new customer), the credit decision process relies more heavily on external data sources. If the customer has 210 days or more of customer tenure with Verizon Wireless (an existing customer), the credit decision process relies on internal data sources. Verizon Wireless' experience has been that the payment attributes of longer tenured customers are highly predictive for estimating their reliability to make future payments. External data sources include obtaining a credit report from a national consumer credit reporting agency, if available. Verizon Wireless uses its internal data and/or credit data obtained from the credit reporting agencies to create a custom credit risk score. The custom credit risk score is generated automatically (except with respect to a small number of applications where the information needs manual intervention) from the applicant's credit data using Verizon Wireless' proprietary custom credit models, which are empirically derived, demonstrably and statistically sound. The credit risk score measures the likelihood that the potential customer will become severely delinquent and be disconnected for non-payment. For a small portion of new customer applications, a traditional credit report is not available from one of the national credit reporting agencies because the potential customer does not have sufficient credit history. In those instances, alternate credit data is used for the risk assessment.

Based on the custom credit risk score, we assign each customer to a credit class, each of which has specified offers of credit including an account level spending limit and either a maximum amount of credit allowed per device or a required down payment percentage. During the fourth quarter of 2018 Verizon Wireless moved all customers, new and existing, from a required down payment percentage, between zero and 100%, to a maximum amount of credit per device.

Subsequent to origination, Verizon Wireless monitors delinquency and write-off experience as key credit quality indicators for its portfolio of device payment plan agreements and fixed-term service plans. The extent of our collection efforts with respect to a particular customer are based on the results of proprietary custom empirically derived internal behavioral scoring models that analyze the customer's past performance to predict the likelihood of the customer falling further delinquent. These customer scoring models assess a number of variables, including origination characteristics, customer account history and payment patterns. Based on the score derived from these models, accounts are grouped by risk category to determine the collection strategy to be applied to such accounts. We continuously monitor collection performance results and the credit quality of our device payment plan agreement receivables based on a variety of metrics, including aging. Verizon Wireless considers an account to be delinquent and in default status if there are unpaid charges remaining on the account on the day after the bill's due date.

The balance and aging of the device payment plan agreement receivables on a gross basis was as follows:

	(dollars in millions)	
At December 31,	2018	2017
Unbilled	\$ 18,043	\$ 16,591
Billed:		
Current	986	975
Past due	284	204
Device payment plan agreement receivables, gross	\$ 19,313	\$ 17,770

Activity in the allowance for credit losses for the device payment plan agreement receivables was as follows:

	(dollars in millions)	
	2018	2017
Balance at January 1,	\$ 848	\$ 688
Bad debt expense	459	718
Write-offs	(710)	(558)
Balance at December 31,	\$ 597	\$ 848

Sales of Wireless Device Payment Plan Agreement Receivables

In 2015 and 2016, we established programs pursuant to a Receivables Purchase Agreement (RPA) to sell from time to time, on an uncommitted basis, eligible device payment plan agreement receivables to a group of primarily relationship banks (Purchasers) on both a revolving and non-revolving basis, collectively the Programs. In December 2017, the RPA and all other related transaction documents were terminated. Under the Programs, eligible device payment plan agreement receivables were transferred to the Purchasers for upfront cash proceeds and additional consideration upon settlement of the receivables, referred to as the deferred purchase price.

There were no sales of device payment plan agreement receivables under the Programs during 2017. During 2016, we sold \$3.3 billion of receivables, net of allowance and imputed interest, under the Revolving Program. We received cash proceeds from new transfers of \$2.0 billion and cash proceeds from reinvested collections of \$0.9 billion and recorded a deferred purchase price of \$0.4 billion.

The sales of receivables under the RPA did not have a significant impact on our consolidated statements of income. The cash proceeds received from the Purchasers were recorded within Cash flows provided by operating activities in our consolidated statements of cash flows.

Deferred Purchase Price

The deferred purchase price was initially recorded in our consolidated balance sheets as an Other asset at fair value, based on the remaining device payment amounts expected to be collected, adjusted, as applicable, for the time value of money and by the timing and estimated value of the device trade-in in connection with upgrades. The estimated value of the device trade-in considered prices expected to be offered to us by independent third parties. This estimate contemplated changes in value after the launch of a device. The fair value measurements were considered to be Level 3 measurements within the fair value hierarchy. The collection of the deferred purchase price was contingent on collections from customers. During 2017, we repurchased all outstanding receivables previously sold to the Purchasers in exchange for the obligation to pay the associated deferred purchase price to the wholly-owned subsidiaries that were bankruptcy remote special purpose entities (Sellers). At December 31, 2017, our deferred purchase price receivable was fully satisfied.

Collections following the repurchase of receivables were \$0.2 billion during both 2018 and 2017. Collections of deferred purchase price were \$1.4 billion during 2017 and \$1.1 billion during 2016. These collections were recorded in Cash flows used in investing activities in our consolidated statement of cash flows.

Variable Interest Entities

As the Programs were terminated in December 2017, VIEs related to the sale of wireless device payment plan receivables did not exist at December 31, 2018 or December 31, 2017.

During 2017, under the RPA, the Sellers' sole business consisted of the acquisition of the receivables from Cellco and certain other affiliates of Verizon and the resale of the receivables to the Purchasers. The assets of the Sellers were not available to be used to satisfy obligations of any Verizon entities other than the Sellers. We determined that the Sellers were VIEs as they lack sufficient equity to finance their activities. Given that we had the power to direct the activities of the Sellers that most significantly impact the Sellers' economic performance, we were deemed to be the primary beneficiary of the Sellers. As a result, we consolidated the assets and liabilities of the Sellers into our consolidated financial statements.

Continuing Involvement

At December 31, 2018 and 2017, the total portfolio of device payment plan agreement receivables that we were servicing was \$19.3 billion and \$17.8 billion, respectively. There were no derecognized device payment plan agreement receivables outstanding at December 31, 2017. As of December 31, 2017, we have collected and remitted approximately \$10.1 billion, net of fees and no amounts remained to be remitted to the Purchasers.

During the year ended December 31, 2017, Verizon had continuing involvement with the sold receivables as it serviced the receivables. We continued to service the customer and their related receivables on behalf of the Purchasers, including facilitating customer payment collection, in exchange for a monthly servicing fee. While servicing the receivables, the same policies and procedures were applied to the sold receivables that applied to owned receivables, and we continued to maintain normal relationships with our customers. The credit quality of the customers we continued to service was consistent throughout the periods presented.

In addition, we had continuing involvement related to the sold receivables as we were responsible for absorbing additional credit losses pursuant to the agreements. Credit losses on receivables sold were \$0.1 billion during 2017.

Note 9. Fair Value Measurements and Financial Instruments

Recurring Fair Value Measurements

The following table presents the balances of assets and liabilities measured at fair value on a recurring basis as of December 31, 2018:

	(dollars in millions)			
	Level 1 ⁽¹⁾	Level 2 ⁽²⁾	Level 3 ⁽³⁾	Total
Assets:				
Other assets:				
Fixed income securities	\$ –	\$ 405	\$ –	\$ 405
Interest rate swaps	–	3	–	3
Cross currency swaps	–	220	–	220
Interest rate caps	–	14	–	14
Total	\$ –	\$ 642	\$ –	\$ 642
Liabilities:				
Other liabilities:				
Interest rate swaps	\$ –	\$ 813	\$ –	\$ 813
Cross currency swaps	–	536	–	536
Forward starting interest rate swaps	–	60	–	60
Interest rate caps	–	4	–	4
Total	\$ –	\$ 1,413	\$ –	\$ 1,413

The following table presents the balances of assets and liabilities measured at fair value on a recurring basis as of December 31, 2017:

	(dollars in millions)			
	Level 1 ⁽¹⁾	Level 2 ⁽²⁾	Level 3 ⁽³⁾	Total
Assets:				
Other assets:				
Equity securities	\$ 74	\$ –	\$ –	\$ 74
Fixed income securities	–	366	–	366
Interest rate swaps	–	54	–	54
Cross currency swaps	–	450	–	450
Interest rate caps	–	6	–	6
Total	\$ 74	\$ 876	\$ –	\$ 950
Liabilities:				
Other liabilities:				
Interest rate swaps	\$ –	\$ 413	\$ –	\$ 413
Cross currency swaps	–	46	–	46
Total	\$ –	\$ 459	\$ –	\$ 459

- (1) Quoted prices in active markets for identical assets or liabilities
 (2) Observable inputs other than quoted prices in active markets for identical assets and liabilities
 (3) Unobservable pricing inputs in the market

Equity securities measured at fair value on a recurring basis consist of investments in common stock of domestic and international corporations measured using quoted prices in active markets. Equity securities in the table above excludes certain of our equity investments, which were previously accounted for under the cost method, as they do not have readily determinable fair values. Beginning January 1, 2018 these investments have been measured using a quantitative approach under the practicability exception offered by ASU 2016-01. Such investments are measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer and are included in Investments in unconsolidated businesses in our consolidated balance sheets. As of December 31, 2018, the carrying amount of our investments without readily determinable fair values was \$0.2 billion. During 2018, there were insignificant adjustments due to observable price changes and we recognized an insignificant impairment charge.

Fixed income securities consist primarily of investments in municipal bonds. For fixed income securities that do not have quoted prices in active markets, we use alternative matrix pricing resulting in these debt securities being classified as Level 2.

Derivative contracts are valued using models based on readily observable market parameters for all substantial terms of our derivative contracts and thus are classified within Level 2. We use mid-market pricing for fair value measurements of our derivative instruments. Our derivative instruments are recorded on a gross basis.

We recognize transfers between levels of the fair value hierarchy as of the end of the reporting period. There were no transfers between Level 1 and Level 2 during 2018 and 2017.

Fair Value of Short-term and Long-term Debt

The fair value of our debt is determined using various methods, including quoted prices for identical terms and maturities, which is a Level 1 measurement, as well as quoted prices for similar terms and maturities in inactive markets and future cash flows discounted at current rates, which are Level 2 measurements. The fair value of our short-term and long-term debt, excluding capital leases, was as follows:

		(dollars in millions)			
At December 31,		2018		2017	
		Carrying Amount	Fair Value	Carrying Amount	Fair Value
Short- and long-term debt, excluding capital leases		\$ 112,159	\$ 118,535	\$ 116,075	\$ 128,658

Derivative Instruments

The following table sets forth the notional amounts of our outstanding derivative instruments:

At December 31,	(dollars in millions)	
	2018	2017
Interest rate swaps	\$ 19,813	\$ 20,173
Cross currency swaps	16,638	16,638
Forward starting interest rate swaps	4,000	—
Interest rate caps	2,218	2,840
Foreign exchange forwards	600	—

Interest Rate Swaps

We enter into interest rate swaps to achieve a targeted mix of fixed and variable rate debt. We principally receive fixed rates and pay variable rates based on the LIBOR, resulting in a net increase or decrease to Interest expense. These swaps are designated as fair value hedges and hedge against interest rate risk exposure of designated debt issuances. We record the interest rate swaps at fair value in our consolidated balance sheets as assets and liabilities. Changes in the fair value of the interest rate swaps are recorded to Interest expense, which are offset by changes in the fair value of the hedged debt due to changes in interest rates.

During 2018, we entered into interest rate swaps with a total notional value of \$0.7 billion and settled interest rate swaps with a total notional value of \$1.1 billion. During 2017, we entered into interest rate swaps with a total notional value of \$7.5 billion and settled interest rate swaps with a total notional value of \$0.5 billion.

The ineffective portion of these interest rate swaps was insignificant for the years ended December 31, 2018 and 2017.

The following amounts were recorded in Long-term debt in our consolidated balance sheets related to cumulative basis adjustments for fair value hedges:

At December 31,	(dollars in millions)	
	2018	2017
Carrying amount of hedged liabilities	\$ 18,903	\$ 19,723
Cumulative amount of fair value hedging adjustment included in the carrying amount of the hedged liabilities	(785)	(316)

Cross Currency Swaps

We have entered into cross currency swaps designated as cash flow hedges to exchange our British Pound Sterling, Euro, Swiss Franc and Australian Dollar-denominated cash flows into U.S. dollars and to fix our cash payments in U.S. dollars, as well as to mitigate the impact of foreign currency transaction gains or losses.

During 2018, a pre-tax loss of \$0.7 billion was recognized in Other comprehensive income (loss) with respect to these swaps.

During 2017, we entered into cross currency swaps with a total notional value of \$14.0 billion and settled \$10.2 billion notional amount of cross currency swaps. A pre-tax gain of \$1.4 billion was recognized in Other comprehensive income (loss) with respect to these swaps.

A portion of the gains and losses recognized in Other comprehensive income (loss) was reclassified to Other income (expense), net to offset the related pre-tax foreign currency transaction gain or loss on the underlying hedged item.

Forward Starting Interest Rate Swaps

We have entered into forward starting interest rate swaps designated as cash flow hedges in order to manage our exposure to interest rate changes on future forecasted transactions.

During 2018, we entered into forward starting interest rate swaps with a total notional value of \$4.0 billion. During 2018, a pre-tax loss of \$0.1 billion was recognized in Other comprehensive income (loss).

We hedge our exposure to the variability in future cash flows of based on the expected maturities of the related forecasted debt issuance.

Net Investment Hedges

We have designated certain foreign currency instruments as net investment hedges to mitigate foreign exchange exposure related to non-U.S. dollar net investments in certain foreign subsidiaries against changes in foreign exchange rates. The notional amount of the Euro-denominated debt as a net investment hedge was \$0.8 billion and \$0.9 billion at December 31, 2018 and 2017, respectively.

Undesignated Derivatives

We also have the following derivative contracts which we use as economic hedges but for which we have elected not to apply hedge accounting.

Interest Rate Caps

We enter into interest rate caps to mitigate our interest exposure to interest rate increases on our ABS Financing Facility and Asset-Backed Notes. During 2017, we entered into interest rate caps with a notional value of \$0.3 billion. During both 2018 and 2017, we recognized an insignificant amount in Interest expense.

Foreign Exchange Forwards

We enter into British Pound Sterling and Euro foreign exchange forwards to mitigate our foreign exchange rate risk related to non-functional currency denominated monetary assets and liabilities of international subsidiaries. During 2018, we entered into foreign exchange forwards with a total notional value of \$2.8 billion and settled foreign exchange forwards with a total notional value of \$2.2 billion.

Treasury Rate Locks

We entered into treasury rate locks with a total notional value of \$2.0 billion to hedge the tender offers conducted in September 2018 for eight series of notes issued by Verizon with coupon rates ranging from 3.850% to 5.012% and maturity dates ranging from 2039 to 2055 (September Tender Offers). Upon the early settlement of the September Tender Offers, we settled these hedges. During 2018, we recognized an insignificant loss related to treasury rate locks in Other income (expense), net.

Concentrations of Credit Risk

Financial instruments that subject us to concentrations of credit risk consist primarily of temporary cash investments, short-term and long-term investments, trade receivables, including device payment plan agreement receivables, certain notes receivable, including lease receivables and derivative contracts.

Counterparties to our derivative contracts are major financial institutions with whom we have negotiated derivatives agreements (ISDA master agreements) and credit support annex (CSA) agreements which provide rules for collateral exchange. Our CSA agreements entered into prior to the fourth quarter of 2017 generally require collateralized arrangements with our counterparties in connection with uncleared derivatives. During 2017, we paid an insignificant amount of cash to extend amendments to certain of our collateral exchange arrangements, which eliminated the requirement to post collateral for a specified period of time. Additionally, during the fourth quarter of 2017, we began negotiating and executing new ISDA master agreements and CSA agreements with our counterparties. The negotiations and executions of new agreements continued in 2018. The newly executed CSA agreements contain rating based thresholds such that we or our counterparties may be required to hold or post collateral based upon changes in outstanding positions as compared to established thresholds and changes in credit ratings. At December 31, 2018, we posted collateral of approximately \$0.1 billion related to derivative contracts under collateral exchange arrangements, which were recorded as Prepaid expenses and other in our consolidated balance sheet. We did not post any collateral at December 31, 2017. While we may be exposed to credit losses due to the nonperformance of our counterparties, we consider the risk remote and do not expect that any such nonperformance would result in a significant effect on our results of operations or financial condition due to our diversified pool of counterparties.

Note 10. Stock-Based Compensation

Verizon Long-Term Incentive Plan

In May 2017, Verizon's shareholders approved the 2017 Long-Term Incentive Plan (the 2017 Plan) and terminated Verizon's authority to grant new awards under the Verizon 2009 Long-Term Incentive Plan (the 2009 Plan). The 2017 Plan provides for broad-based equity grants to employees, including executive officers, and permits the granting of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance stock units and other awards. Upon approval of the 2017 Plan, Verizon reserved the number of shares that were remaining but not issued under the 2009 Plan. Shares subject to outstanding awards under the 2009 Plan that expire, are canceled or otherwise terminated will also be available for the awards under the 2017 Plan. As of December 31, 2018, 89 million shares are reserved for future issuance under the 2017 Plan.

Restricted Stock Units

Restricted Stock Units (RSUs) granted under the 2017 Plan generally vest in three equal installments on each anniversary of the grant date. The RSUs that are paid in stock upon vesting and are thus classified as equity awards are measured using the grant date fair value of Verizon common stock and are not remeasured at the end of each reporting period. The RSUs that are settled in cash are classified as liability awards and the liability is measured at its fair value at the end of each reporting period. All RSUs granted under the 2017 Plan have dividend equivalent units, which will be paid to participants at the time the RSU award is paid, and in the same proportion as the RSU award.

In February 2018, Verizon announced a broad-based employee special award of RSUs under the 2017 Plan to eligible full-time and part-time employees. These RSUs will vest in two equal installments on each anniversary of the grant date, and will be paid in cash.

In connection with our acquisition of Yahoo's operating business, on the closing date of the Transaction each unvested and outstanding Yahoo RSU award that was held by an employee who became an employee of Verizon was replaced with a Verizon RSU award, which is generally payable in cash upon the applicable vesting date. These awards are classified as liability awards and are measured at fair value at the end of each reporting period.

Performance Stock Units

The 2017 Plan also provides for grants of Performance Stock Units (PSUs) that generally vest at the end of the third year after the grant. As defined by the 2017 Plan, the Human Resources Committee of the Board of Directors determines the number of PSUs a participant earns based on the extent to which the corresponding performance goals have been achieved over the three-year performance cycle. The PSUs are classified as liability awards because the PSU awards are paid in cash upon vesting. The PSU award liability is measured at its fair value at the end of each reporting period and, therefore, will fluctuate based on the price of Verizon common stock as well as performance relative to the targets. All PSUs granted under the 2017 Plan have dividend equivalent units, which will be paid to participants at the time that PSU award is determined and paid, and in the same proportion as the PSU award. The granted and cancelled activity for the PSU award includes adjustments for the performance goals achieved.

The following table summarizes Verizon's Restricted Stock Unit and Performance Stock Unit activity:

(shares in thousands)	Restricted Stock Units		
	Equity Awards	Liability Awards	Performance Stock Units
Outstanding January 1, 2016	13,903	—	17,203
Granted	4,409	—	6,391
Payments	(4,890)	—	(4,702)
Cancelled/Forfeited	(114)	—	(1,143)
Outstanding Adjustments	—	—	170
Outstanding December 31, 2016	13,308	—	17,919
Granted	4,216	25,168	6,564
Payments	(4,825)	(8,487)	(6,031)
Cancelled/Forfeited	(66)	(2,690)	(217)
Outstanding December 31, 2017	12,633	13,991	18,235
Granted	4,134	15,157	5,779
Payments	(5,977)	(6,860)	(4,526)
Cancelled/Forfeited	(213)	(2,362)	(2,583)
Outstanding December 31, 2018	10,577	19,926	16,905

As of December 31, 2018, unrecognized compensation expense related to the unvested portion of Verizon's RSUs and PSUs was approximately \$1.1 billion and is expected to be recognized over approximately two years.

The equity RSUs granted in 2018 and 2017 have weighted-average grant date fair values of \$49.19 and \$49.93 per unit, respectively. During 2018, 2017 and 2016, we paid \$0.8 billion, \$0.8 billion and \$0.4 billion, respectively, to settle RSUs and PSUs classified as liability awards.

Stock-Based Compensation Expense

After-tax compensation expense for stock-based compensation related to RSUs and PSUs described above included in Net income attributable to Verizon was \$0.7 billion, \$0.4 billion and \$0.4 billion for 2018, 2017 and 2016, respectively.

Note 11. Employee Benefits

We maintain non-contributory defined benefit pension plans for certain employees. In addition, we maintain postretirement health care and life insurance plans for certain retirees and their dependents, which are both contributory and non-contributory, and include a limit on our share of the cost for certain recent and future retirees. In accordance with our accounting policy for pension and other postretirement benefits, operating expenses include pension and benefits related credits and/or charges based on actuarial assumptions, including projected discount rates, an estimated return on plan assets, and health care trend rates. These estimates are updated in the fourth quarter to reflect actual return on plan assets and updated actuarial assumptions or upon a remeasurement. The adjustment is recognized in the income statement during the fourth quarter or upon a remeasurement event pursuant to our accounting policy for the recognition of actuarial gains and losses.

Pension and Other Postretirement Benefits

Pension and other postretirement benefits for certain employees are subject to collective bargaining agreements. Modifications in benefits have been bargained from time to time, and we may also periodically amend the benefits in the management plans. The following tables summarize benefit costs, as well as the benefit obligations, plan assets, funded status and rate assumptions associated with pension and postretirement health care and life insurance benefit plans.

Obligations and Funded Status

At December 31,	Pension		(dollars in millions) Health Care and Life	
	2018	2017	2018	2017
Change in Benefit Obligations				
Beginning of year	\$ 21,531	\$ 21,112	\$ 19,460	\$ 19,650
Service cost	284	280	127	149
Interest cost	690	683	615	659
Plan amendments	230	—	(8)	(545)
Actuarial (gain) loss, net	(1,418)	1,377	(2,729)	627
Benefits paid	(1,475)	(1,932)	(1,101)	(1,080)
Curtailment and termination benefits	181	11	—	—
Settlements paid	(456)	—	—	—
End of year	19,567	21,531	16,364	19,460
Change in Plan Assets				
Beginning of year	19,175	14,663	1,119	1,363
Actual return on plan assets	(494)	2,342	(26)	134
Company contributions	1,066	4,141	1,183	702
Benefits paid	(1,475)	(1,932)	(1,101)	(1,080)
Settlements paid	(456)	—	—	—
Divestiture (Note 3)	—	(39)	—	—
End of year	17,816	19,175	1,175	1,119
Funded Status				
End of year	\$ (1,751)	\$ (2,356)	\$ (15,189)	\$ (18,341)

At December 31,	Pension		(dollars in millions) Health Care and Life	
	2018	2017	2018	2017
Amounts recognized on the balance sheet				
Noncurrent assets	\$ 3	\$ 21	\$ —	\$ —
Current liabilities	(71)	(63)	(292)	(637)
Noncurrent liabilities	(1,683)	(2,314)	(14,897)	(17,704)
Total	\$ (1,751)	\$ (2,356)	\$ (15,189)	\$ (18,341)
Amounts recognized in Accumulated Other Comprehensive Income (Pre-tax)				
Prior service cost (benefit)	\$ 585	\$ 404	\$ (4,698)	\$ (5,667)
Total	\$ 585	\$ 404	\$ (4,698)	\$ (5,667)

The accumulated benefit obligation for all defined benefit pension plans was \$19.6 billion and \$21.5 billion at December 31, 2018 and 2017, respectively.

2018 Collective Bargaining Negotiations

The extension agreement ratified in August 2018 extended our collective bargaining agreements with the Communications Workers of America and the International Brotherhood of Electrical Workers that were due to expire on August 3, 2019 for four years until August 5, 2023. The collective bargaining agreements cover approximately 34,000 employees. Amendments triggered by the collective bargaining negotiations were made to certain pension plans for certain union represented employees and retirees. The impact of the plan amendments was an increase in our defined benefit pension plans plan obligations and a net decrease to Accumulated other comprehensive income of \$0.2 billion (net of taxes of \$0.2 billion). The annual impact of the amount recorded in Accumulated other comprehensive income that will be reclassified to net periodic benefit cost is minimal.

2017 Postretirement Plan Amendments

During 2017, amendments were made to certain postretirement plans related to retiree medical benefits for management and certain union represented employees and retirees. The impact of the plan amendments was a reduction in our postretirement benefit plan obligations of approximately \$0.5 billion, which has been recorded as a net increase to Accumulated other comprehensive income of \$0.3 billion (net of taxes of \$0.2 billion). The impact of the amount recorded in Accumulated other comprehensive income that will be reclassified to net periodic benefit cost is insignificant.

2016 Collective Bargaining Negotiations

During 2016, we adopted changes to our defined benefit pension plans and other postretirement benefit plans to reflect the agreed upon terms and conditions of the collective bargaining agreements ratified in June 2016. The impact includes a net increase to Accumulated other comprehensive income of \$2.9 billion (net of taxes of \$1.8 billion). The amount recorded in Accumulated other comprehensive income will be reclassified to net periodic benefit cost on a straight-line basis over the average remaining service period of the respective plans' participants, which, on a weighted-average basis, is 12.2 years for defined benefit pension plans and 7.8 years for other postretirement benefit plans. The above-noted reclassification resulted in a decrease to net periodic benefit cost and increase to pre-tax income of approximately \$0.7 billion, \$0.7 billion and \$0.4 billion, respectively, during 2018, 2017 and 2016.

Information for pension plans with an accumulated benefit obligation in excess of plan assets follows:

At December 31,	(dollars in millions)	
	2018	2017
Projected benefit obligation	\$ 19,510	\$ 21,300
Accumulated benefit obligation	19,461	21,242
Fair value of plan assets	17,757	18,923

Net Periodic Benefit Cost (Income)

The following table summarizes the components of net periodic benefit cost (income) related to our pension and postretirement health care and life insurance plans:

Years Ended December 31,	Pension			(dollars in millions) Health Care and Life		
	2018	2017	2016	2018	2017	2016
Service cost – Cost of services	\$ 230	\$ 215	\$ 252	\$ 104	\$ 116	\$ 150
Service cost – Selling, general and administrative expense	54	65	70	23	33	43
Service cost	284	280	322	127	149	193
Amortization of prior service cost (credit)	48	39	21	(976)	(949)	(657)
Expected return on plan assets	(1,293)	(1,262)	(1,045)	(44)	(53)	(54)
Interest cost	690	683	677	615	659	746
Remeasurement loss (gain), net	369	337	1,198	(2,658)	546	1,300
Curtailment and termination benefits	181	11	4	–	–	–
Other components	(5)	(192)	855	(3,063)	203	1,335
Total	\$ 279	\$ 88	\$ 1,177	\$ (2,936)	\$ 352	\$ 1,528

The service cost component of net periodic benefit cost (income) is recorded in Cost of services and Selling, general and administrative expense in the consolidated statements of income while the other components, including mark-to-market adjustments, if any, are recorded in Other income (expense), net.

Other pre-tax changes in plan assets and benefit obligations recognized in other comprehensive (income) loss are as follows:

At December 31,	Pension			(dollars in millions) Health Care and Life		
	2018	2017	2016	2018	2017	2016
Prior service cost (benefit)	\$ 230	\$ –	\$ 428	\$ (8)	\$ (544)	\$ (5,142)
Reversal of amortization items						
Prior service (benefit) cost	(48)	(39)	(21)	976	949	657
Amounts reclassified to net income	–	–	87	–	–	451
Total recognized in other comprehensive loss (income) (pre-tax)	\$ 182	\$ (39)	\$ 494	\$ 968	\$ 405	\$ (4,034)

Amounts reclassified to net income for the year ended December 31, 2016 includes the reclassification to Selling, general and administrative expense of a pre-tax pension and postretirement benefit curtailment gain of \$0.5 billion (\$0.3 billion net of taxes) due to the transfer of employees to Frontier, which caused the elimination of a significant amount of future service in three of our defined benefit pension plans and one of our other postretirement benefit plans requiring us to recognize a portion of the prior service credits. See Note 3 for additional information.

The estimated prior service cost for the defined benefit pension plans that will be amortized from Accumulated other comprehensive income into net periodic benefit (income) cost over the next fiscal year is \$0.1 billion. The estimated prior service cost for the defined benefit postretirement plans that will be amortized from Accumulated other comprehensive income into net periodic benefit income over the next fiscal year is \$1.0 billion.

Assumptions

The weighted-average assumptions used in determining benefit obligations follow:

At December 31,	Pension		Health Care and Life	
	2018	2017	2018	2017
Discount Rate	4.40%	3.70%	4.30%	3.60%
Rate of compensation increases	3.00	3.00	N/A	N/A

The weighted-average assumptions used in determining net periodic cost follow:

At December 31,	Pension			Health Care and Life		
	2018	2017	2016	2018	2017	2016
Discount rate in effect for determining service cost	4.10%	4.70%	4.50%	3.90%	4.60%	4.20%
Discount rate in effect for determining interest cost	3.40	3.40	3.20	3.20	3.50	4.20
Expected return on plan assets	7.00	7.70	7.00	4.80	4.50	4.80
Rate of compensation increases	3.00	3.00	3.00	N/A	N/A	N/A

In determining our pension and other postretirement benefit obligations, we used a weighted-average discount rate of 4.40% in 2018. The rates were selected to approximate the composite interest rates available on a selection of high-quality bonds available in the market at December 31, 2018. The bonds selected had maturities that coincided with the time periods during which benefits payments are expected to occur, were non-callable and available in sufficient quantities to ensure marketability (at least \$0.3 billion par outstanding).

In order to project the long-term target investment return for the total portfolio, estimates are prepared for the total return of each major asset class over the subsequent 10-year period. Those estimates are based on a combination of factors including the current market interest rates and valuation levels, consensus earnings expectations and historical long-term risk premiums. To determine the aggregate return for the pension trust, the projected return of each individual asset class is then weighted according to the allocation to that investment area in the trust's long-term asset allocation policy.

The assumed health care cost trend rates follow:

At December 31,	Health Care and Life		
	2018	2017	2016
Healthcare cost trend rate assumed for next year	6.30%	7.00%	6.50%
Rate to which cost trend rate gradually declines	4.50	4.50	4.50
Year the rate reaches the level it is assumed to remain thereafter	2027	2026	2025

A one-percentage point change in the assumed health care cost trend rate would have the following effects:

One-Percentage Point	(dollars in millions)	
	Increase	Decrease
Effect on 2018 service and interest cost	\$ 20	\$ (19)
Effect on postretirement benefit obligation as of December 31, 2018	462	(485)

Plan Assets

The company's overall investment strategy is to achieve a mix of assets that allows us to meet projected benefit payments while taking into consideration risk and return. While target allocation percentages will vary over time, the current target allocation for plan assets is designed so that 52.5% of the assets have the objective of achieving a return in excess of the growth in liabilities (comprised of public equities, private equities, real estate, hedge funds and emerging debt) and 45.5% of the assets are invested as liability hedging assets (where cash flows from investments better match projected benefit payments, typically longer duration fixed income) and 2.0% is in cash. This allocation will shift as funded status improves to a higher allocation of liability hedging assets. Target policies will be revisited periodically to ensure they are in line with fund objectives. Both active and passive management approaches are used depending on perceived market efficiencies and various other factors. Due to our diversification and risk control processes, there are no significant concentrations of risk, in terms of sector, industry, geography or company names.

Pension and healthcare and life plans assets do not include significant amounts of Verizon common stock.

Pension Plans

The fair values for the pension plans by asset category at December 31, 2018 are as follows:

Asset Category	Total	Level 1	(dollars in millions)	
			Level 2	Level 3
Cash and cash equivalents	\$ 1,701	\$ 1,694	\$ 7	\$ –
Equity securities	2,253	2,220	20	13
Fixed income securities				
U.S. Treasuries and agencies	1,684	1,557	127	–
Corporate bonds	3,645	124	3,244	277
International bonds	1,113	19	1,076	18
Other	–	–	–	–
Real estate	727	–	–	727
Other				
Private equity	664	–	–	664
Hedge funds	459	–	373	86
Total investments at fair value	12,246	5,614	4,847	1,785
Investments measured at NAV	5,570			
Total	\$ 17,816	\$ 5,614	\$ 4,847	\$ 1,785

The fair values for the pension plans by asset category at December 31, 2017 are as follows:

Asset Category	Total	Level 1	(dollars in millions)	
			Level 2	Level 3
Cash and cash equivalents	\$ 2,889	\$ 2,874	\$ 15	\$ –
Equity securities	2,795	2,794	–	1
Fixed income securities				
U.S. Treasuries and agencies	1,382	1,234	148	–
Corporate bonds	2,961	139	2,718	104
International bonds	1,068	17	1,031	20
Other	396	4	392	–
Real estate	627	–	–	627
Other				
Private equity	580	–	–	580
Hedge funds	845	–	660	185
Total investments at fair value	13,543	7,062	4,964	1,517
Investments measured at NAV	5,632			
Total	\$ 19,175	\$ 7,062	\$ 4,964	\$ 1,517

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Notes to Consolidated Financial Statements *continued*

The following is a reconciliation of the beginning and ending balance of pension plan assets that are measured at fair value using significant unobservable inputs:

	(dollars in millions)						
	Equity Securities	Corporate Bonds	International Bonds	Real Estate	Private Equity	Hedge Funds	Total
Balance at January 1, 2017	\$ —	\$ 97	\$ 14	\$ 655	\$ 624	\$ 4	\$ 1,394
Actual gain (loss) on plan assets	—	(1)	—	76	78	—	153
Purchases (sales)	119	27	22	(70)	(114)	183	167
Transfers out	(118)	(19)	(16)	(34)	(8)	(2)	(197)
Balance at December 31, 2017	1	104	20	627	580	185	1,517
Actual gain (loss) on plan assets	1	(7)	3	134	25	—	156
Purchases (sales)	11	177	(5)	(34)	59	62	270
Transfers out	—	3	—	—	—	(161)	(158)
Balance at December 31, 2018	\$ 13	\$ 277	\$ 18	\$ 727	\$ 664	\$ 86	\$ 1,785

Health Care and Life Plans

The fair values for the other postretirement benefit plans by asset category at December 31, 2018 are as follows:

Asset Category	(dollars in millions)			
	Total	Level 1	Level 2	Level 3
Cash and cash equivalents	\$ 471	\$ 431	\$ 40	\$ —
Equity securities	239	239	—	—
Fixed income securities				
U.S. Treasuries and agencies	24	24	—	—
Corporate bonds	96	96	—	—
International bonds	18	18	—	—
Total investments at fair value	848	808	40	—
Investments measured at NAV	327			
Total	\$ 1,175	\$ 808	\$ 40	\$ —

The fair values for the other postretirement benefit plans by asset category at December 31, 2017 are as follows:

Asset Category	(dollars in millions)			
	Total	Level 1	Level 2	Level 3
Cash and cash equivalents	\$ 71	\$ 1	\$ 70	\$ —
Equity securities	294	294	—	—
Fixed income securities				
U.S. Treasuries and agencies	23	22	1	—
Corporate bonds	141	141	—	—
International bonds	60	18	42	—
Total investments at fair value	589	476	113	—
Investments measured at NAV	530			
Total	\$ 1,119	\$ 476	\$ 113	\$ —

The following are general descriptions of asset categories, as well as the valuation methodologies and inputs used to determine the fair value of each major category of assets.

Cash and cash equivalents include short-term investment funds (less than 90 days to maturity), primarily in diversified portfolios of investment grade money market instruments and are valued using quoted market prices or other valuation methods. The carrying value of cash equivalents approximates fair value due to the short-term nature of these investments.

Investments in securities traded on national and foreign securities exchanges are valued by the trustee at the last reported sale prices on the last business day of the year or, if no sales were reported on that date, at the last reported bid prices. Government obligations, corporate bonds, international bonds and asset-backed debt are valued using matrix prices with input from independent third-party valuation sources.

Over-the-counter securities are valued at the bid prices or the average of the bid and ask prices on the last business day of the year from published sources or, if not available, from other sources considered reliable such as multiple broker quotes.

Commingled funds not traded on national exchanges are priced by the custodian or fund's administrator at their net asset value (NAV). Commingled funds held by third-party custodians appointed by the fund managers provide the fund managers with a NAV. The fund managers have the responsibility for providing this information to the custodian of the respective plan.

The investment manager of the entity values venture capital, corporate finance, and natural resource limited partnership investments. Real estate investments are valued at amounts based upon appraisal reports prepared by either independent real estate appraisers or the investment manager using discounted cash flows or market comparable data. Loans secured by mortgages are carried at the lesser of the unpaid balance or appraised value of the underlying properties. The values assigned to these investments are based upon available and current market information and do not necessarily represent amounts that might ultimately be realized. Because of the inherent uncertainty of valuation, estimated fair values might differ significantly from the values that would have been used had a ready market for the securities existed. These differences could be material.

Forward currency contracts, futures, and options are valued by the trustee at the exchange rates and market prices prevailing on the last business day of the year. Both exchange rates and market prices are readily available from published sources. These securities are classified by the asset class of the underlying holdings.

Hedge funds are valued by the custodian at NAV based on statements received from the investment manager. These funds are valued in accordance with the terms of their corresponding offering or private placement memoranda.

Commingled funds, hedge funds, venture capital, corporate finance, natural resource and real estate limited partnership investments for which fair value is measured using the NAV per share as a practical expedient are not leveled within the fair value hierarchy and are included as a reconciling item to total investments.

Employer Contributions

In 2018, we made \$1.0 billion discretionary contribution to our qualified pension plans and \$0.7 billion discretionary contribution to a retiree benefit account to fund health and welfare benefits. Qualified pension plans contributions are estimated to be \$0.3 billion, nonqualified pension plans contributions are estimated to be \$0.1 billion, and contributions to our other postretirement benefit plans are estimated to be \$0.5 billion in 2019.

Estimated Future Benefit Payments

The benefit payments to retirees are expected to be paid as follows:

Year	(dollars in millions)	
	Pension Benefits	Health Care and Life
2019	\$ 2,771	\$ 1,086
2020	1,796	1,113
2021	1,578	1,130
2022	1,526	1,135
2023	1,500	1,137
2024 to 2028	5,008	5,689

Savings Plan and Employee Stock Ownership Plans

We maintain four leveraged employee stock ownership plans (ESOP). We match a certain percentage of eligible employee contributions to certain savings plans with shares of our common stock from this ESOP. At December 31, 2018, the number of allocated shares of common stock in this ESOP was 51 million. There were no unallocated shares of common stock in this ESOP at December 31, 2018. All leveraged ESOP shares are included in earnings per share computations.

Total savings plan costs were \$1.1 billion in 2018, \$0.8 billion in 2017 and \$0.7 billion in 2016.

Severance Benefits

The following table provides an analysis of our severance liability recorded in accordance with the accounting standard regarding employers' accounting for postemployment benefits:

(dollars in millions)					
Year	Beginning of Year	Charged to Expense	Payments	Other	End of Year
2016	\$ 800	\$ 417	\$ (583)	\$ 22	\$ 656
2017	656	581	(564)	(46)	627
2018	627	2,093	(560)	(4)	2,156

Severance, Pension and Benefits (Credits) Charges

During 2018, we recorded net pre-tax pension and benefits credits of \$2.1 billion in accordance with our accounting policy to recognize actuarial gains and losses in the period in which they occur. The pension and benefits remeasurement credits of \$2.3 billion, which were recorded in Other income (expense), net in our consolidated statements of income, were primarily driven by an increase in our discount rate assumption used to determine the current year liabilities of our pension plans and postretirement benefit plans from a weighted-average of 3.7% at December 31, 2017 to a weighted-average of 4.4% at December 31, 2018 (\$2.6 billion), and mortality and other assumption adjustments of \$1.7 billion, \$1.6 billion of which related to healthcare claims and trend adjustments, offset by the difference between our estimated return on assets of 7.0% and our actual return on assets of (2.7)% (\$1.9 billion). The credits were partially offset by \$0.2 billion due to the effect of participants retiring under the voluntary separation program.

In September 2018, Verizon announced a voluntary separation program for select U.S.-based management employees. Approximately 10,400 eligible employees will separate from the Company under this program by the end of June 2019, with nearly half of these employees having exited in December of 2018. Principally as a result of this program but also as a result of other headcount reduction initiatives, the Company recorded a severance charge of \$1.8 billion (\$1.4 billion after-tax) during the year ended December 31, 2018, which was recorded in Selling, general and administrative expense in our consolidated statement of income. During 2018, we also recorded \$0.3 billion in severance costs under our other existing separation plan.

During 2017, we recorded net pre-tax severance, pension and benefits charges of \$1.4 billion, exclusive of acquisition related severance charges, in accordance with our accounting policy to recognize actuarial gains and losses in the period in which they occur. The pension and benefits remeasurement charges of approximately \$0.9 billion, which were recorded in Other income (expense), net in our consolidated statements of income, were primarily driven by a decrease in our discount rate assumption used to determine the current year liabilities of our pension and postretirement benefit plans from a weighted-average of 4.2% at December 31, 2016 to a weighted-average of 3.7% at December 31, 2017 (\$2.6 billion). The charges were partially offset by the difference between our estimated return on assets of 7.0% and our actual return on assets of 14.0% (\$1.2 billion), a change in mortality assumptions primarily driven by the use of updated actuarial tables (MP-2017) issued by the Society of Actuaries (\$0.2 billion) and other assumption adjustments (\$0.3 billion). As part of these charges, we also recorded severance costs of \$0.5 billion under our existing separation plans, which were recorded in Selling, general and administrative expense in our consolidated statements of income.

During 2016, we recorded net pre-tax severance, pension and benefits charges of \$2.9 billion in accordance with our accounting policy to recognize actuarial gains and losses in the period in which they occur. The pension and benefits remeasurement charges of \$2.5 billion, which were recorded in Other income (expense), net in our consolidated statements of income, were primarily driven by a decrease in our discount rate assumption used to determine the current year liabilities of our pension and other postretirement benefit plans from a weighted-average of 4.6% at December 31, 2015 to a weighted-average of 4.2% at December 31, 2016 (\$2.1 billion), updated health care trend cost assumptions (\$0.9 billion), the difference between our estimated return on assets of 7.0% and our actual return on assets of 6.0% (\$0.2 billion) and other assumption adjustments (\$0.3 billion). These charges were partially offset by a change in mortality assumptions primarily driven by the use of updated actuarial tables (MP-2016) issued by the Society of Actuaries (\$0.5 billion) and lower negotiated prescription drug pricing (\$0.5 billion). As part of these charges, we also recorded severance costs of \$0.4 billion under our existing separation plans, which were recorded in Selling, general and administrative expense in our consolidated statements of income.

The net pre-tax severance, pension and benefits charges during 2016 were comprised of a net pre-tax pension remeasurement charge of \$0.2 billion measured as of March 31, 2016 related to settlements for employees who received lump-sum distributions in one of our defined benefit pension plans, a net pre-tax pension and benefits remeasurement charge of \$0.8 billion measured as of April 1, 2016 related to curtailments in three of our defined benefit pension and one of our other postretirement plans, a net pre-tax pension and benefits remeasurement charge of \$2.7 billion measured as of May 31, 2016 in two defined benefit pension plans and three other postretirement benefit plans as a result of our accounting for the contractual healthcare caps and bargained for changes, a net pre-tax pension remeasurement charge of \$0.1 billion measured as of May 31, 2016 related to settlements for employees who received lump-sum distributions in three of our defined benefit pension plans, a net pre-tax pension remeasurement charge of \$0.6 billion measured as of August 31, 2016 related to settlements for employees who received lump-sum distributions in five of our defined benefit pension plans, and a net pre-tax pension and benefits credit of \$1.9 billion as a result of our fourth quarter remeasurement of our pension and other postretirement assets and liabilities based on updated actuarial assumptions.

Note 12. Taxes

The components of income before provision (benefit) for income taxes are as follows:

(dollars in millions)			
Years Ended December 31,	2018	2017	2016
Domestic	\$ 19,801	\$ 19,645	\$ 20,047
Foreign	(178)	949	939
Total	\$ 19,623	\$ 20,594	\$ 20,986

The components of the provision (benefit) for income taxes are as follows:

(dollars in millions)			
Years Ended December 31,	2018	2017	2016
Current			
Federal	\$ 2,187	\$ 3,630	\$ 7,451
Foreign	267	200	148
State and Local	741	677	842
Total	3,195	4,507	8,441
Deferred			
Federal	175	(14,360)	(933)
Foreign	30	(66)	(2)
State and Local	184	(37)	(128)
Total	389	(14,463)	(1,063)
Total income tax provision (benefit)	\$ 3,584	\$ (9,956)	\$ 7,378

The following table shows the principal reasons for the difference between the effective income tax rate and the statutory federal income tax rate:

Years Ended December 31,	2018	2017	2016
Statutory federal income tax rate	21.0%	35.0%	35.0%
State and local income tax rate, net of federal tax benefits	3.7	1.6	2.2
Affordable housing credit	(0.6)	(0.6)	(0.7)
Employee benefits including ESOP dividend	(0.3)	(0.5)	(0.5)
Impact of tax reform re-measurement	—	(81.6)	—
Internal restructure	(9.1)	(0.6)	(0.7)
Noncontrolling interests	(0.5)	(0.6)	(0.6)
Non-deductible goodwill	4.7	1.0	2.2
Other, net	(0.6)	(2.0)	(1.7)
Effective income tax rate	18.3%	(48.3)%	35.2%

The effective income tax rate for 2018 was 18.3% compared to (48.3)% for 2017. The increase in the effective tax rate and the provision for income taxes was primarily due to the non-recurring, non-cash income tax benefit of \$16.8 billion recorded in 2017 for the re-measurement of U.S. deferred tax liabilities at the lower 21% U.S. federal corporate income tax rate, as a result of the enactment of the TCJA on December 22, 2017. In addition, the current period provision for income taxes includes the tax impact of the Oath goodwill impairment charge not deductible for tax purposes, offset by the current year reduction in the statutory U.S. federal corporate income tax rate from 35% to 21%, effective January 1, 2018 under the TCJA and a non-recurring deferred tax benefit of approximately \$2.1 billion as a result of an internal reorganization of legal entities within the Wireless business.

In December 2017, the Securities and Exchange Commission staff issued Staff Accounting Bulletin (SAB) 118 to provide guidance for companies that had not completed their accounting for the income tax effects of the TCJA. Due to the complexities involved in accounting for the enactment of the TCJA, SAB 118 allowed for a provisional estimate of the impacts of the TCJA in our earnings for the year ended December 31, 2017, as well as up to a one year measurement period that ended on December 22, 2018, for any subsequent adjustments to such provisional estimate. Pursuant to SAB 118, Verizon recorded a provisional estimate of \$16.8 billion for the impacts of the TCJA, primarily due to the re-measurement of its U.S. deferred income tax liabilities at the lower 21% U.S. federal corporate income tax rate, with no significant impact from the transition tax on repatriation, the implementation of the territorial tax system, or limitations on the deduction of interest expense. Verizon has completed its analysis of the impacts of the TCJA, including analyzing the effects of any Internal Revenue Service (IRS) and U.S. Treasury guidance issued, and state tax law changes enacted, within the maximum one year measurement period resulting in no significant adjustments to the \$16.8 billion provisional amount previously recorded.

The effective income tax rate for 2017 was (48.3)% compared to 35.2% for 2016. The decrease in the effective income tax rate and the provision for income taxes was primarily due to a non-recurring, non-cash income tax benefit recorded in 2017 as a result of the enactment of the TCJA described above.

The amounts of cash taxes paid by Verizon are as follows:

(dollars in millions)			
Years Ended December 31,	2018	2017	2016
Income taxes, net of amounts refunded	\$ 2,213	\$ 4,432	\$ 9,577
Employment taxes	1,066	1,207	1,196
Property and other taxes	1,598	1,737	1,796
Total	\$ 4,877	\$ 7,376	\$ 12,569

Deferred Tax Assets and Liabilities

Deferred taxes arise because of differences in the book and tax bases of certain assets and liabilities. Significant components of deferred tax assets and liabilities are as follows:

At December 31,	(dollars in millions)	
	2018	2017
Deferred Tax Assets		
Employee benefits	\$ 5,403	\$ 6,174
Tax loss and credit carry forwards	3,576	4,176
Other – assets	1,650	1,938
	10,629	12,288
Valuation allowances	(2,741)	(3,293)
Deferred tax assets	7,888	8,995
Deferred Tax Liabilities		
Spectrum and other intangible amortization	21,976	21,148
Depreciation	15,662	14,767
Other – liabilities	3,976	4,281
Deferred tax liabilities	41,614	40,196
Net deferred tax liability	\$ 33,726	\$ 31,201

At December 31, 2018, undistributed earnings of our foreign subsidiaries indefinitely invested outside the U.S. amounted to approximately \$3.0 billion. The majority of Verizon's cash flow is generated from domestic operations and we are not dependent on foreign cash or earnings to meet our funding requirements, nor do we intend to repatriate these undistributed foreign earnings to fund U.S. operations. Furthermore, a portion of these undistributed earnings represents amounts that legally must be kept in reserve in accordance with certain foreign jurisdictional requirements and are unavailable for distribution or repatriation. As a result, we have not provided U.S. deferred taxes on these undistributed earnings because we intend that they will remain indefinitely reinvested outside of the U.S. and therefore unavailable for use in funding U.S. operations. Determination of the amount of unrecognized deferred taxes related to these undistributed earnings is not practicable.

At December 31, 2018, we had net after-tax loss and credit carry forwards for income tax purposes of approximately \$3.6 billion that primarily relate to state and foreign taxes. Of these net after-tax loss and credit carry forwards, approximately \$2.1 billion will expire between 2019 and 2038 and approximately \$1.5 billion may be carried forward indefinitely.

During 2018, the valuation allowance decreased approximately \$0.6 billion. The balance of the valuation allowance at December 31, 2018 and the 2018 activity is primarily related to state and foreign taxes.

Unrecognized Tax Benefits

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

	(dollars in millions)		
	2018	2017	2016
Balance at January 1,	\$ 2,355	\$ 1,902	\$ 1,635
Additions based on tax positions related to the current year	160	219	338
Additions for tax positions of prior years	699	756	188
Reductions for tax positions of prior years	(248)	(419)	(153)
Settlements	(40)	(42)	(18)
Lapses of statutes of limitations	(55)	(61)	(88)
Balance at December 31,	\$ 2,871	\$ 2,355	\$ 1,902

Included in the total unrecognized tax benefits at December 31, 2018, 2017 and 2016 is \$2.3 billion, \$1.9 billion and \$1.5 billion, respectively, that if recognized, would favorably affect the effective income tax rate.

We recognized the following net after-tax expenses related to interest and penalties in the provision for income taxes:

Years Ended December 31,	(dollars in millions)
2018	\$ (75)
2017	(77)
2016	(25)

The after-tax accruals for the payment of interest and penalties in the consolidated balance sheets are as follows:

At December 31,	(dollars in millions)
2018	\$ 348
2017	269

Verizon and/or its subsidiaries file income tax returns in the U.S. federal jurisdiction, and various state, local and foreign jurisdictions. As a large taxpayer, we are under audit by the IRS and multiple state and foreign jurisdictions for various open tax years. The IRS is currently examining the Company's U.S. income tax returns for tax years 2013-2014 and Cellco Partnership's U.S. income tax return for tax year 2013-2014. Tax controversies are ongoing for tax years as early as 2005. The amount of the liability for unrecognized tax benefits will change in the next twelve months due to the expiration of the statute of limitations in various jurisdictions and it is reasonably possible that various current tax examinations will conclude or require reevaluations of the Company's tax positions during this period. An estimate of the range of the possible change cannot be made until these tax matters are further developed or resolved.

Note 13. Segment Information

Reportable Segments

We have two reportable segments, Wireless and Wireline, which we operate and manage as strategic business units and organize by products and services, and customer groups, respectively. We measure and evaluate our reportable segments based on segment operating income, consistent with the chief operating decision maker's assessment of segment performance.

Our segments and their principal activities consist of the following:

Segment	Description
Wireless	Wireless' communications products and services include wireless voice and data services and equipment sales, which are provided to consumer, business and government customers across the U.S.
Wireline	Wireline's communications products and enhanced services include video and data services, corporate networking solutions, security and managed network services and local and long distance voice services. We provide these products and services to consumers in the U.S., as well as to carriers, businesses and government customers both in the U.S. and around the world.

The Wireline segment is organized in four customer groups: Consumer Markets, which includes consumer retail customers; Enterprise Solutions, which includes large business customers, including multinational corporations, and federal government customers; Partner Solutions, which includes other carriers that use our facilities to provide services to their customers; and Business Markets, which includes U.S.-based small and medium business customers, state and local governments, and educational institutions.

Corporate and other includes the results of our Media business, Verizon Media, which operated in 2018 under the "Oath" brand, our telematics business, branded Verizon Connect, and other businesses, investments in unconsolidated businesses, unallocated corporate expenses, pension and other employee benefit related costs and interest and financing expenses. Corporate and other also includes the historical results of divested businesses and other adjustments and gains and losses that are not allocated in assessing segment performance due to their nature. Although such transactions are excluded from the business segment results, they are included in reported consolidated earnings. Gains and losses from these transactions that are not individually significant are included in segment results as these items are included in the chief operating decision maker's assessment of segment performance.

In November 2018, we announced a strategic reorganization of our business. We are modifying our internal and external reporting processes, systems and internal controls to accommodate the new structure and expect to transition to the new segment reporting structure during the second quarter of 2019. We continue to report operating results to our chief operating decision maker under our current operating segments.

We completed our acquisition of Yahoo's operating business on June 13, 2017.

In May 2017, we completed the Data Center Sale, where we sold 23 customer-facing data center sites in the U.S. and Latin America to Equinix. The results of operations for this divestiture and other insignificant transactions are included within Corporate and other for all periods presented to reflect comparable segment operating results consistent with the information regularly reviewed by our chief operating decision maker.

In addition, Corporate and other includes the results of our telematics businesses for all periods presented, which were reclassified from our Wireline segment effective April 1, 2016. The impact of this reclassification was insignificant to our consolidated financial statements and our segment results of operations.

The reconciliation of segment operating revenues and expenses to consolidated operating revenues and expenses below includes the effects of special items that management does not consider in assessing segment performance, primarily because of their nature.

We have adjusted prior period consolidated and segment information, where applicable, to conform to the current period presentation. On January 1, 2018, we adopted ASU 2017-07, "Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost." Components other than the service component of net periodic pension cost and periodic postretirement benefit cost (income), inclusive of the mark-to-market pension and benefit remeasurements, have been reclassified from operating to non-operating charges (benefits) in our consolidated statements of income. The adoption of ASU 2017-07 did not change how we present our segment results.

2018 Annual Report

Notes to Consolidated Financial Statements *continued*

The following table provides operating financial information for our two reportable segments:

	(dollars in millions)		
			Total Reportable Segments
2018	Wireless	Wireline	
External Operating Revenues			
Service	\$ 62,936	\$ —	\$ 62,936
Equipment	22,258	—	22,258
Other	6,201	—	6,201
Consumer Markets	—	12,586	12,586
Enterprise Solutions	—	8,837	8,837
Partner Solutions	—	3,685	3,685
Business Markets	—	3,397	3,397
Other	—	242	242
Intersegment revenues	339	1,013	1,352
Total operating revenues	91,734	29,760	121,494
Cost of services	9,251	17,701	26,952
Wireless cost of equipment	23,323	—	23,323
Selling, general and administrative expense	16,604	6,151	22,755
Depreciation and amortization expense	9,736	6,181	15,917
Total operating expenses	58,914	30,033	88,947
Operating income (loss)	\$ 32,820	\$ (273)	\$ 32,547
Assets	\$ 213,290	\$ 94,799	\$ 308,089
Property, plant and equipment, net	42,749	43,350	86,099
Capital expenditures	8,486	6,255	14,741

	(dollars in millions)		
			Total Reportable Segments
2017	Wireless	Wireline	
External Operating Revenues			
Service	\$ 62,972	\$ —	\$ 62,972
Equipment	18,889	—	18,889
Other	5,270	—	5,270
Consumer Markets	—	12,775	12,775
Enterprise Solutions	—	9,165	9,165
Partner Solutions	—	3,969	3,969
Business Markets	—	3,585	3,585
Other	—	234	234
Intersegment revenues	380	952	1,332
Total operating revenues	87,511	30,680	118,191
Cost of services	8,886	17,922	26,808
Wireless cost of equipment	22,147	—	22,147
Selling, general and administrative expense	17,876	6,274	24,150
Depreciation and amortization expense	9,395	6,104	15,499
Total operating expenses	58,304	30,300	88,604
Operating income	\$ 29,207	\$ 380	\$ 29,587
Assets	\$ 235,873	\$ 75,282	\$ 311,155
Property, plant and equipment, net	43,935	41,351	85,286
Capital expenditures	10,310	5,339	15,649

	(dollars in millions)		
2016	Wireless	Wireline	Total Reportable Segments
External Operating Revenues			
Service	\$ 66,362	\$ —	\$ 66,362
Equipment	17,511	—	17,511
Other	4,915	—	4,915
Consumer Markets	—	12,751	12,751
Enterprise Solutions	—	9,162	9,162
Partner Solutions	—	3,976	3,976
Business Markets	—	3,356	3,356
Other	—	314	314
Intersegment revenues	398	951	1,349
Total operating revenues	89,186	30,510	119,696
Cost of services	9,031	18,353	27,384
Wireless cost of equipment	22,238	—	22,238
Selling, general and administrative expense	18,881	6,476	25,357
Depreciation and amortization expense	9,183	5,975	15,158
Total operating expenses	59,333	30,804	90,137
Operating income (loss)	\$ 29,853	\$ (294)	\$ 29,559
Assets	\$ 211,345	\$ 66,679	\$ 278,024
Property, plant and equipment, net	42,898	40,205	83,103
Capital expenditures	11,240	4,504	15,744

Reconciliation to Consolidated Financial Information

A reconciliation of the reportable segment operating revenues to consolidated operating revenues is as follows:

Years Ended December 31,	(dollars in millions)		
	2018	2017	2016
Operating Revenues			
Total reportable segments	\$ 121,494	\$ 118,191	\$ 119,696
Corporate and other	10,942	9,019	5,663
Reconciling items:			
Operating results from divested businesses (Note 3)	—	368	2,115
Eliminations	(1,573)	(1,544)	(1,494)
Consolidated operating revenues	\$ 130,863	\$ 126,034	\$ 125,980

Fios revenues are included within our Wireline segment and amounted to approximately \$11.9 billion, \$11.7 billion, and \$11.2 billion for the years ended December 31, 2018, 2017 and 2016, respectively.

A reconciliation of the total of the reportable segments' operating income to consolidated income before provision for income taxes is as follows:

Years Ended December 31,	(dollars in millions)		
	2018	2017	2016
Operating Income			
Total reportable segments	\$ 32,547	\$ 29,587	\$ 29,559
Corporate and other	(1,694)	(1,492)	(1,455)
Reconciling items:			
Severance charges (Note 11)	(2,157)	(497)	(421)
Other components of net periodic pension and benefit (charges) credits (Note 11)	(823)	(800)	(578)
Net gain on sale of divested businesses (Note 3)	—	1,774	1,007
Acquisition and integration related charges (Note 3)	(553)	(884)	—
Gain on spectrum license transaction (Note 3)	—	270	142
Operating results from divested businesses	—	149	995
Oath goodwill impairment	(4,591)	—	—
Product realignment charges	(451)	(682)	—
Consolidated operating income	22,278	27,425	29,249
Equity in losses of unconsolidated businesses	(186)	(77)	(98)
Other income (expense), net	2,364	(2,021)	(3,789)
Interest expense	(4,833)	(4,733)	(4,376)
Income Before (Provision) Benefit For Income Taxes	\$ 19,623	\$ 20,594	\$ 20,986

A reconciliation of the total of the reportable segments' assets to consolidated assets is as follows:

At December 31,	(dollars in millions)	
	2018	2017
Assets		
Total reportable segments	\$ 308,089	\$ 311,155
Corporate and other	244,695	239,040
Eliminations	(287,955)	(293,052)
Total consolidated	\$ 264,829	\$ 257,143

No single customer accounted for more than 10% of our total operating revenues during the years ended December 31, 2018, 2017 and 2016. International operating revenues and long-lived assets are not significant.

Note 14. Comprehensive Income

Comprehensive income consists of net income and other gains and losses affecting equity that, under U.S. GAAP, are excluded from net income. Significant changes in the components of Other comprehensive income, net of provision for income taxes are described below.

Accumulated Other Comprehensive Income

The changes in the balances of Accumulated other comprehensive income by component are as follows:

(dollars in millions)	Foreign currency translation adjustments	Unrealized gains (losses) on cash flow hedges	Unrealized gains (losses) on marketable securities	Defined benefit pension and postretirement plans	Total
Balance at January 1, 2016	\$ (554)	\$ (278)	\$ 101	\$ 1,281	\$ 550
Other comprehensive income (loss)	(159)	(225)	(13)	2,881	2,484
Amounts reclassified to net income	—	423	(42)	(742)	(361)
Net other comprehensive income (loss)	(159)	198	(55)	2,139	2,123
Balance at December 31, 2016	(713)	(80)	46	3,420	2,673
Other comprehensive income	245	818	10	327	1,400
Amounts reclassified to net income	—	(849)	(24)	(541)	(1,414)
Net other comprehensive income (loss)	245	(31)	(14)	(214)	(14)
Balance at December 31, 2017	(468)	(111)	32	3,206	2,659
Opening balance sheet adjustment (Note 1)	(15)	(24)	(13)	682	630
Adjusted opening balance	(483)	(135)	19	3,888	3,289
Other comprehensive income (loss)	(117)	(574)	—	(164)	(855)
Amounts reclassified to net income	—	629	1	(694)	(64)
Net other comprehensive income (loss)	(117)	55	1	(858)	(919)
Balance at December 31, 2018	\$ (600)	\$ (80)	\$ 20	\$ 3,030	\$ 2,370

The amounts presented above in net other comprehensive income (loss) are net of taxes. The amounts reclassified to net income related to unrealized gain (loss) on cash flow hedges in the table above are included in Other income (expense), net and Interest expense in our consolidated statements of income. See Note 9 for additional information. The amounts reclassified to net income related to unrealized gain (loss) on marketable securities in the table above are included in Other income (expense), net in our consolidated statements of income. The amounts reclassified to net income related to defined benefit pension and postretirement plans in the table above are included in Other income (expense), net in our consolidated statements of income. See Note 11 for additional information.

Note 15. Additional Financial Information

The tables that follow provide additional financial information related to our consolidated financial statements:

Income Statement Information

Years Ended December 31,	2018	(dollars in millions)	
		2017	2016
Depreciation expense	\$ 15,186	\$ 14,741	\$ 14,227
Interest costs on debt balances	5,399	5,256	4,961
Net amortization of debt discount	174	155	119
Capitalized interest costs	(740)	(678)	(704)
Advertising expense	2,682	2,643	2,744
Other income (expense), net			
Interest income	\$ 94	\$ 82	\$ 59
Other components of net periodic benefit (cost) income	3,068	(11)	(2,190)
Other, net	(798)	(2,092)	(1,658)
	\$ 2,364	\$ (2,021)	\$ (3,789)

Balance Sheet Information

At December 31,	2018	(dollars in millions)	
		2017	2016
Accounts payable and accrued liabilities			
Accounts payable	\$ 7,232	\$ 7,063	
Accrued expenses	5,948	6,756	
Accrued vacation, salaries and wages	6,268	4,521	
Interest payable	1,570	1,409	
Taxes payable	1,483	1,483	
	\$ 22,501	\$ 21,232	
Other current liabilities			
Dividends payable	\$ 2,512	\$ 2,429	
Contract liability ⁽¹⁾	4,207	4,050	
Other	1,520	1,873	
	\$ 8,239	\$ 8,352	

- (1) Prior to the adoption of Topic 606, liabilities related to contracts with customers included advance billing and deferred revenues. These balances have been reclassified to conform to current year presentation.

Cash Flow Information

Years Ended December 31,	2018	(dollars in millions)	
		2017	2016
Cash Paid			
Interest, net of amounts capitalized	\$ 4,408	\$ 4,369	\$ 4,085
Income taxes, net of amounts refunded	2,213	4,432	9,577
Other, net Cash Flows from Operating Activities			
Changes in device payment plan agreement non-current receivables	\$ (509)	\$ (579)	\$ (3,303)
Other, net	728	1,255	204
	\$ 219	\$ 676	\$ (3,099)
Other, net Cash Flows from Financing Activities			
Net debt related costs	\$ (141)	\$ (3,599)	\$ (1,991)
Change in short-term obligations, excluding current maturities	(790)	(170)	(149)
Other, net	(893)	(670)	(765)
	\$ (1,824)	\$ (4,439)	\$ (2,905)

In March 2017, the Verizon Board of Directors authorized a share buyback program to repurchase up to 100 million shares of the Company's common stock. The program will terminate when the aggregate number of shares purchased reaches 100 million, or at the close of business on February 28, 2020, whichever is sooner. During the years ended December 31, 2018, 2017, and 2016, Verizon did not repurchase any shares of Verizon's common stock under our authorized share buyback programs. At December 31, 2018, the maximum number of shares that could be purchased by or on behalf of Verizon under our share buyback program was 100 million.

Common stock has been used from time to time to satisfy some of the funding requirements of employee and shareholder plans. During the years ended December 31, 2018, 2017, and 2016, we issued 3.5 million, 2.8 million and 3.5 million common shares from Treasury stock, respectively, which had an insignificant aggregate value.

Note 16. Commitments and Contingencies

In the ordinary course of business, Verizon is involved in various commercial litigation and regulatory proceedings at the state and federal level. Where it is determined, in consultation with counsel based on litigation and settlement risks, that a loss is probable and estimable in a given matter, the Company establishes an accrual. In none of the currently pending matters is the amount of accrual material. An estimate of the reasonably possible loss or range of loss in excess of the amounts already accrued cannot be made at this time due to various factors typical in contested proceedings, including: (1) uncertain damage theories and demands; (2) a less than complete factual record; (3) uncertainty concerning legal theories and their resolution by courts or regulators; and (4) the unpredictable nature of the opposing party and its demands. We continuously monitor these proceedings as they develop and adjust any accrual or disclosure as needed. We do not expect that the ultimate resolution of any pending regulatory or legal matter in future periods, including the Hicksville matter described below, will have a material effect on our financial condition, but it could have a material effect on our results of operations for a given reporting period.

Reserves have been established to cover environmental matters relating to discontinued businesses and past telecommunications activities. These reserves include funds to address contamination at the site of a former Sylvania facility in Hicksville NY, which had processed nuclear fuel rods in the 1950s and 1960s. In September 2005, the Army Corps of Engineers (ACE) accepted the site into its Formerly Utilized Sites Remedial Action Program. As a result, the ACE has taken primary responsibility for addressing the contamination at the site. An adjustment to the reserves may be made after a cost allocation is conducted with respect to the past and future expenses of all of the parties. Adjustments to the environmental reserve may also be made based upon the actual conditions found at other sites requiring remediation.

Verizon is currently involved in approximately 30 federal district court actions alleging that Verizon is infringing various patents. Most of these cases are brought by non-practicing entities and effectively seek only monetary damages; a small number are brought by companies that have sold products and could seek injunctive relief as well. These cases have progressed to various stages and a small number may go to trial in the coming 12 months if they are not otherwise resolved.

In connection with the execution of agreements for the sales of businesses and investments, Verizon ordinarily provides representations and warranties to the purchasers pertaining to a variety of nonfinancial matters, such as ownership of the securities being sold, as well as indemnity from certain financial losses. From time to time, counterparties may make claims under these provisions, and Verizon will seek to defend against those claims and resolve them in the ordinary course of business.

Subsequent to the sale of Verizon Information Services Canada in 2004, we continue to provide a guarantee to publish directories, which was issued when the directory business was purchased in 2001 and had a 30-year term (before extensions). The preexisting guarantee continues, without modification, despite the subsequent sale of Verizon Information Services Canada and the spin-off of our domestic print and Internet yellow pages directories business. The possible financial impact of the guarantee, which is not expected to be adverse, cannot be reasonably estimated as a variety of the potential outcomes available under the guarantee result in costs and revenues or benefits that may offset each other. We do not believe performance under the guarantee is likely.

As of December 31, 2018, letters of credit totaling approximately \$0.6 billion, which were executed in the normal course of business and support several financing arrangements and payment obligations to third parties, were outstanding.

We have several commitments, totaling \$22.2 billion, primarily to purchase programming and network services, equipment, software and marketing services, which will be used or sold in the ordinary course of business, from a variety of suppliers. Of this total amount, \$8.8 billion is attributable to 2019, \$9.1 billion is attributable to 2020 through 2021, \$2.1 billion is attributable to 2022 through 2023 and \$2.2 billion is attributable to years thereafter. These amounts do not represent our entire anticipated purchases in the future, but represent only those items that are the subject of contractual obligations. Our commitments are generally determined based on the noncancelable quantities or termination amounts. Purchases against our commitments totaled approximately \$9.0 billion for 2018, \$8.2 billion for 2017, and \$8.1 billion for 2016. Since the commitments to purchase programming services from television networks and broadcast stations have no minimum volume requirement, we estimated our obligation based on number of subscribers at December 31, 2018, and applicable rates stipulated in the contracts in effect at that time. We also purchase products and services as needed with no firm commitment.

Note 17. Quarterly Financial Information (Unaudited)

Quarter Ended	(dollars in millions, except per share amounts)				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
2018					
Operating Revenues	\$ 31,772	\$ 32,203	\$ 32,607	\$ 34,281	\$ 130,863
Operating Income	7,349	6,617	7,675	637	22,278
Net Income	4,666	4,246	5,062	2,065	16,039
Net Income Attributable to Verizon	4,545	4,120	4,924	1,939	15,528
Basic Earnings Per Share Attributable to Verizon ⁽¹⁾	\$ 1.11	\$ 1.00	\$ 1.19	\$ 0.47	\$ 3.76
Diluted Earnings Per Share Attributable to Verizon ⁽¹⁾	\$ 1.11	\$ 1.00	\$ 1.19	\$ 0.47	\$ 3.76
2017					
Operating Revenues	\$ 29,814	\$ 30,548	\$ 31,717	\$ 33,955	\$ 126,034
Operating Income	6,963	8,013	6,990	5,459	27,425
Net Income	3,553	4,478	3,736	18,783	30,550
Net Income Attributable to Verizon	3,450	4,362	3,620	18,669	30,101
Basic Earnings Per Share Attributable to Verizon ⁽¹⁾	\$ 0.85	\$ 1.07	\$ 0.89	\$ 4.57	\$ 7.37
Diluted Earnings Per Share Attributable to Verizon ⁽¹⁾	\$ 0.84	\$ 1.07	\$ 0.89	\$ 4.56	\$ 7.36

(1) Net income attributable to Verizon per common share is computed independently for each quarter and the sum of the quarters may not equal the annual amount.

Results of operations for 2018 and 2017 include the following after-tax charges (credits) attributable to Verizon:

	2018				(dollars in millions) 2017			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Severance, pension and benefits charges (credits)	\$ —	\$ 250	\$ (335)	\$ 108	\$ —	\$ 118	\$ —	\$ 732
Early debt redemption costs	184	—	352	—	512	—	274	409
Acquisition and integration related charges	82	92	103	142	—	355	100	95
Gain on spectrum license transactions	—	—	—	—	(77)	—	—	(91)
Net gain on sale of divested businesses	—	—	—	—	—	(931)	—	—
Product realignment charges	—	509	—	—	—	—	—	461
Corporate tax reform	—	—	—	—	—	—	—	(16,761)
Oath goodwill impairment	—	—	—	4,527	—	—	—	—
Wireless legal entity restructuring	—	—	—	(2,065)	—	—	—	—

Wireless Legal Entity Restructuring

During the fourth quarter of 2018, we completed an internal reorganization of legal entities within the Wireless business and recorded a non-recurring deferred tax benefit of approximately \$2.1 billion on our consolidated statement of income for the year ended December 31, 2018, which reduced our deferred tax liability by the same amount.

Corporate Tax Reform

During the fourth quarter of 2017, we recorded a one-time corporate tax reduction of approximately \$16.8 billion in (Provision) benefit for income taxes in our consolidated statement of income for the year ended December 31, 2017. Verizon has completed its analysis of the impacts of the TCJA, including analyzing the effects of any IRS and U.S. Treasury guidance issued, and state tax law changes enacted, within the maximum one year measurement period resulting in no significant adjustments to the provisional amount previously recorded.



Investor information

Stock transfer agent

Questions or requests for assistance regarding changes to, or transfers of, your registered stock ownership should be directed to our Transfer Agent, Computershare Trust Company, N.A.:

Verizon Communications Inc.
c/o Computershare
P.O. Box 505000
Louisville, KY 40233-5000

Phone: 800.631.2355 or 781.575.3994

Outside the U.S.: 866.725.6576

Website: www.computershare.com/verizon

Email: verizon@computershare.com

Persons using a telecommunications device for the deaf (TDD) may call: 800.952.9245

Shareowner services

Please contact our Transfer Agent regarding information about the following services:

Online account access: Registered shareowners can view account information online at www.computershare.com/verizon.

Click on "Create Log In" to register. For existing users, click on "Log In."

Direct dividend deposit service: Verizon offers an electronic funds transfer service to registered shareowners wishing to deposit dividends directly into savings or checking accounts on dividend payment dates.

Direct stock purchase and dividend reinvestment plan:

A direct stock purchase plan allows current and new investors to purchase Verizon common stock and to reinvest their dividends toward the purchase of additional shares. For more information, go to www.verizon.com/about/investors/shareowner-services.

Electronic delivery: By receiving links to proxy, annual report and shareowner materials online, you can help Verizon reduce the amount of materials we print and mail. As a thank you for choosing electronic delivery, Verizon will plant a tree on your behalf. It's fast and easy, and you can change your electronic delivery options at any time.

Sign up at www.computershare.com/verizon to take advantage of the many benefits electronic delivery offers, including:

- Faster access to financial documents
- Email notification of document availability
- Access to your documents online 24/7
- Convenience of managing your documents

If your shares are held by a broker, bank or other nominee, you may elect to receive an electronic copy of the annual report and proxy materials online at www.proxyvote.com, or you can contact your broker.

Investor services

Investor website: Get company information and news on our investor website – www.verizon.com/about/investors.

Email alerts: Get the latest investor information delivered directly to you. Subscribe to email alerts on our investor website.

Stock market information

Shareowners of record as of December 31, 2018: 630,756

Verizon (ticker symbol: VZ) is listed on the New York Stock Exchange and the Nasdaq Global Select Market.

Dividend information

At its September 2018 meeting, the Board of Directors increased our quarterly dividend 2.1 percent. On an annual basis, this increased Verizon's dividend to \$2.41 per share.

Dividends have been paid since 1984.

Form 10-K

To receive a printed copy of the 2018 Annual Report on Form 10-K, which is filed with the Securities and Exchange Commission, please contact Investor Relations:

Verizon Communications Inc.
Investor Relations
One Verizon Way
Basking Ridge, NJ 07920
Phone: 212.395.1525

Corporate governance

Verizon's Bylaws, Code of Conduct, Corporate Governance Guidelines and the charters of the committees of our Board of Directors can be found on the corporate governance section of our website at www.verizon.com/about/investors/corporate-governance.

If you would like to receive a printed copy of any of these documents, please contact the Assistant Corporate Secretary:

Verizon Communications Inc.
Assistant Corporate Secretary
1095 Avenue of the Americas
New York, NY 10036