

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE
ACT OF 1934

For the fiscal year ended December 31, 2017

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934

For the Transition Period From to

Commission File Number: 001-37789
333-112593-01

CCO Holdings, LLC
CCO Holdings Capital Corp.
(Exact name of registrant as specified in its charter)

Delaware

86-1067239

Delaware

20-0257904

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification Number)

400 Atlantic Street
Stamford, Connecticut 06901

(203) 905-7801

(Address of principal executive offices including zip code)

(Registrant's telephone number, including area code)

Securities registered pursuant to section 12(b) of the Act: None
Securities registered pursuant to section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o

Indicate by check mark whether the registrants have submitted electronically and posted on their corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrants were required to submit and post such files). Yes x No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o Accelerated filer o Non-accelerated filer x Smaller reporting company o

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No x

All of the issued and outstanding shares of capital stock of CCO Holdings Capital Corp. are held by CCO Holdings, LLC. All of the limited liability company membership interests of CCO Holdings, LLC are held by CCH I Holdings, LLC (a subsidiary of Charter Communications, Inc., a reporting company under the Exchange Act). There is no public trading market for any of the aforementioned limited liability company membership interests or shares of capital stock.

CCO Holdings, LLC and CCO Holdings Capital Corp. meet the conditions set forth in General Instruction I(1)(a) and (b) to Form 10-K and are therefore filing with the reduced disclosure format.

Number of shares of common stock of CCO Holdings Capital Corporation outstanding as of December 31, 2017: 1

Documents Incorporated By Reference: None

CCO HOLDINGS, LLC
CCO HOLDINGS CAPITAL CORP.
FORM 10-K — FOR THE YEAR ENDED DECEMBER 31, 2017

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This annual report on Form 10-K is for the year ended December 31, 2017. The United States Securities and Exchange Commission (“SEC”) allows us to “incorporate by reference” information that we file with the SEC, which means that we can disclose important information to you by referring you directly to those documents. Information incorporated by reference is considered to be part of this annual report. In addition, information that we file with the SEC in the future will automatically update and supersede information contained in this annual report. In this annual report, “CCO Holdings,” “we,” “us” and “our” refer to CCO Holdings, LLC and its subsidiaries.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS:

This annual report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), regarding, among other things, our plans, strategies and prospects, both business and financial including, without limitation, the forward-looking statements set forth in Part I. Item 1. under the heading “Business” and in Part II. Item 7. under the heading “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this annual report. Although we believe that our plans, intentions and expectations reflected in or suggested by these forward-looking statements are reasonable, we cannot assure you that we will achieve or realize these plans, intentions or expectations. Forward-looking statements are inherently subject to risks, uncertainties and assumptions, including, without limitation, the factors described in Part I. Item 1A. under “Risk Factors” and in Part II. Item 7. under the heading, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this annual report. Many of the forward-looking statements contained in this annual report may be identified by the use of forward-looking words such as “believe,” “expect,” “anticipate,” “should,” “planned,” “will,” “may,” “intend,” “estimated,” “aim,” “on track,” “target,” “opportunity,” “tentative,” “positioning,” “designed,” “create,” “predict,” “project,” “initiatives,” “seek,” “would,” “could,” “continue,” “ongoing,” “upside,” “increases” and “potential,” among others. Important factors that could cause actual results to differ materially from the forward-looking statements we make in this annual report are set forth in this annual report and in other reports or documents that we file from time to time with the SEC, and include, but are not limited to:

- our ability to efficiently and effectively integrate acquired operations;
- our ability to sustain and grow revenues and cash flow from operations by offering video, Internet, voice, mobile, advertising and other services to residential and commercial customers, to adequately meet the customer experience demands in our markets and to maintain and grow our customer base, particularly in the face of increasingly aggressive competition, the need for innovation and the related capital expenditures;
- the impact of competition from other market participants, including but not limited to incumbent telephone companies, direct broadcast satellite operators, wireless broadband and telephone providers, digital subscriber line (“DSL”) providers, fiber to the home providers, video provided over the Internet by (i) market participants that have not historically competed in the multichannel video business, (ii) traditional multichannel video distributors, and (iii) content providers that have historically licensed cable networks to multichannel video distributors, and providers of advertising over the Internet;
- general business conditions, economic uncertainty or downturn, unemployment levels and the level of activity in the housing sector;
- our ability to obtain programming at reasonable prices or to raise prices to offset, in whole or in part, the effects of higher programming costs (including retransmission consents);
- our ability to develop and deploy new products and technologies including mobile products, our cloud-based user interface, Spectrum Guide®, and downloadable security for set-top boxes, and any other cloud-based consumer services and service platforms;
- the effects of governmental regulation on our business including costs, disruptions and possible limitations on operating flexibility related to, and our ability to comply with, regulatory conditions applicable to us as a result of the Time Warner Cable Inc. and Bright House Networks, LLC Transactions;
- any events that disrupt our networks, information systems or properties and impair our operating activities or our reputation;
- the ability to retain and hire key personnel;
- the availability and access, in general, of funds to meet our debt obligations prior to or when they become due and to fund our operations and necessary capital expenditures, either through (i) cash on hand, (ii) free cash flow, or (iii) access to the capital or credit markets; and
- our ability to comply with all covenants in our indentures and credit facilities, any violation of which, if not cured in a timely manner, could trigger a default of our other obligations under cross-default provisions.

All forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by this cautionary statement. We are under no duty or obligation to update any of the forward-looking statements after the date of this annual report.

PART I

Item 1. Business.

Introduction

We are the second largest cable operator in the United States and a leading broadband communications services company providing video, Internet and voice services to approximately 27.2 million residential and business customers at December 31, 2017. In addition, we sell video and online advertising inventory to local, regional and national advertising customers and fiber-delivered communications and managed information technology (“IT”) solutions to large enterprise customers. We also own and operate regional sports networks and local sports, news and community channels and sell security and home management services in the residential marketplace.

CCO Holdings is a holding company whose principal assets are the equity interests in its operating subsidiaries. CCO Holdings is a direct subsidiary of CCH I Holdings, LLC, which is an indirect subsidiary of Charter Communications, Inc. (“Charter”), Charter Communications Holdings, LLC (“Charter Holdings”) and Spectrum Management Holding Company, LLC.

Our core strategy is to deliver high quality products at competitive prices, combined with outstanding service. This strategy, combined with simple, easy to understand pricing and packaging, is central to our goal of growing our customer base while also selling more services to each customer. We expect to execute this strategy by managing our operations in a consumer-friendly, efficient and cost-effective manner. Our operating strategy includes insourcing much of our customer care and field operations workforces, which results in higher quality service transactions. While an insourced operating model can increase field operations and customer care costs associated with each service transaction, the higher quality nature of insourced labor service transactions significantly reduces the volume of service transactions per customer, more than offsetting the higher investment made in each service transaction. As we reduce the number of service transactions and recurring costs per customer relationship, we effectively pass those savings on to our customers in the form of products and prices that we believe provide more value than what our competitors offer. The combination of offering competitively priced products and high quality service, allows us to increase the number of customers we serve over our fixed network and increase the number of products we sell to each customer, while at the same time reducing the number of service transactions per relationship, improving customer satisfaction and reducing churn, which results in lower costs to acquire and serve customers. We are also reducing our operating costs per customer relationship by providing customers with the ability to communicate with us through a variety of new forums that they may favor over telephonic communications. These forums include our customer website, mobile device applications, online chat and social media, which are less costly for us to provide than direct telephonic communications. Ultimately, our operating strategy enables us to offer high quality, competitively priced services profitably, while continuing to invest in new products and services.

Our principal executive offices are located at 400 Atlantic Street, Stamford, Connecticut 06901. Our telephone number is (203) 905-7800, and Charter has a website accessible at www.charter.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and all amendments thereto, are available on Charter's website free of charge as soon as reasonably practicable after they have been filed. The information posted on Charter's website is not incorporated into this annual report.

The Transactions

On May 18, 2016, the transactions contemplated by the Agreement and Plan of Mergers dated as of May 23, 2015 (the “Merger Agreement”), by and among Time Warner Cable Inc. (“Legacy TWC”), Charter Communications, Inc. prior to the closing of the Merger Agreement (“Legacy Charter”), CCH I, LLC, previously a wholly owned subsidiary of Legacy Charter and certain other subsidiaries of CCH I, LLC were completed (the “TWC Transaction,” and together with the Bright House Transaction described below, the “Transactions”). As a result of the TWC Transaction, CCH I, LLC became the new public parent company that holds the operations of the combined companies and was renamed Charter Communications, Inc.

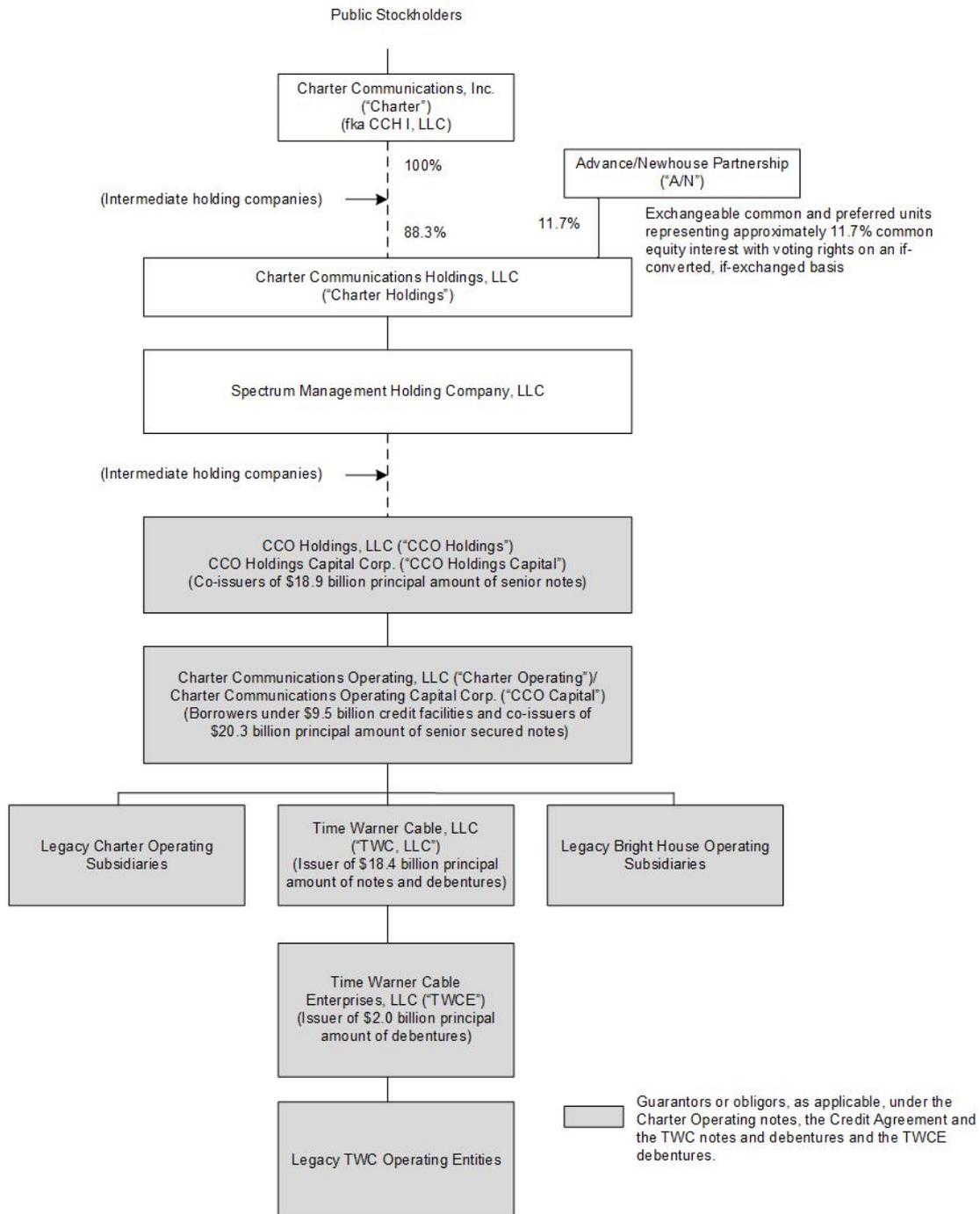
Also, on May 18, 2016, Legacy Charter and Advance/Newhouse Partnership (“A/N”), the former parent of Bright House Networks, LLC (“Legacy Bright House”), completed their previously announced transaction, pursuant to a definitive Contribution Agreement (the “Contribution Agreement”), under which Charter acquired Legacy Bright House (the “Bright House Transaction”). Pursuant to the Bright House Transaction, Charter became the owner of the membership interests in Legacy Bright House and the other assets primarily related to Legacy Bright House (other than certain excluded assets and liabilities and non-operating cash).

In connection with the TWC Transaction, Legacy Charter and Liberty Broadband completed their previously announced transactions pursuant to their investment agreement, in which Liberty Broadband purchased shares of Charter Class A common

stock to partially finance the cash portion of the TWC Transaction consideration, and in connection with the Bright House Transaction, Liberty Broadband purchased shares of Charter Class A common stock (the "Liberty Transaction"). See Note 3 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data," for more information on the Transactions.

Corporate Entity Structure

The chart below sets forth our entity structure and that of our direct and indirect parents and subsidiaries. The chart does not include all of our affiliates and subsidiaries and, in some cases, we have combined separate entities for presentation purposes. The equity ownership percentages shown below are approximations. Indebtedness amounts shown below are principal amounts as of December 31, 2017. See Note 9 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data," which also includes the accreted values of the indebtedness described below.



Products and Services

We offer our customers subscription-based video services, including video on demand (“VOD”), high definition (“HD”) television, and digital video recorder (“DVR”) service, Internet services and voice services. As of December 31, 2017, 74% of our footprint was all-digital enabling us to offer more HD channels, faster Internet speeds and better video picture quality and we intend to transition the remaining portions of our Legacy TWC and Legacy Bright House footprints to all-digital. Our video, Internet, and voice services are offered to residential and commercial customers on a subscription basis, with prices and related charges based on the types of service selected, whether the services are sold as a “bundle” or on an individual basis, and the equipment necessary to receive our services. Bundled services are available to substantially all of our passings, and approximately 59% of our customers subscribe to a bundle of services.

All customer statistics as of December 31, 2017 include the operations of Legacy TWC, Legacy Bright House and Legacy Charter, each of which is based on individual legacy company reporting methodology. These methodologies differ and their differences may be material. Statistical reporting will be conformed over time to a single reporting methodology. The following table summarizes our customer statistics for video, Internet and voice as of December 31, 2017 and 2016 (in thousands except per customer data and footnotes).

	Approximate as of December 31,	
	2017 ^(a)	2016 ^{(a)(b)}
Customer Relationships ^(c)		
Residential	25,639	24,801
Small and Medium Business	1,560	1,404
Total Customer Relationships	27,199	26,205
Residential Primary Service Units (“PSUs”)		
Video	16,544	16,836
Internet	22,545	21,374
Voice	10,427	10,327
	49,516	48,537
Monthly Residential Revenue per Residential Customer ^(d)	\$ 109.75	\$ 109.57
Small and Medium Business PSUs		
Video	453	400
Internet	1,358	1,219
Voice	912	778
	2,723	2,397
Monthly Small and Medium Business Revenue per Customer ^(e)	\$ 207.36	\$ 213.87
Enterprise PSUs ^(f)	114	97

^(a) We calculate the aging of customer accounts based on the monthly billing cycle for each account. On that basis, as of December 31, 2017 and 2016, customers include approximately 245,800 and 208,400 customers, respectively, whose accounts were over 60 days past due, approximately 19,500 and 15,500 customers, respectively, whose accounts were over 90 days past due, and approximately 12,600 and 8,000 customers, respectively, whose accounts were over 120 days past due.

^(b) In the second quarter of 2017, we conformed the seasonal customer program in the Legacy Bright House footprint to our program. Prior to the plan change, Legacy Bright House customers enrolling in the seasonal plan were charged a one-time fee and counted as customer disconnects, and as new connects, when moving off the seasonal plan. Under our seasonal plan, residential customers pay a reduced monthly fee while the seasonal plan is active and remain reported as customers. Excluding the impact of customer activity related to Legacy Bright House's previous seasonal plan, residential customer relationships and video, Internet and voice PSUs at December 31, 2016 would have been higher by approximately 10,000, 8,000, 12,000 and 7,000 respectively.

^(c) Customer relationships include the number of customers that receive one or more levels of service, encompassing video, Internet and voice services, without regard to which service(s) such customers receive. Customers who reside in residential

multiple dwelling units (“MDUs”) and that are billed under bulk contracts are counted based on the number of billed units within each bulk MDU. Total customer relationships excludes enterprise customer relationships.

- (d) Monthly residential revenue per residential customer is calculated as total residential video, Internet and voice annual revenue divided by twelve divided by average residential customer relationships during the respective year.
- (e) Monthly small and medium business revenue per customer is calculated as total small and medium business annual revenue divided by twelve divided by average small and medium business customer relationships during the respective year.
- (f) Enterprise PSUs represent the aggregate number of fiber service offerings counting each separate service offering as an individual PSU.

Residential Services

Video Services

Our video customers receive a package of basic programming which, in our all-digital markets, generally includes a digital set-top box that provides an interactive electronic programming guide with parental controls, access to pay-per-view services, including VOD (available to nearly all of our passings), digital music channels and the option to view certain video services on third party devices. Customers have the option to purchase additional tiers of services including premium channels which provide original programming, commercial-free movies, sports, and other special event entertainment programming. Substantially all of our video programming is available in HD. We also offer certain video packages containing a limited number of channels via our cable television systems.

In the vast majority of our footprint, we offer VOD service which allows customers to select from approximately 35,000 titles at any time. VOD includes standard definition, HD and three dimensional (“3D”) content. VOD programming options may be accessed for free if the content is associated with a customer’s linear subscription, or for a fee on a transactional basis. VOD services are also offered on a subscription basis included in a digital tier premium channel subscription or for a monthly fee. Pay-per-view channels allow customers to pay on a per-event basis to view a single showing of a one-time special sporting event, music concert, or similar event on a commercial-free basis.

Our goal is to provide our video customers with the programming they want, when they want it, on any device. DVR service enables customers to digitally record programming and to pause and rewind live programming. Customers can also use our Spectrum TV application available on mobile devices, residential devices and on our website, to watch up to 250 channels of cable TV, view VOD programming, remotely control digital set-top boxes while in the home and to program DVRs remotely. Customers also have access to programmer authenticated applications and websites (known as TV Everywhere services) such as HBO Go[®], Fox Now[®], Discovery Go[®] and WatchESPN[®].

In certain markets, we have launched Spectrum Guide[®], a network or “cloud-based” user interface that can run on traditional set-top boxes, with a look and feel that is similar to that of the Spectrum TV App. Spectrum Guide[®] is designed to allow our customers to enjoy a state-of-the-art video experience on the majority of our set-top boxes, including accessing third-party video applications such as Netflix. The guide enables customers to find video content more easily across cable TV channels and VOD options. We plan to continue to deploy Spectrum Guide across our footprint and enhance this technology in 2018 and beyond.

Internet Services

In 2017, we completed our launch of Spectrum pricing and packaging (“SPP”) and now offer an entry level Internet download speed of at least 100 megabits per second (“Mbps”) across 99% of our footprint and 200 Mbps across 17% of our footprint, which among other things, allows several people within a single household to stream HD video content online while simultaneously using our Internet service for non-video purposes. Additionally, leveraging DOCSIS 3.1 technology, we had introduced speed offerings of 940 Mbps (“Spectrum Internet Gig”) in 17% of our footprint as of December 31, 2017. Finally, we offer a security suite with our Internet services which, upon installation by customers, provides protection against computer viruses and spyware and includes parental control features.

We offer an in-home WiFi product that provides customers with high performance wireless routers to maximize their in-home wireless Internet experience. Additionally, we offer an out-of-home WiFi service (“Spectrum WiFi”) in most of our footprint to our Internet customers at designated “hot spots.” In 2018, we expect to continue to expand WiFi accessibility to our customers through our network of WiFi hotspots.

Voice Services

We provide voice communications services using voice over Internet protocol ("VoIP") technology to transmit digital voice signals over our network. Our voice services include unlimited local and long distance calling to the United States, Canada, Mexico and Puerto Rico, voicemail, call waiting, caller ID, call forwarding and other features and offers international calling either by the minute, or through packages of minutes per month. For customers that subscribe to both our voice and video offerings, caller ID on TV is also available in most areas.

Mobile Services

Our mobile strategy is built on the long-term vision of an integrated fixed/wireless network with differentiated products, and the ability to maximize the potential of our existing cable business. We intend to launch our Spectrum-branded mobile service in 2018 to residential customers via our mobile virtual network operator ("MVNO") reseller agreement with Verizon Wireless. In the second phase, we plan to use our WiFi network in conjunction with additional unlicensed or licensed spectrum to improve network performance and expand capacity to offer consumers a superior wireless service. In furtherance of this second phase, we have experimental wireless licenses from the Federal Communications Commission ("FCC") that we are utilizing to test next generation wireless services in several markets around the country. We currently plan to only offer our Spectrum mobile service to residential customers subscribing to our Internet service. In the future, we may also offer mobile service to our small and medium business customers on similar terms. We believe Spectrum-branded mobile services will drive more sales of our core products, create longer customer lives and increase profitability and cash flow over time. As we launch our new mobile services, we expect an initial funding period to grow a new product as well as negative working capital impacts from the timing of device-related cash flows when we provide the handset or tablet to customers pursuant to equipment installment plans.

We are exploring working with a variety of partners and vendors in a number of operational areas within the wireless space, including: creating common operating platforms; technical standards development and harmonization; device forward and reverse logistics; and emerging wireless technology platforms. The efficiencies created are expected to provide more choice, innovative products and competitive prices for customers. We intend to consider and pursue opportunities in the mobile space which may include entering into joint ventures or partnerships with wireless or cable providers which may require significant investment. There is no assurance we will enter into such arrangements or that if we do, that they will be successful.

Commercial Services

We offer scalable broadband communications solutions for businesses and carrier organizations of all sizes, selling Internet access, data networking, fiber connectivity to cellular towers and office buildings, video entertainment services and business telephone services.

Small and Medium Business

Spectrum Business offers Internet, voice and video services to small and medium businesses over our hybrid fiber coaxial network that are similar to those that we provide to our residential customers. Spectrum Business includes a full range of video programming and entry-level Internet speeds of 100 Mbps downstream and 10 Mbps upstream. Additionally, customers can upgrade their Internet speeds to 200 or 300 Mbps downstream. Spectrum Business also includes a set of business services including web hosting, e-mail and security, and multi-line telephone services with more than 30 business features including web-based service management, that are generally not available to residential customers.

Enterprise Solutions

Spectrum Enterprise offers fiber-delivered communications and managed IT solutions to larger businesses, as well as high-capacity last-mile data connectivity services to wireless and wireline carriers, Internet Service Providers ("ISPs") and other competitive carriers on a wholesale basis. Spectrum Enterprise's product portfolio includes fiber Internet access, voice trunking services, hosted voice, Ethernet services that privately and securely connect geographically dispersed client locations, and video solutions designed to meet the needs of hospitality, education, and health care clients. In addition, Spectrum Enterprise is beginning market field trials of an innovative Hybrid Software-Defined Wide Area Network that enables businesses to leverage the performance of Ethernet, the ubiquity of Internet connectivity and the flexibility of a software-defined solution to solve a wide array of business communications and networking challenges. Our managed IT portfolio includes Cloud Infrastructure as a Service and Cloud Desktop as a Service, and managed hosting, application, and messaging solutions, along with other related IT and professional services. Our large serviceable footprint allows us to effectively serve business customers with multiple sites across given

geographic regions. These customers can benefit from obtaining advanced services from a single provider simplifying procurement and potentially reducing their costs.

Advertising Services

Our advertising sales division, Spectrum Reach[®], offers local, regional and national businesses the opportunity to advertise in individual and multiple markets on cable television networks and digital outlets. We receive revenues from the sale of local advertising across various platforms for networks such as MTV[®], CNN[®] and ESPN[®]. In any particular market, we typically insert local advertising on up to 60 channels. Our large footprint provides opportunities for advertising customers to address broader regional audiences from a single provider and thus reach more customers with a single transaction. Our size also provides scale to invest in new technology to create more targeted and addressable advertising capabilities.

Available advertising time is generally sold by our advertising sales force. In some markets, we have formed advertising interconnects or entered into representation agreements with other video distributors, including, among others, Verizon Communications Inc.'s ("Verizon") fiber optic service ("FiOS") and AT&T Inc.'s ("AT&T") U-verse and DIRECTV platforms, under which we sell advertising on behalf of those operators. In other markets, we enter into representation agreements under which another operator in the area will sell advertising on our behalf. These arrangements enable us and our partners to deliver linear commercials across wider geographic areas, replicating the reach of local broadcast television stations to the extent possible. In addition, we enter into interconnect agreements from time to time with other cable operators, which, on behalf of a number of video operators, sells advertising time to national and regional advertisers in individual or multiple markets.

Additionally, we sell the advertising inventory of our owned and operated local sports, news and lifestyle channels, of our regional sports networks that carry Los Angeles Lakers' basketball games and other sports programming and of SportsNet LA, a regional sports network that carries Los Angeles Dodgers' baseball games and other sports programming.

We are in the process of deploying advanced advertising products such as our Audience App, which uses our proprietary set-top box viewership data (all anonymized and aggregated) to optimize linear inventory, and household addressability, which allows for more finite targeting, within various parts of our footprint. These new products will be distributed across more of our footprint in 2018.

Other Services

Regional Sports and News Networks

We have an agreement with the Los Angeles Lakers for rights to distribute all locally available Los Angeles Lakers' games through 2033. We broadcast those games on our regional sports network, Spectrum SportsNet. We also manage 16 local news channels, including Spectrum News NY1, a 24-hour news channel focused on New York City, 10 local sports channels and one local lifestyle community channel, and we own 26.8% of Sterling Entertainment Enterprises, LLC (doing business as SportsNet New York), a New York City-based regional sports network that carries New York Mets' baseball games as well as other regional sports programming.

American Media Productions, LLC ("American Media Productions"), an unaffiliated third party, owns SportsNet LA, a regional sports network carrying the Los Angeles Dodgers' baseball games and other sports programming. In accordance with agreements with American Media Productions, we act as the network's exclusive affiliate and advertising sales representative and have certain branding and programming rights with respect to the network. In addition, we provide certain production and technical services to American Media Productions. The affiliate, advertising, production and programming agreements continue through 2038.

Security and Home Management

We provide security and home management services to our residential customers in certain markets. Our broadband cable system connects the customer's in-home system to our emergency response center for traditional security, fire and medical emergency monitoring and dispatch. The service also allows customers to remotely arm or disarm their security system, monitor their home via indoor and outdoor cameras, and remotely operate key home functions, including setting and controlling lights, thermostats and door locks.

Pricing of Our Products and Services

Our revenues are principally derived from the monthly fees customers pay for the services we provide. We typically charge a one-time installation fee which is sometimes waived or discounted in certain sales channels during certain promotional periods.

Our SPP generally offers a standardized price for each tier of service, bundle of services, and add-on service, regardless of market and emphasizes triple play bundles of video, Internet and voice services. Our most popular and competitive services are combined in core packages at what we believe are attractive prices. We believe our approach:

- offers simplicity for customers to understand our offers, and for our employees in service delivery;
- drives our ability to package more services at the time of sale, thus increasing revenue per customer;
- offers a higher quality and more value-based set of services, including faster Internet speeds, more HD channels, lower equipment fees and a more transparent pricing structure;
- drives higher customer satisfaction, lower service calls and churn; and
- allows for gradual price increases at the end of promotional periods.

Our Network Technology and Customer Premise Equipment

Our network includes three key components: a national backbone, regional/metro networks and a “last-mile” network. Both our national backbone and regional/metro network components utilize a redundant Internet Protocol (“IP”) ring/mesh architecture. The national backbone component provides connectivity from regional demarcation points to nationally centralized content, connectivity and services. The regional/metro network components provide connectivity between the regional demarcation points and headends within a specific geographic area and enable the delivery of content and services between these network components.

Our last-mile network utilizes a hybrid fiber coaxial cable (“HFC”) architecture, which combines the use of fiber optic cable with coaxial cable. In most systems, we deliver our signals via fiber optic cable from the headend to a group of nodes, and use coaxial cable to deliver the signal from individual nodes to the homes served by that node. For our fiber Internet, Ethernet, carrier wholesale, SIP and PRI Spectrum Enterprise customers, fiber optic cable is extended from individual nodes to the customer’s site. For certain new build and MDU sites, we increasingly bring fiber to the customer site. Our design standard is six strands of fiber to each node, with two strands activated and four strands reserved for spares and future services. This design standard allows these additional strands to be utilized for additional residential traffic capacity, and enterprise customer needs as they arise. We believe that this hybrid network design provides high capacity and signal quality. The design also provides two-way signal capabilities for the support of interactive services.

HFC architecture benefits include:

- bandwidth capacity to enable traditional and two-way video and broadband services;
- dedicated bandwidth for two-way services; and
- signal quality and high service reliability.

Approximately 98% of our estimated passings are served by systems that have bandwidth of 750 megahertz or greater as of December 31, 2017. This bandwidth capacity enables us to offer HD television, DOCSIS-based Internet services and voice services.

An all-digital platform enables us to offer a larger selection of HD channels, faster Internet speeds and better picture quality while providing greater plant security and enabling lower installation and disconnect service truck rolls. We are currently all-digital in 74% of our footprint and intend to transition the remaining portions of our Legacy TWC and Legacy Bright House footprints.

We have been introducing our new set-top box, WorldBox, to consumers in certain markets. The WorldBox design has opened the set-top box market to new vendors and reduced our set-top box costs. WorldBox also includes more advanced features and functionality than older set-top boxes, including faster processing times, IP capabilities with increased speed, additional simultaneous recordings, increased DVR storage capacity, and a greater degree of flexibility for consumers to take Charter-provisioned set-top boxes with them, if and when, they move residences. We have also been introducing our new cloud-based user interface, Spectrum Guide[®], to our video customers in certain markets. Spectrum Guide[®] improves video content search and discovery, and fully enables our on-demand offering. In addition, Spectrum Guide[®] can function on the majority of our set-top boxes, reducing costs and customer disruption to swap equipment for new functionality.

Management, Customer Operations and Marketing

Our operations are centralized, with senior executives located at several key corporate offices, responsible for coordinating and overseeing operations, including establishing company-wide strategies, policies and procedures. Sales and marketing, network operations, field operations, customer operations, engineering, advertising sales, human resources, legal, government relations, information technology and finance are all directed at the corporate level. Regional and local field operations are responsible for

customer premise service transactions and maintaining and constructing that portion of our network which is located outdoors. In 2018, our field operations group continues to focus on standardizing practices, processes, procedures and metrics.

We continue to focus on improving the customer experience through enhanced product offerings, reliability of services, and delivery of quality customer service. As part of our operating strategy, we are committed to investments and hiring plans that continue to insource most of our customer operations workload. In-house domestic call centers handled approximately 75% of our customer service calls and are managed centrally to ensure a consistent, high quality customer experience. Routing calls by particular call types to specific agents that only handle such call types, enables agents to become experts in addressing specific customer needs, thus creating a better customer experience. We also continue to migrate our call centers to full virtualization which allows calls to be routed across our call centers regardless of the location origin of the call, reducing call wait times, and saving costs. A new call center agent desktop interface tool, already used at Legacy Charter, is being developed for Legacy TWC and Legacy Bright House. This new desktop interface tool will enable virtualization of all call centers, regardless of legacy billing platform, and will better serve our customers.

We also provide customers with the opportunity to interact with us through a variety of forums in addition to telephonic communications, including through our customer website, mobile device applications, online chat and social media. Our customer websites and mobile applications enable customers to pay their bills, manage their accounts, order new services and utilize self-service help and support.

We sell our residential and commercial services using a national brand platform known as Spectrum®, Spectrum Business® and Spectrum Enterprise®. These brands reflect our comprehensive approach to industry-leading products, driven by speed, performance and innovation. Our marketing strategy emphasizes the sale of our bundled services through targeted direct response marketing programs to existing and potential customers, and increases awareness and the value of the Spectrum brand. Our marketing organization creates and executes marketing programs intended to grow customer relationships, increase the number of services we sell per relationship, retain existing customers and cross-sell additional products to current customers. We monitor the effectiveness of our marketing efforts, customer perception, competition, pricing, and service preferences, among other factors, in order to increase our responsiveness to our customers and to improve our sales and customer retention. The marketing organization manages the majority of the sales channels including direct sales, on-line, outbound telemarketing and stores.

Programming

We believe that offering a wide variety of video programming choices influences a customer's decision to subscribe and retain our cable video services. We obtain basic and premium programming, usually pursuant to written contracts from a number of suppliers. Media corporation consolidation has, however, resulted in fewer suppliers and additional selling power on the part of programming suppliers. Our programming contracts are generally for a fixed period of time, usually for multiple years, and are subject to negotiated renewal. Recently, we have begun entering into agreements to co-produce original content which give us the right to provide our customers with certain exclusive content, for a period of time.

Programming is usually made available to us for a license fee, which is generally paid based on the number of customers to whom we make that programming available. Programming license fees may include "volume" discounts and financial incentives to support the launch of a channel and/or ongoing marketing support, as well as discounts for channel placement or service penetration. For home shopping channels, we typically receive a percentage of the revenue attributable to our customers' purchases. We also offer VOD and pay per view channels of movies and events that are subject to a revenue split with the content provider.

Our programming costs have increased in excess of customary inflationary and cost-of-living type increases. We expect programming costs to continue to increase due to a variety of factors including, annual increases pursuant to our programming contracts, contract renewals with programmers and the carriage of incremental programming, including new services, higher expanded basic video penetration and VOD programming. Increases in the cost of sports programming and the amounts paid for broadcast station retransmission consent have been the largest contributors to the growth in our programming costs over the last few years. Additionally, the demands of large media companies who link carriage of their most popular networks to carriage and cost increases of their less popular networks, has limited our flexibility in creating more tailored and cost-sensitive programming packages for consumers.

Federal law allows commercial television broadcast stations to make an election between "must-carry" rights and an alternative "retransmission-consent" regime. When a station opts for retransmission-consent, we are not allowed to carry the station's signal without that station's permission. Continuing demands by owners of broadcast stations for cash payments at substantial increases over amounts paid in prior years in exchange for retransmission consent will increase our programming costs or require us to cease carriage of popular programming, potentially leading to a loss of customers in affected markets.

Over the past several years, increases in our video service rates have not fully offset the increases in our programming costs, and with the impact of increasing competition and other marketplace factors, we do not expect the increases in our video service rates to fully offset the increase in our programming costs for the foreseeable future. Although we pass along a portion of amounts paid for retransmission consent to the majority of our customers, our inability to fully pass programming cost increases on to our video customers has had, and is expected in the future to have, an adverse impact on our cash flow and operating margins associated with our video product. In order to mitigate reductions of our operating margins due to rapidly increasing programming costs, we continue to review our pricing and programming packaging strategies.

We currently have programming contracts that have expired and others that will expire at, or before the end, of 2018. We will seek to renew these agreements on terms that we believe are favorable. There can be no assurance, however, that these agreements will be renewed on favorable or comparable terms. To the extent that we are unable to reach agreements with certain programmers on terms that we believe are reasonable, we have been, and may in the future be, forced to remove such programming channels from our line-up, which may result in a loss of customers.

Regions

We operate in geographically diverse areas which are organized in regional clusters. These regions are managed centrally on a consolidated level. Our eleven regions and the customer relationships within each region as of December 31, 2017 are as follows (in thousands):

Regions	Total Customer Relationships
Carolinas	2,668
Central	2,870
Florida	2,389
Great Lakes	2,208
Northeast	2,970
Northwest	1,472
NYC	1,334
South	2,085
Southern Ohio	2,093
Texas	2,736
West	4,374

Competition

Residential Services

We face intense competition for residential customers, both from existing competitors and, as a result of the rapid development of new technologies, services and products, from new entrants.

Video competition

Our residential video service faces competition from direct broadcast satellite (“DBS”) service providers, which have a national footprint and compete in all of our operating areas. DBS providers offer satellite-delivered pre-packaged programming services that can be received by relatively small and inexpensive receiving dishes. DBS providers offer aggressive promotional pricing, exclusive programming (e.g., NFL Sunday Ticket) and video services that are comparable in many respects to our residential video service. Our residential video service also faces competition from companies with fiber-based networks, primarily AT&T U-verse, Frontier Communications Corporation (“Frontier”) FiOs and Verizon FiOs, which offer wireline video services in approximately 27%, 8% and 4%, respectively, of our operating areas. AT&T also owns DIRECTV, and as a combined company provides video service (via IP or satellite) and voice service (via IP or wireless) across our entire footprint, and delivers video, Internet, voice and mobile services across 45% of our passings. AT&T also announced the acquisition of Time Warner Inc. in October 2016 which is subject to regulatory approval. If approved, it is not yet clear how AT&T will use the various programming and studio assets it would acquire from Time Warner Inc. to benefit its own products on its four video platforms or what potential program access conditions, as part of any regulatory approval, might apply.

Our residential video service also faces growing competition from a number of other sources, including companies that deliver linear network programming, movies and television shows on demand and other video content over broadband Internet connections to televisions, computers, tablets and mobile devices. These newer categories of competitors include virtual multichannel video programming distributors (“V-MVPD”) such as DirecTV NOW, Sling TV, Playstation Vue, YouTube TV and Hulu Live, and direct to consumer products offered by programmers that have not traditionally sold programming directly to consumers, such as HBO Now, CBS All Access and Showtime Anytime. Other online video business models have also developed, including, (i) subscription video on demand (“SVOD”) services such as Netflix, Amazon Prime, and Hulu Plus, (ii) ad-supported free online video products, including YouTube and Hulu, some of which offer programming for free to consumers that we currently purchase for a fee, (iii) pay-per-view products, such as iTunes and Amazon Instant, and (iv) additional offerings from wireless providers which continue to integrate and bundle video services and mobile products. Historically, we have generally viewed SVOD online video services as complementary to our own video offering, and we have developed a cloud-based guide that is capable of incorporating video from many online video services currently offered in the marketplace. As the proliferation of online video services grows, however, services from V-MVPDs and new direct to consumer offerings, as well as piracy and password sharing, could negatively impact the growth of our video business.

Internet competition

Our residential Internet service faces competition from the phone companies’ DSL, fiber-to-the-home (“FTTH”) and wireless broadband offerings, as well as from a variety of companies that offer other forms of online services, including wireless and satellite-based broadband services. AT&T, Frontier FiOs and Verizon’s FiOs are our primary FTTH competitors. Given the FTTH deployments of our competitors, launches of broadband services offering 1 gigabits per second (“Gbps”) speed have recently grown. Several competitors, including AT&T, Verizon’s FiOs and Google, deliver 1 Gbps broadband speed in at least a portion of their footprints which overlap our footprint. DSL service is often offered at prices lower than our Internet services, although typically at speeds much lower than the minimum speeds we offer as part of SPP. Various wireless phone companies are now offering third and fourth generation (3G and 4G) wireless Internet services and some have announced that they intend to offer faster fifth generation (5G) services in the future. Some wireless phone companies offer unlimited data packages to customers. In addition, a growing number of commercial areas, such as retail malls, restaurants and airports, offer WiFi Internet service. Numerous local governments are also considering or actively pursuing publicly subsidized WiFi Internet access networks. These options offer alternatives to cable-based Internet access.

Voice competition

Our residential voice service competes with wireless and wireline phone providers, as well as other forms of communication, such as text messaging on cellular phones, instant messaging, social networking services, video conferencing and email. We also compete with “over-the-top” phone providers, such as Vonage, Skype, magicJack, Google Voice and Ooma, Inc., as well as companies that sell phone cards at a cost per minute for both national and international service. The increase in the number of different technologies capable of carrying voice services and the number of alternative communication options available to customers as well as the replacement of wireline services by wireless have intensified the competitive environment in which we operate our residential voice service. When launched, our mobile service will compete with other wireless providers such as Verizon, AT&T, T-Mobile US, Inc. (“T-Mobile”) and Sprint Corporation (“Sprint”).

Regional Competitors

In some of our operating areas, other competitors have built networks that offer video, Internet and voice services that compete with our services. For example, in certain markets, our residential video, Internet and voice services compete with Google Fiber, Cincinnati Bell Inc., Hawaiian Telcom, RCN Telecom Services, LLC, Grande Communications Networks, LLC and WideOpenWest Finance, LLC.

Additional competition

In addition to multi-channel video providers, cable systems compete with other sources of news, information and entertainment, including over-the-air television broadcast reception, live events, movie theaters and the Internet. Competition is also posed by fixed wireless and satellite master antenna television systems, or SMATV systems, serving MDUs, such as condominiums, apartment complexes, and private residential communities.

Business Services

We face intense competition across each of our business services product offerings. Our small and medium business video, Internet,

networking and voice services face competition from a variety of providers as described above. Our enterprise solutions also face competition from the competitors described above as well as other telecommunications carriers, such as metro and regional fiber-based carriers. We also compete with cloud, hosting and related service providers and application-service providers.

Advertising

We face intense competition for advertising revenue across many different platforms and from a wide range of local and national competitors. Advertising competition has increased and will likely continue to increase as new advertising avenues seek to attract the same advertisers. We compete for advertising revenue against, among others, local broadcast stations, national cable and broadcast networks, radio stations, print media and online advertising companies and content providers.

Security and Home Management

Our IntelligentHome service faces competition from traditional security companies, such as the ADT Corporation, service providers such as Verizon and AT&T, as well as new entrants, such as Vivint, Inc., Alarm.com, Inc. and NEST Labs, Inc.

Seasonality and Cyclicity

Our business is subject to seasonal and cyclical variations. Our results are impacted by the seasonal nature of customers receiving our cable services in college and vacation markets. Our revenue is subject to cyclical advertising patterns and changes in viewership levels. Our advertising revenue is generally higher in the second and fourth calendar quarters of each year, due in part to increases in consumer advertising in the spring and in the period leading up to and including the holiday season. U.S. advertising revenue is also cyclical, benefiting in even-numbered years from advertising related to candidates running for political office and issue-oriented advertising. Our capital expenditures and trade working capital are also subject to significant seasonality based on the timing of subscriber growth, network programs, specific projects and construction.

Regulation and Legislation

The following summary addresses the key regulatory and legislative developments affecting the cable industry and our services for both residential and commercial customers. Cable system operations are extensively regulated by the federal government (primarily the FCC), certain state governments, and many local governments. A failure to comply with these regulations could subject us to substantial penalties. Our business can be dramatically impacted by changes to the existing regulatory framework, whether triggered by legislative, administrative, or judicial rulings. Congress and the FCC have frequently revisited the subject of communications regulation and they are likely to do so again in the future. We could be materially disadvantaged in the future if we are subject to new regulations or regulatory actions that do not equally impact our key competitors. We cannot provide assurance that the already extensive regulation of our business will not be expanded in the future. In addition, we are already subject to Charter-specific conditions regarding certain business practices as a result of the FCC's approval of the Transactions.

Video Service

Must Carry/Retransmission Consent

There are two alternative legal methods for carriage of local broadcast television stations on cable systems. Federal "must carry" regulations require cable systems to carry local broadcast television stations upon the request of the local broadcaster. Alternatively, federal law includes "retransmission consent" regulations, by which popular commercial television stations can prohibit cable carriage unless the cable operator first negotiates for "retransmission consent," which may be conditioned on significant payments or other concessions. Popular stations invoking "retransmission consent" have been demanding substantial compensation increases in their recent negotiations with cable operators, thereby significantly increasing our operating costs.

Additional government-mandated broadcast carriage obligations, including those related to the FCC's newly adopted enhanced technical broadcasting option (Advanced Television Systems Committee 3.0), could disrupt existing programming commitments, interfere with our preferred use of limited channel capacity, and limit our ability to offer services that appeal to our customers and generate revenues.

Cable Equipment

In 1996, Congress enacted a statute requiring the FCC to adopt regulations designed to assure the development of an independent retail market for "navigation devices," such as cable set-top boxes. As a result, the FCC required cable operators to make a separate offering of security modules (*i.e.*, a "CableCARD") that can be used with retail navigation devices. Some of the FCC's rules

requiring support for CableCARDs were vacated by the United States Court of Appeals for the District of Columbia in 2013, and another of these rules was repealed by Congress in 2014, but the basic obligation to provide separable security for retail devices remains in place. In 2016, the FCC proposed to replace its CableCARD regime with burdensome new rules that would have required us to make disaggregated “information flows” available to set-top boxes and apps supplied by third parties. That proposal was not adopted, but various parties may continue to advocate alternative regulatory approaches to reduce consumer dependency on traditional operator provided set-top boxes. It remains uncertain whether the FCC or Congress will change the legal requirements related to our set-top boxes and what the impact of any such changes might be.

Privacy and Information Security Regulation

The Communications Act of 1934, as amended (the “Communications Act”) limits our ability to collect, use, and disclose customers’ personally identifiable information for our video, voice, and Internet services, as well as provides requirements to safeguard such information. We are subject to additional federal, state, and local laws and regulations that impose additional restrictions on the collection, use and disclosure of consumer information. Further, the FCC, Federal Trade Commission (“FTC”), and many states regulate and restrict the marketing practices of communications service providers, including telemarketing and sending unsolicited commercial emails.

As a result of the FCC’s 2017 decision to reclassify broadband Internet access service as an “information service,” the FTC once again has the authority, pursuant to its authority to enforce against unfair or deceptive acts and practices, to protect the privacy of Internet service customers, including our use and disclosure of certain customer information. Although one court decision has raised questions regarding the extent of FTC jurisdiction over companies that offer both common carrier services as well as non-common carrier services, that decision has been stayed, pending review by the full Ninth Circuit Court of Appeals.

Our operations are also subject to federal and state laws governing information security. In the event of an information security breach, such rules may require consumer and government agency notification and may result in regulatory enforcement actions with the potential of monetary forfeitures. The FCC, the FTC and state attorneys general regularly bring enforcement actions against companies related to information security breaches and privacy violations.

Various security standards provide guidance to telecommunications companies in order to help identify and mitigate cybersecurity risk. One such standard is the voluntary framework released by the National Institute for Standards and Technologies (“NIST”) in February 2014, in cooperation with other federal agencies and owners and operators of U.S. critical infrastructure. The NIST cybersecurity framework provides a prioritized and flexible model for organizations to identify and manage cyber risks inherent to their business. It was designed to supplement, not supersede, existing cybersecurity regulations and requirements. Several government agencies have encouraged compliance with the NIST cybersecurity framework, including the FCC, which is also considering expansion of its cybersecurity guidelines or the adoption of cybersecurity requirements. NIST recently proposed draft updates to this voluntary framework and is expected to release final revisions in 2018.

After the repeal of the FCC’s 2016 privacy rules through the Congressional Review Act, many states and local authorities have considered legislative or other actions that would impose additional restrictions on our ability to collect, use and disclose certain information. Despite language in the FCC’s December 2017 decision reclassifying broadband Internet access service as an “information service,” that preempts state and local privacy regulations that conflict with federal policy, we expect these state and local efforts to regulate online privacy to continue in 2018. Additionally, several state legislatures are considering the adoption of new data security and cybersecurity legislation that could result in additional network and information security requirements for our business. There are also bills pending in both the U.S. House of Representatives and Senate that could impose new privacy and data security obligations. We cannot predict whether any of these efforts will be successful or preempted, or how new legislation and regulations, if any, would affect our business.

Pole Attachments

The Communications Act requires most utilities owning utility poles to provide cable systems with access to poles and conduits and simultaneously subjects the rates charged for this access to either federal or state regulation. In 2011 and again in 2015, the FCC amended its existing pole attachment rules to promote broadband deployment. The 2011 order allows for new penalties in certain cases involving unauthorized attachments, but generally strengthens the cable industry’s ability to access investor-owned utility poles on reasonable rates, terms, and conditions. Additionally, the 2011 order reduces the federal rate formula previously applicable to “telecommunications” attachments to closely approximate the rate formula applicable to “cable” attachments. The 2015 order continues the reconciliation of rates, effectively closing the remaining “loophole” that potentially allowed for significantly higher rates for telecommunications than for “cable” attachments in certain scenarios, and minimizing the rate consequences of any of our services if deemed “telecommunications” for pole attachment purposes. Utility pole owners have appealed the 2015 order. Neither the 2011 order nor the 2015 order directly affect the rate in states that self-regulate (rather than

allow the FCC to regulate pole rates), but many of those states have substantially the same rate for cable and telecommunications attachments.

Some municipalities have enacted “one-touch” make-ready pole attachment ordinances, which permit third parties to alter components of our network attached to utility poles in ways that could adversely affect our businesses. Some of these ordinances have been challenged with differing results. In 2017, the FCC initiated a rulemaking that considers amending its pole attachment rules to permit a “one-touch” make-ready-like process for the poles within its jurisdiction. If adopted, these rules could have a similar effect as the municipal one-touch make-ready ordinances and adversely affect our businesses.

Cable Rate Regulation

Federal law strictly limits the potential scope of cable rate regulation. Pursuant to federal law, all video offerings are universally exempt from rate regulation, except for a cable system’s minimum level of video programming service, referred to as “basic service,” and associated equipment. Rate regulation of basic service and associated equipment operates pursuant to a federal formula, with local governments, commonly referred to as local franchising authorities, primarily responsible for administering this regulation. The majority of our local franchising authorities have never certified to regulate basic service cable rates. In 2015, the FCC adopted an order (which was subsequently upheld on appeal) reversing its historic approach to rate regulation certifications and requiring a local franchise authority interested in regulating cable rates to first make an affirmative showing that there is no “effective competition” (as defined under federal law) in the community. Very few local franchise authorities have filed the necessary rate regulation certification, and the FCC’s 2015 order should make it more difficult for such entities to assert rate regulation in the future.

There have been calls to impose expanded rate regulation on the cable industry. Confronted with rapidly increasing cable programming costs, it is possible that Congress may adopt new constraints on the retail pricing or packaging of cable programming. Any such constraints could adversely affect our operations.

Ownership Restrictions

Federal regulation of the communications field traditionally included a host of ownership restrictions, which limited the size of certain media entities and restricted their ability to enter into competing enterprises. Through a series of legislative, regulatory, and judicial actions, most of these restrictions have been either eliminated or substantially relaxed. Changes in this regulatory area could alter the business environment in which we operate.

Access Channels

Local franchise agreements often require cable operators to set aside certain channels for public, educational, and governmental access programming. Federal law also requires cable systems to designate up to 15% of their channel capacity for commercial leased access by unaffiliated third parties, who may offer programming that our customers do not particularly desire. The FCC adopted revised rules in 2007 mandating a significant reduction in the rates that operators can charge commercial leased access users and imposing additional administrative requirements that would be burdensome on the cable industry. The effect of the FCC’s revised rules was stayed by a federal court, pending a cable industry appeal and an adverse finding by the Office of Management and Budget. Although commercial leased access activity historically has been relatively limited, increased activity in this area could further burden the channel capacity of our cable systems.

Other FCC Regulatory Matters

FCC regulations cover a variety of additional areas, including, among other things: (1) equal employment opportunity obligations; (2) customer service standards; (3) technical service standards; (4) mandatory blackouts of certain network and syndicated programming; (5) restrictions on political advertising; (6) restrictions on advertising in children’s programming; (7) licensing of systems and facilities; (8) maintenance of public files; (9) emergency alert systems; (10) inside wiring and exclusive contracts for MDU complexes; and (11) disability access, including new requirements governing video-description and closed-captioning. Each of these regulations restricts our business practices to varying degrees and may impose additional costs on our operations.

It is possible that Congress or the FCC will expand or modify its regulation of cable systems in the future, and we cannot predict at this time how that might impact our business.

Copyright

Cable systems are subject to a federal copyright compulsory license covering carriage of television and radio broadcast signals.

The copyright law provides copyright owners the right to audit our payments under the compulsory license, and we are currently subject to ongoing compulsory copyright audits. The possible modification or elimination of this compulsory copyright license is the subject of continuing legislative proposals and administrative review and could adversely affect our ability to obtain desired broadcast programming.

Copyright clearances for non-broadcast programming services are arranged through private negotiations. Cable operators also must obtain music rights for locally originated programming and advertising from the major music performing rights organizations. These licensing fees have been the source of litigation in the past, and we cannot predict with certainty whether license fee disputes may arise in the future.

Franchise Matters

Our cable systems generally are operated pursuant to nonexclusive franchises, permits, and similar authorizations granted by a municipality or other state or local government entity in order to utilize and cross public rights-of-way. Cable franchises generally are granted for fixed terms and in many cases include monetary penalties for noncompliance and may be terminable if the franchisee fails to comply with material provisions. The specific terms and conditions of cable franchises vary significantly between jurisdictions. Cable franchises generally contain provisions governing cable operations, franchise fees, system construction, maintenance, technical performance, customer service standards, supporting and carrying public access channels, and changes in the ownership of the franchisee. A number of states subject cable systems to the jurisdiction of centralized state government agencies, such as public utility commissions. Although local franchising authorities have considerable discretion in establishing franchise terms, certain federal protections benefit cable operators. For example, federal law caps local franchise fees.

Prior to the scheduled expiration of our franchises, we generally initiate renewal proceedings with the granting authorities. The Communications Act, which is the primary federal statute regulating interstate communications, provides for an orderly franchise renewal process in which granting authorities may not unreasonably withhold renewals. In connection with the franchise renewal process, however, many governmental authorities require the cable operator to make additional costly commitments. Historically, we have been able to renew our franchises without incurring significant costs, although any particular franchise may not be renewed on commercially favorable terms or otherwise. If we fail to obtain renewals of franchises representing a significant number of our customers, it could have a material adverse effect on our consolidated financial condition, results of operations, or our liquidity. Similarly, if a local franchising authority's consent is required for the purchase or sale of a cable system, the local franchising authority may attempt to impose more burdensome requirements as a condition for providing its consent.

The traditional cable franchising regime has undergone significant change as a result of various federal and state actions. The FCC has adopted rules that streamline entry for new competitors (particularly those affiliated with telephone companies) and reduce certain franchising burdens for these new entrants. The FCC adopted more modest relief for existing cable operators.

At the same time, a substantial number of states have adopted new franchising laws. Again, these laws were principally designed to streamline entry for new competitors, and they often provide advantages for these new entrants that are not immediately available to existing cable operators. In many instances, these franchising regimes do not apply to established cable operators until the existing franchise expires or a competitor directly enters the franchise territory.

Internet Service

In 2015, the FCC determined that broadband Internet access services, such as those we offer, were a form of "telecommunications service" under the Communications Act and, on that basis, imposed rules banning service providers from blocking access to lawful content, restricting data rates for downloading lawful content, prohibiting the attachment of non-harmful devices, giving special transmission priority to affiliates, and offering third parties the ability to pay for priority routing. The 2015 rules also imposed a "transparency" requirement, *i.e.*, an obligation to disclose all material terms and conditions of our service to consumers.

In December 2017, the FCC adopted an order repudiating its treatment of broadband as a "telecommunications service," reclassifying broadband as an "information service," and eliminating the 2015 rules other than the transparency requirement, which it eased in significant ways. The FCC also ruled that state regulators may not impose obligations similar to federal obligations that the FCC removed. We expect that various parties will challenge the FCC's December 2017 ruling in court, and, we cannot predict how any such court challenges will be resolved. Moreover, it is possible that the FCC might further revise its approach to broadband Internet access in the future, or that Congress might enact legislation affecting the rules applicable to the service.

The FCC's December 2017 ruling does not affect other regulatory obligations on broadband Internet access providers. Notably, broadband providers are obliged by the Communications Assistance for Law Enforcement Act ("CALEA") to configure their networks in a manner that facilitates the ability of law enforcement, with proper legal authorization, to obtain information about

our customers, including the content of their Internet communications. The FCC and Congress also are considering subjecting Internet access services to the Universal Service funding requirements. These funding requirements could impose significant new costs on our Internet service. Also, the FCC and some state regulatory commissions direct certain subsidies to telephone companies deploying broadband to areas deemed to be “unserved” or “underserved.” We have opposed such subsidies when directed to areas that we serve. Despite our efforts, future subsidies may be directed to areas served by us, which could result in subsidized competitors operating in our service territories. State and local governmental organizations have also adopted Internet-related regulations. These various governmental jurisdictions are also considering additional regulations in these and other areas, such as privacy, pricing, service and product quality, imposition of local franchise fees on Internet-related revenue and taxation. The adoption of new Internet regulations or the adaptation of existing laws to the Internet could adversely affect our business.

Aside from the FCC’s generally applicable regulations, we have made certain commitments to comply with the FCC’s order in connection with the FCC’s approval of the TWC Transaction and the Bright House Transaction (discussed below).

Voice Service

The Telecommunications Act of 1996 created a more favorable regulatory environment for us to provide telecommunications and/or competitive voice services than had previously existed. In particular, it established requirements ensuring that competitive telephone companies could interconnect their networks with those providers of traditional telecommunications services to open the market to competition. The FCC has subsequently ruled that competitive telephone companies that support VoIP services, such as those we offer our customers, are entitled to interconnection with incumbent providers of traditional telecommunications services, which ensures that our VoIP services can compete in the market. Since that time, the FCC has initiated a proceeding to determine whether such interconnection rights should extend to traditional and competitive networks utilizing IP technology, and how to encourage the transition to IP networks throughout the industry. The FCC initiated a further proceeding in 2017 to consider whether additional changes to interconnection obligations are needed, including how and where companies interconnect their networks with the networks of other providers. New rules or obligations arising from these proceedings may affect our ability to compete in the provision of voice services.

The FCC has collected extensive data from providers of point to point transport (“special access”) services, such as us, and the FCC may use that data to evaluate whether the market for such services is competitive, or whether the market should be subject to further regulation, which may increase our costs or constrain our ability to compete in this market.

Further regulatory changes are being considered that could impact our voice business and that of our primary telecommunications competitors. The FCC and state regulatory authorities are considering, for example, whether certain common carrier regulations traditionally applied to incumbent local exchange carriers should be modified or reduced, and, in some jurisdictions, the extent to which common carrier requirements should be extended to VoIP providers. The FCC has already determined that certain providers of voice services using Internet Protocol technology must comply with requirements relating to 911 emergency services (“E911”), the CALEA (the statute governing law enforcement access to and surveillance of communications), Universal Service Fund contributions, customer privacy and Customer Proprietary Network Information issues, number portability, network outage reporting, rural call completion, disability access, regulatory fees, back-up power obligations, and discontinuance of service. In March 2007, a federal appeals court affirmed the FCC’s decision concerning federal regulation of certain VoIP services, but declined to specifically find that VoIP service provided by cable companies, such as we provide, should be regulated only at the federal level. As a result, some states have begun proceedings to subject cable VoIP services to state level regulation, and at least one state has asserted jurisdiction over our VoIP services. We prevailed on a legal challenge to that state’s assertion of jurisdiction. However, the state has appealed that ruling in a case which is now pending before a federal appellate court in Minnesota. Although we have registered with, or obtained certificates or authorizations from the FCC and the state regulatory authorities in those states in which we offer competitive voice services in order to ensure the continuity of our services and to maintain needed network interconnection arrangements, it is unclear whether and how these and other ongoing regulatory matters ultimately will be resolved.

Transaction-Related Commitments

In connection with approval of the Transactions, federal and state regulators imposed a number of post-merger conditions on us including but not limited to the following.

FCC Conditions

- Offer settlement-free Internet interconnection to any party that meets the requirements of our Interconnection Policy (available on Charter’s website) on terms generally consistent with the policy for seven years (with a possible reduction to five);
- Deploy and offer high-speed broadband Internet access service to an additional two million locations over five years;

- Refrain from charging usage-based prices or imposing data caps on any fixed mass market broadband Internet access service plans for seven years (with a possible reduction to five);
- Offer 30/4 Mbps discounted broadband where technically feasible to eligible customers throughout our service area for four years from the offer's commencement; and
- Continue to provide CableCARDS to any new or existing customer upon request for use in third-party retail devices for four years and continue to support such CableCARDS for seven years (in each case, unless the FCC changes the relevant rules).

The FCC conditions also contain a number of compliance reporting requirements.

DOJ Conditions

The Department of Justice ("DOJ") Order prohibits us from entering into or enforcing any agreement with a video programmer that forbids, limits or creates incentives to limit the video programmer's provision of content to online video distributors ("OVDs"). We will not be able to avail ourselves of other distributors' most favored nation ("MFN") provisions if they are inconsistent with this prohibition. The DOJ's conditions are effective for seven years, although we may petition the DOJ to eliminate the conditions after five years.

State Conditions

Certain state regulators, including California, New York, Hawaii and New Jersey also imposed conditions in connection with the approval of the Transactions. These conditions include requirements related to:

- Upgrading networks within the designated state, including upgrades to broadband speeds and conversion of all households served within California and New York to an all-digital platform;
- Building out our network to households and business locations that are not currently served by cable within the designated states;
- Offering LifeLine service discounts and low-income broadband to eligible households served within the applicable states;
- Investing in service improvement programs and customer service enhancements and maintaining customer-facing jobs within the designated state;
- Continuing to make legacy service offerings available, including allowing Legacy TWC and Legacy Bright House customers to maintain their existing service offerings for a period of three years; and
- Complying with reporting requirements.

Employees

As of December 31, 2017, we had approximately 94,800 active full-time equivalent employees.

Item 1A. Risk Factors.

Risks Related to Our Business

If we are not able to successfully complete the integration of our business with that of Legacy TWC and Legacy Bright House, the anticipated benefits of the Transactions may not be fully realized or may take longer to realize than expected. In such circumstance, we may not perform as expected.

There can be no assurances that we can successfully complete the integration of our business with that of Legacy TWC and Legacy Bright House. We now have significantly more systems, assets, investments, businesses, customers and employees than each company did prior to the Transactions. It is possible that the integration process could result in the loss of customers, the disruption of our ongoing businesses or in unexpected integration issues, higher than expected integration costs and an overall post-completion integration process that takes longer than originally anticipated. The process of integrating Legacy TWC and Legacy Bright House with the Legacy Charter operations requires significant capital expenditures and the expansion of certain operations and operating and financial systems. Management continues to devote a significant amount of time and attention to the integration process and there is a significant degree of difficulty and management involvement inherent in that process.

Even if the new businesses are successfully integrated, it may not be possible to realize the benefits that are expected to result from the Transactions, or realize these benefits within the time frame that is expected. For example, the benefits of our pricing and packaging and converting our video product to all-digital in certain Legacy TWC and Legacy Bright House systems may not be fully realized or may take longer than anticipated, or the benefits from the Transactions may be offset by costs incurred or

delays in integrating the businesses and increased operating costs. If the combined company fails to realize the anticipated benefits from the Transactions, our liquidity, results of operations, financial condition and/or share price may be adversely affected. In addition, at times, the attention of certain members of our management and resources may be focused on the integration of the businesses and diverted from day-to-day business operations, which may disrupt the business of the combined company.

We operate in a very competitive business environment, which affects our ability to attract and retain customers and can adversely affect our business, operations and financial results.

The industry in which we operate is highly competitive and has become more so in recent years. In some instances, we compete against companies with fewer regulatory burdens, better access to financing, greater personnel resources, greater resources for marketing, greater and more favorable brand name recognition, and long-established relationships with regulatory authorities and customers. Increasing consolidation in the cable industry and the repeal of certain ownership rules have provided additional benefits to certain of our competitors, either through access to financing, resources, or efficiencies of scale.

Our residential video service faces competition from a number of sources, including direct broadcast satellite services, as well as other companies that deliver movies, television shows and other video programming over broadband Internet connections to TVs, computers, tablets and mobile devices. Our residential Internet service faces competition from the phone companies' DSL, FTTH and wireless broadband offerings as well as from a variety of companies that offer other forms of online services, including wireless and satellite-based broadband services. Our residential voice service and our planned mobile service competes with wireless and wireline phone providers, as well as other forms of communication, such as text messaging on cellular phones, instant messaging, social networking services, video conferencing and email. Competition from these companies, including intensive marketing efforts with aggressive pricing, exclusive programming and increased HD broadcasting may have an adverse impact on our ability to attract and retain customers.

Overbuilds could also adversely affect our growth, financial condition, and results of operations, by creating or increasing competition. We are aware of traditional overbuild situations impacting certain of our markets, however, we are unable to predict the extent to which additional overbuild situations may occur.

Our services may not allow us to compete effectively. Competition may reduce our expected growth of future cash flows which may contribute to future impairments of our franchises and goodwill and our ability to meet cash flow requirements, including debt service requirements. For additional information regarding the competition we face, see "Business -Competition" and "-Regulation and Legislation."

We face risks relating to competition for the leisure time and discretionary spending of audiences, which has intensified in part due to advances in technology and changes in consumer expectations and behavior.

In addition to the various competitive factors discussed above, we are subject to risks relating to increasing competition for the leisure time, shifting consumer needs and discretionary spending of consumers. We compete with all other sources of entertainment, news and information delivery, as well as a broad range of communications products and services. Technological advancements, such as new video formats and Internet streaming and downloading of programming that can be viewed on televisions, computers, smartphones and tablets, many of which have been beneficial to us, have nonetheless increased the number of entertainment and information delivery choices available to consumers and intensified the challenges posed by audience fragmentation.

Newer products and services, particularly alternative methods for the distribution, sale and viewing of content will likely continue to be developed, further increasing the number of competitors that we face. The increasing number of choices available to audiences, including low-cost or free choices, could negatively impact not only consumer demand for our products and services, but also advertisers' willingness to purchase advertising from us. We compete for the sale of advertising revenue with television networks and stations, as well as other advertising platforms, such as radio, print and, increasingly, online media. Our failure to effectively anticipate or adapt to new technologies and changes in consumer expectations and behavior could significantly adversely affect our competitive position and our business and results of operations.

Our exposure to the economic conditions of our current and potential customers, vendors and third parties could adversely affect our cash flow, results of operations and financial condition.

We are exposed to risks associated with the economic conditions of our current and potential customers, the potential financial instability of our customers and their financial ability to purchase our products. If there were a general economic downturn, we may experience increased cancellations by our customers or unfavorable changes in the mix of products purchased, including an increase in the number of homes that replace their video service with Internet-delivered and/or over-air content, which would negatively impact our ability to attract customers, increase rates and maintain or increase revenue. In addition, providing video

services is an established and highly penetrated business. Our ability to gain new video subscribers is dependent to a large extent on growth in occupied housing in our service areas, which is influenced by both national and local economic conditions. Weak economic conditions may also have a negative impact on our advertising revenue. These events have adversely affected us in the past, and may adversely affect our cash flow, results of operations and financial condition if a downturn were to occur.

In addition, we are susceptible to risks associated with the potential financial instability of the vendors and third parties on which we rely to provide products and services or to which we outsource certain functions. The same economic conditions that may affect our customers, as well as volatility and disruption in the capital and credit markets, also could adversely affect vendors and third parties and lead to significant increases in prices, reduction in output or the bankruptcy of our vendors or third parties upon which we rely. Any interruption in the services provided by our vendors or by third parties could adversely affect our cash flow, results of operation and financial condition.

We face risks inherent in our commercial business.

We may encounter unforeseen difficulties as we increase the scale of our service offerings to businesses. We sell Internet access, data networking and fiber connectivity to cellular towers and office buildings, and video and business voice services to businesses and have increased our focus on growing this business. In order to grow our commercial business, we expect to continue to invest in technology, equipment and personnel focused on the commercial business. Commercial business customers often require service level agreements and generally have heightened customer expectations for reliability of services. If our efforts to build the infrastructure to scale the commercial business are not successful, the growth of our commercial services business would be limited. We depend on interconnection and related services provided by certain third parties for the growth of our commercial business. As a result, our ability to implement changes as the services grow may be limited. If we are unable to meet these service level requirements or expectations, our commercial business could be adversely affected. Finally, we expect advances in communications technology, as well as changes in the marketplace and the regulatory and legislative environment. Consequently, we are unable to predict the effect that ongoing or future developments in these areas might have on our voice and commercial businesses and operations.

Programming costs are rising at a much faster rate than wages or inflation, and we may not have the ability to reduce or moderate the growth rates of, or pass on to our customers, our increasing programming costs, which would adversely affect our cash flow and operating margins.

Video programming has been, and is expected to continue to be, our largest operating expense item. In recent years, the cable industry has experienced a rapid escalation in the cost of programming. We expect programming costs to continue to increase due to a variety of factors including amounts paid for broadcast station retransmission consent, annual increases imposed by programmers, including sports programmers, and the carriage of incremental programming, including new services and VOD programming. The inability to fully pass programming cost increases on to our customers has had, and is expected in the future to have, an adverse impact on our cash flow and operating margins associated with the video product. We have programming contracts that have expired and others that will expire at or before the end of 2018. There can be no assurance that these agreements will be renewed on favorable or comparable terms. In addition, a number of programmers have begun to sell their services through alternative distribution channels, including IP-based platforms, which are less secure than our own video distribution platforms. There is growing evidence that these less secure video distribution platforms are leading to video product theft via password sharing among consumers. Password sharing may drive down the number of customers who pay for certain programming, putting programmer revenues at risk, and which in turn may cause certain programmers to seek even higher programming fees from us. To the extent that we are unable to reach agreement with certain programmers on terms that we believe are reasonable, we have been, and may be in the future, forced to remove such programming channels from our line-up, which may result in a loss of customers. Our failure to carry programming that is attractive to our customers could adversely impact our customer levels, operations and financial results. In addition, if our Internet customers are unable to access desirable content online because content providers block or limit access by our customers as a class, our ability to gain and retain customers, especially Internet customers, may be negatively impacted.

Increased demands by owners of some broadcast stations for carriage of other services or payments to those broadcasters for retransmission consent are likely to further increase our programming costs. Federal law allows commercial television broadcast stations to make an election between “must-carry” rights and an alternative “retransmission-consent” regime. When a station opts for the retransmission consent regime, we are not allowed to carry the station’s signal without that station’s permission. In some cases, we carry stations under short-term arrangements while we attempt to negotiate new long-term retransmission agreements. If negotiations with these programmers prove unsuccessful, they could require us to cease carrying their signals, possibly for an indefinite period. Any loss of stations could make our video service less attractive to customers, which could result in less subscription and advertising revenue. In retransmission-consent negotiations, broadcasters often condition consent with respect to one station on carriage of one or more other stations or programming services in which they or their affiliates have an interest.

Carriage of these other services, as well as increased fees for retransmission rights, may increase our programming expenses and diminish the amount of capacity we have available to introduce new services, which could have an adverse effect on our business and financial results.

Our inability to respond to technological developments and meet customer demand for new products and services could adversely affect our ability to compete effectively.

We operate in a highly competitive, consumer-driven and rapidly changing environment. From time to time, we may pursue strategic initiatives, including, for example, our mobile strategy. Our success is, to a large extent, dependent on our ability to acquire, develop, adopt, upgrade and exploit new and existing technologies to address consumers' changing demands and distinguish our services from those of our competitors. We may not be able to accurately predict technological trends or the success of new products and services. If we choose technologies or equipment that are less effective, cost-efficient or attractive to customers than those chosen by our competitors, if we offer services that fail to appeal to consumers, are not available at competitive prices or that do not function as expected, or we are not able to fund the expenditures necessary to keep pace with technological developments, our competitive position could deteriorate, and our business and financial results could suffer.

The ability of some of our competitors to introduce new technologies, products and services more quickly than we do may adversely affect our competitive position. Furthermore, advances in technology, decreases in the cost of existing technologies or changes in competitors' product and service offerings may require us in the future to make additional research and development expenditures or to offer at no additional charge or at a lower price certain products and services that we currently offer to customers separately or at a premium. In addition, the uncertainty of our ability, and the costs, to obtain intellectual property rights from third parties could impact our ability to respond to technological advances in a timely and effective manner.

Our inability to maintain and expand our upgraded systems and provide advanced services such as a state of the art user interface in a timely manner, or to anticipate the demands of the marketplace, could materially adversely affect our ability to attract and retain customers. In addition, as we launch our new mobile services using virtual network operator rights from a third party, we expect an initial funding period to grow a new product as well as negative working capital impacts from the timing of device-related cash flows when we provide the handset or tablet pursuant to equipment installation plans. Consequently, our growth, financial condition and results of operations could suffer materially.

We depend on third party service providers, suppliers and licensors; thus, if we are unable to procure the necessary services, equipment, software or licenses on reasonable terms and on a timely basis, our ability to offer services could be impaired, and our growth, operations, business, financial results and financial condition could be materially adversely affected.

We depend on a limited number of third party service providers, suppliers and licensors to supply some of the services, hardware, software and operational support necessary to provide some of our services. Some of our hardware, software and operational support vendors, and service providers represent our sole source of supply or have, either through contract or as a result of intellectual property rights, a position of some exclusivity. If any of these parties breaches or terminates its agreement with us or otherwise fails to perform its obligations in a timely manner, demand exceeds these vendors' capacity, they experience operating or financial difficulties, they significantly increase the amount we pay for necessary products or services, or they cease production of any necessary product due to lack of demand, profitability or a change in ownership or are otherwise unable to provide the equipment or services we need in a timely manner, at our specifications and at reasonable prices, our ability to provide some services might be materially adversely affected, or the need to procure or develop alternative sources of the affected materials or services might delay our ability to serve our customers. In addition, the existence of only a limited number of vendors of key technologies can lead to less product innovation and higher costs. These events could materially and adversely affect our ability to retain and attract customers and our operations, business, financial results and financial condition.

Our cable systems have historically been restricted to using one of two proprietary conditional access security systems, which we believe has limited the number of manufacturers producing set-top boxes for such systems. As an alternative, we developed a new conditional access security system which can be downloaded into set-top boxes with features we specify that could be provided by a variety of manufacturers. We refer to our specified set-top box as our Worldbox. Additionally, we are developing technology to allow our two current proprietary conditional access security systems to be software downloadable into our Worldbox. In order to realize the broadest benefits of our Worldbox technology, we must now complete the support for the downloadable proprietary conditional access security systems within the Worldbox. We cannot provide assurances that this implementation will ultimately be successful or completed in the expected timeframe or at the expected budget.

Our business may be adversely affected if we cannot continue to license or enforce the intellectual property rights on which our business depends.

We rely on patent, copyright, trademark and trade secret laws and licenses and other agreements with our employees, customers, suppliers and other parties to establish and maintain our intellectual property rights in technology and the products and services used in our operations. Also, because of the rapid pace of technological change, we both develop our own technologies, products and services and rely on technologies developed or licensed by third parties. However, any of our intellectual property rights could be challenged or invalidated, or such intellectual property rights may not be sufficient to permit us to take advantage of current industry trends or otherwise to provide competitive advantages, which could result in costly redesign efforts, discontinuance of certain product or service offerings or other competitive harm. We may not be able to obtain or continue to obtain licenses from these third parties on reasonable terms, if at all. In addition, claims of intellectual property infringement could require us to enter into royalty or licensing agreements on unfavorable terms, incur substantial monetary liability or be enjoined preliminarily or permanently from further use of the intellectual property in question, which could require us to change our business practices or offerings and limit our ability to compete effectively. Even unsuccessful claims can be time-consuming and costly to defend and may divert management's attention and resources away from our business. In recent years, the number of intellectual property infringement claims has been increasing in the communications and entertainment industries, and, with increasing frequency, we are party to litigation alleging that certain of our services or technologies infringe the intellectual property rights of others.

Various events could disrupt our networks, information systems or properties and could impair our operating activities and negatively impact our reputation and financial results.

Network and information systems technologies are critical to our operating activities, both for our internal uses, such as network management and supplying services to our customers, including customer service operations and programming delivery. Network or information system shutdowns or other service disruptions caused by events such as computer hacking, dissemination of computer viruses, worms and other destructive or disruptive software, "cyber attacks," process breakdowns, denial of service attacks and other malicious activity pose increasing risks. Both unsuccessful and successful "cyber attacks" on companies have continued to increase in frequency, scope and potential harm in recent years. While we develop and maintain systems seeking to prevent systems-related events and security breaches from occurring, the development and maintenance of these systems is costly and requires ongoing monitoring and updating as techniques used in such attacks become more sophisticated and change frequently. We, and the third parties on which we rely, may be unable to anticipate these techniques or implement adequate preventive measures. While from time to time attempts have been made to access our network, these attempts have not as yet resulted in any material release of information, degradation or disruption to our network and information systems.

Our network and information systems are also vulnerable to damage or interruption from power outages, telecommunications failures, accidents, natural disasters (including extreme weather arising from short-term or any long-term changes in weather patterns), terrorist attacks and similar events. Further, the impacts associated with extreme weather or long-term changes in weather patterns, such as rising sea levels or increased and intensified storm activity, may cause increased business interruptions or may require the relocation of some of our facilities. Our system redundancy may be ineffective or inadequate, and our disaster recovery planning may not be sufficient for all eventualities.

Any of these events, if directed at, or experienced by, us or technologies upon which we depend, could have adverse consequences on our network, our customers and our business, including degradation of service, service disruption, excessive call volume to call centers, and damage to our or our customers' equipment and data. Large expenditures may be necessary to repair or replace damaged property, networks or information systems or to protect them from similar events in the future. Moreover, the amount and scope of insurance that we maintain against losses resulting from any such events or security breaches may not be sufficient to cover our losses or otherwise adequately compensate us for any disruptions to our business that may result. Any such significant service disruption could result in damage to our reputation and credibility, customer dissatisfaction and ultimately a loss of customers or revenue. Any significant loss of customers or revenue, or significant increase in costs of serving those customers, could adversely affect our growth, financial condition and results of operations.

Furthermore, our operating activities could be subject to risks caused by misappropriation, misuse, leakage, falsification or accidental release or loss of information maintained in our information technology systems and networks and those of our third-party vendors, including customer, personnel and vendor data. We provide certain confidential, proprietary and personal information to third parties in connection with our business, and there is a risk that this information may be compromised.

As a result of the increasing awareness concerning the importance of safeguarding personal information, the potential misuse of such information and legislation that has been adopted or is being considered regarding the protection, privacy and security of personal information, information-related risks are increasing, particularly for businesses like ours that process, store and transmit large amount of data, including personal information for our customers. We could be exposed to significant costs if such risks

were to materialize, and such events could damage our reputation, credibility and business and have a negative impact on our revenue. We could be subject to regulatory actions and claims made by consumers in private litigations involving privacy issues related to consumer data collection and use practices. We also could be required to expend significant capital and other resources to remedy any such security breach.

The risk described above may be increased during the period in which we are integrating our people, processes and systems as a result of the Transactions.

For tax purposes, Charter could experience a deemed ownership change in the future that could limit its ability to use its tax loss carryforwards.

Charter had approximately \$10.9 billion of federal tax net operating loss carryforwards resulting in a gross deferred tax asset of approximately \$2.3 billion as of December 31, 2017. These losses resulted from the operations of Charter Communications Holdings Company, LLC ("Charter Holdco") and its subsidiaries and from loss carryforwards received as a result of the TWC Transaction. Federal tax net operating loss carryforwards expire in the years 2018 through 2035. In addition, Charter had state tax net operating loss carryforwards resulting in a gross deferred tax asset (net of federal tax benefit) of approximately \$359 million as of December 31, 2017. State tax net operating loss carryforwards generally expire in the years 2018 through 2037.

In the past, Charter has experienced ownership changes as defined in Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"). In general, an ownership change occurs whenever the percentage of the stock of a corporation owned, directly or indirectly, by 5-percent stockholders (within the meaning of Section 382 of the Code) increases by more than 50 percentage points over the lowest percentage of the stock of such corporation owned, directly or indirectly, by such 5-percent stockholders at any time over the preceding three years. As a result, Charter is subject to an annual limitation on the use of its loss carryforwards which existed at November 30, 2009 for the first ownership change, those that existed at May 1, 2013 for the second ownership change, and those created at May 18, 2016 for the third ownership change. The limitation on Charter's ability to use its loss carryforwards, in conjunction with the loss carryforward expiration provisions, could reduce Charter's ability to use a portion of its loss carryforwards to offset future taxable income, which could result in Charter being required to make material cash tax payments. Charter's ability to make such income tax payments, if any, will depend at such time on its liquidity or its ability to raise additional capital, and/or on receipt of payments or distributions from Charter Holdco and its subsidiaries, including us.

If Charter were to experience additional ownership changes in the future (as a result of purchases and sales of stock by its 5-percent stockholders, new issuances or redemptions of our stock, certain acquisitions of its stock and issuances, redemptions, sales or other dispositions or acquisitions of interests in its 5-percent stockholders), Charter's ability to use its loss carryforwards could become subject to further limitations.

If Legacy TWC's Separation Transactions (as defined below), including the Distribution (as defined below), do not qualify as tax-free, either as a result of actions taken or not taken by Legacy TWC or as a result of the failure of certain representations by Legacy TWC to be true, Legacy TWC has agreed to indemnify Time Warner Inc. for its taxes resulting from such disqualification, which would be significant.

As part of Legacy TWC's separation from Time Warner Inc. ("Time Warner") in March 2009 (the "Separation"), Time Warner received a private letter ruling from the Internal Revenue Service ("IRS") and Time Warner and Legacy TWC received opinions of tax counsel confirming that the transactions undertaken in connection with the Separation, including the transfer by a subsidiary of Time Warner of its 12.43% non-voting common stock interest in TW NY to Legacy TWC in exchange for 80 million newly issued shares of Legacy TWC's Class A common stock, Legacy TWC's payment of a special cash dividend to holders of Legacy TWC's outstanding Class A and Class B common stock, the conversion of each share of Legacy TWC's outstanding Class A and Class B common stock into one share of Legacy TWC common stock, and the pro-rata dividend of all shares of Legacy TWC common stock held by Time Warner to holders of record of Time Warner's common stock (the "Distribution" and, together with all of the transactions, the "Separation Transactions"), should generally qualify as tax-free to Time Warner and its stockholders for U.S. federal income tax purposes. The ruling and opinions rely on certain facts, assumptions, representations and undertakings from Time Warner and Legacy TWC regarding the past and future conduct of the companies' businesses and other matters. If any of these facts, assumptions, representations or undertakings are incorrect or not otherwise satisfied, Time Warner and its stockholders may not be able to rely on the ruling or the opinions and could be subject to significant tax liabilities. Notwithstanding the private letter ruling and opinions, the IRS could determine on audit that the Separation Transactions should be treated as taxable transactions if it determines that any of these facts, assumptions, representations or undertakings are not correct or have been violated, or for other reasons, including as a result of significant changes in the stock ownership of Time Warner or Legacy TWC after the Distribution.

Under the tax sharing agreement among Time Warner and Legacy TWC, Legacy TWC generally would be required to indemnify

Time Warner against its taxes resulting from the failure of any of the Separation Transactions to qualify as tax-free as a result of (i) certain actions or failures to act by Legacy TWC or (ii) the failure of certain representations made by Legacy TWC to be true. In addition, even if Legacy TWC bears no contractual responsibility for taxes related to a failure of the Separation Transactions to qualify for their intended tax treatment, Treasury regulation section 1.1502-6 imposes on Legacy TWC several liability for all Time Warner federal income tax obligations relating to the period during which Legacy TWC was a member of the Time Warner federal consolidated tax group, including the date of the Separation Transactions. Similar provisions may apply under foreign, state or local law. Absent Legacy TWC causing the Separation Transactions to not qualify as tax-free, Time Warner has indemnified Legacy TWC against such several liability arising from a failure of the Separation Transactions to qualify for their intended tax treatment.

If we are unable to retain key employees, our ability to manage our business could be adversely affected.

Our operational results have depended, and our future results will depend, upon the retention and continued performance of our management team. Our ability to retain and hire new key employees for management positions could be impacted adversely by the competitive environment for management talent in the broadband communications industry. The loss of the services of key members of management and the inability or delay in hiring new key employees could adversely affect our ability to manage our business and our future operational and financial results.

Risks Related to Our Indebtedness

We have a significant amount of debt and may incur significant additional debt, including secured debt, in the future, which could adversely affect our financial health and our ability to react to changes in our business.

We have a significant amount of debt and may (subject to applicable restrictions in our debt instruments) incur additional debt in the future. As of December 31, 2017, our total principal amount of debt was approximately \$69.0 billion.

Our significant amount of debt could have consequences, such as:

- impact our ability to raise additional capital at reasonable rates, or at all;
- make us vulnerable to interest rate increases, in part because approximately 14% of our borrowings as of December 31, 2017 were, and may continue to be, subject to variable rates of interest;
- expose us to increased interest expense to the extent we refinance existing debt with higher cost debt;
- require us to dedicate a significant portion of our cash flow from operating activities to make payments on our debt, reducing our funds available for working capital, capital expenditures, and other general corporate expenses;
- limit our flexibility in planning for, or reacting to, changes in our business, the cable and telecommunications industries, and the economy at large;
- place us at a disadvantage compared to our competitors that have proportionately less debt; and
- adversely affect our relationship with customers and suppliers.

If current debt amounts increase, our business results are lower than expected, or credit rating agencies downgrade our debt limiting our access to investment grade markets, the related risks that we now face will intensify.

The agreements and instruments governing our debt contain restrictions and limitations that could significantly affect our ability to operate our business, as well as significantly affect our liquidity.

Our credit facilities and the indentures governing our debt contain a number of significant covenants that could adversely affect our ability to operate our business, our liquidity, and our results of operations. These covenants restrict, among other things, our and our subsidiaries' ability to:

- incur additional debt;
- repurchase or redeem equity interests and debt;
- issue equity;
- make certain investments or acquisitions;
- pay dividends or make other distributions;
- dispose of assets or merge;
- enter into related party transactions; and
- grant liens and pledge assets.

Additionally, the Charter Communications Operating, LLC ("Charter Operating") credit facilities require Charter Operating to

comply with a maximum total leverage covenant and a maximum first lien leverage covenant. The breach of any covenants or obligations in our indentures or credit facilities, not otherwise waived or amended, could result in a default under the applicable debt obligations and could trigger acceleration of those obligations, which in turn could trigger cross defaults under other agreements governing our long-term indebtedness. In addition, the secured lenders under our notes and the Charter Operating credit facilities could foreclose on their collateral, which includes equity interests in our subsidiaries, and exercise other rights of secured creditors.

Risks Related to Ownership Position of Liberty Broadband Corporation and Advance/Newhouse Partnership

Liberty Broadband and A/N have governance rights that give them influence over corporate transactions and other matters.

Liberty Broadband currently owns a significant amount of Charter Class A common stock and is entitled to certain governance rights with respect to Charter and us. A/N currently owns Charter Class A common stock and a significant amount of membership interests in our indirect parent company, Charter Holdings, that are convertible into Charter Class A common stock and is entitled to certain governance rights with respect to Charter. Members of the Charter board of directors include directors who are also officers and directors of Liberty Broadband and directors who are current or former officers and directors of A/N. Dr. John Malone is the Chairman of Liberty Broadband, and Mr. Greg Maffei is the president and chief executive officer of Liberty Broadband. Steven Miron is the Chief Executive Officer of A/N and Michael Newhouse is an officer or director of several of A/N's affiliates. As of December 31, 2017, Liberty Broadband beneficially held approximately 21% of Charter's Class A common stock (including shares owned by Liberty Interactive over which Liberty Broadband holds an irrevocable voting proxy) and A/N beneficially held approximately 13% of Charter's Class A common stock, in each case assuming the conversion of the membership interests held by A/N. Pursuant to the stockholders agreement between Liberty Broadband, A/N and Charter, Liberty Broadband currently has the right to designate up to three directors as nominees for Charter's board of directors and A/N currently has the right to designate up to two directors as nominees for Charter's board of directors with one designated director to be appointed to each of the audit committee, the nominating and corporate governance committee, the compensation and benefits committee and the Finance Committee, in each case provided that each maintains certain specified voting or equity ownership thresholds and each nominee meets certain applicable requirements or qualifications.

In connection with the TWC Transaction, Liberty Broadband and Liberty Interactive entered into a proxy and right of first refusal agreement, pursuant to which Liberty Interactive granted Liberty Broadband an irrevocable proxy to vote all Charter Class A common stock owned beneficially or of record by Liberty Interactive, with certain exceptions. In addition, at the closing of the Bright House Transaction, A/N and Liberty Broadband entered into a proxy agreement pursuant to which A/N granted to Liberty Broadband a 5-year irrevocable proxy (which we refer to as the "A/N proxy") to vote, subject to certain exceptions, that number of shares of Charter Class A common stock and Charter Class B common stock, in each case held by A/N (such shares are referred to as the "proxy shares"), that will result in Liberty Broadband having voting power in Charter equal to 25.01% of the outstanding voting power of Charter, provided, that the voting power of the proxy shares is capped at 7.0% of the outstanding voting power of Charter. Therefore, giving effect to the Liberty Interactive proxy and the A/N proxy and the voting cap contained in the stockholders agreement, Liberty Broadband has 25.01% of the outstanding voting power in Charter. The stockholders agreement and Charter's amended and restated certificate of incorporation fixes the size of the board at 13 directors. Liberty Broadband and A/N are required to vote (subject to the applicable voting cap) their respective shares of Charter Class A common stock and Charter Class B common stock for the director nominees nominated by the nominating and corporate governance committee of the board of directors, including the respective designees of Liberty Broadband and A/N, and against any other nominees, except that, with respect to the unaffiliated directors, Liberty Broadband and A/N must instead vote in the same proportion as the voting securities are voted by stockholders other than A/N and Liberty Broadband or any group which includes any of them are voted, if doing so would cause a different outcome with respect to the unaffiliated directors. As a result of their rights under the stockholders agreement and their significant equity and voting stakes in Charter, Liberty Broadband and/or A/N, who may have interests different from those of other stockholders, will be able to exercise substantial influence over certain matters relating to the governance of Charter and us, including the approval of significant corporate actions, such as mergers and other business combination transactions.

Risks Related to Regulatory and Legislative Matters

Our business is subject to extensive governmental legislation and regulation, which could adversely affect our business.

Regulation of the cable industry has increased cable operators' operational and administrative expenses and limited their revenues. Cable operators are subject to various laws and regulations including those covering the following:

- the provision of high-speed Internet service, including transparency rules;
- the provision of voice communications;
- cable franchise renewals and transfers;
- the provisioning and marketing of cable equipment and compatibility with new digital technologies;

- customer and employee privacy and data security;
- limited rate regulation of video service;
- copyright royalties for retransmitting broadcast signals;
- when a cable system must carry a particular broadcast station and when it must first obtain retransmission consent to carry a broadcast station;
- the provision of channel capacity to unaffiliated commercial leased access programmers;
- limitations on our ability to enter into exclusive agreements with multiple dwelling unit complexes and control our inside wiring;
- equal employment opportunity, emergency alert systems, disability access, technical standards, marketing practices, customer service, and consumer protection; and
- approval for mergers and acquisitions often accompanied by the imposition of restrictions and requirements on an applicant's business in order to secure approval of the proposed transaction.

Legislators and regulators at all levels of government frequently consider changing, and sometimes do change, existing statutes, rules, regulations, or interpretations thereof, or prescribe new ones. Any future legislative, judicial, regulatory or administrative actions may increase our costs or impose additional restrictions on our businesses.

As a result of the closing of the Transactions, our businesses are subject to the conditions set forth in the FCC Order and the DOJ Consent Decree and those imposed by state utility commissions and local franchise authorities, and there can be no assurance that these conditions will not have an adverse effect on our businesses and results of operations.

In connection with the Transactions, the FCC Order, the DOJ Consent Decree, and the approvals from state utility commissions and local franchise authorities incorporated numerous commitments and voluntary conditions made by the parties and imposed numerous conditions on our businesses relating to the operation of our business and other matters. Among other things, (i) we are not permitted to charge usage-based prices or impose data caps and are prohibited from charging interconnection fees for qualifying parties; (ii) we are prohibited from entering into or enforcing any agreement with a programmer that forbids, limits or creates incentives to limit the programmer's provision of content to OVD and cannot retaliate against programmers for licensing to OVDs; (iii) we are not able to avail ourselves of other distributors' MFN provisions if they are inconsistent with this prohibition; (iv) we must undertake a number of actions designed to promote diversity; (v) we appointed an independent compliance monitor and comply with a broad array of reporting requirements; and (vi) we must satisfy various other conditions relating to our Internet services, including building out an additional two million locations with access to a high-speed connection of at least 60 megabits per second, and implementing a reduced price high-speed Internet program for low income families. These and other conditions and commitments relating to the Transactions are of varying duration, ranging from three to seven years. In light of the breadth and duration of the conditions and potential changes in market conditions during the time the conditions and commitments are in effect, there can be no assurance that our compliance, and ability to comply, with the conditions will not have a material adverse effect on our business or results of operations.

Changes to existing statutes, rules, regulations, or interpretations thereof, or adoption of new ones, could have an adverse effect on our business.

There are ongoing efforts to amend or expand the federal, state, and local regulation of some of the services offered over our cable systems, which may compound the regulatory risks we already face. For example, with respect to our retail broadband Internet access service, the FCC has reclassified the service twice in the last few years, with the first change adding regulatory obligations and the second change largely removing those new regulatory obligations. These changes reflect a lack of regulatory certainty in this business area, which may continue as a result of litigation, as well as future legislative or administrative changes.

Other potential legislative and regulatory changes could adversely impact our business by increasing our costs and competition and limiting our ability to offer services in a manner that that would maximize our revenue potential. These changes could include, for example, the adoption of new privacy restrictions on our collection, use and disclosure of certain customer information, new data security and cybersecurity mandates that could result in additional network and information security requirements for our business, new restraints on our discretion over programming decisions, including the provision of public, educational and governmental access programming and unaffiliated, commercial leased access programming, new restrictions on the rates we charge for video programming and the marketing of that video programming, changes to the cable industry's compulsory copyright license to carry broadcast signals, new requirements to assure the availability of navigation devices (such as set-top boxes) from third party providers, new Universal Service Fund obligations on our provision of Internet service that would add to the cost of that service; increases in government-administered broadband subsidies to rural areas that could result in subsidized overbuilding of our more rural facilities, and changes in the regulatory framework for VoIP phone service, including the scope of regulatory obligations associated with our VoIP service and our ability to interconnect our VoIP service with incumbent providers of traditional telecommunications service.

If any of these pending laws and regulations are enacted, they could affect our operations and require significant expenditures. We cannot predict future developments in these areas, and we are already subject to Charter-specific conditions regarding certain Internet practices as a result of the FCC's approval of the Transactions, but any changes to the regulatory framework for our video, Internet or VoIP services could have a negative impact on our business and results of operations.

It remains uncertain what rule changes, if any, will ultimately be adopted by Congress and the FCC and what operating or financial impact any such rules might have on us, including on our programming agreements, customer privacy and the user experience. In addition, the FCC's Enforcement Bureau has been actively investigating certain industry practices of various companies and imposing forfeitures for alleged regulatory violations.

Our cable system franchises are subject to non-renewal or termination and are non-exclusive. The failure to renew a franchise or the grant of additional franchises in one or more key markets could adversely affect our business.

Our cable systems generally operate pursuant to franchises, permits, and similar authorizations issued by a state or local governmental authority controlling the public rights-of-way. Many franchises establish comprehensive facilities and service requirements, as well as specific customer service standards and monetary penalties for non-compliance. In many cases, franchises are terminable if the franchisee fails to comply with significant provisions set forth in the franchise agreement governing system operations. Franchises are generally granted for fixed terms and must be periodically renewed. Franchising authorities may resist granting a renewal if either past performance or the prospective operating proposal is considered inadequate. Franchise authorities often demand concessions or other commitments as a condition to renewal. In some instances, local franchises have not been renewed at expiration, and we have operated and are operating under either temporary operating agreements or without a franchise while negotiating renewal terms with the local franchising authorities.

We cannot assure you that we will be able to comply with all significant provisions of our franchise agreements and certain of our franchisers have from time to time alleged that we have not complied with these agreements. Additionally, although historically we have renewed our franchises without incurring significant costs, we cannot assure you that we will be able to renew, or to renew as favorably, our franchises in the future. A termination of or a sustained failure to renew a franchise in one or more key markets could adversely affect our business in the affected geographic area.

Our cable system franchises are non-exclusive. Consequently, local and state franchising authorities can grant additional franchises to competitors in the same geographic area or operate their own cable systems. In some cases, local government entities and municipal utilities may legally compete with us on more favorable terms. Potential competitors (like Google) have recently pursued and obtained local franchises that are more favorable than the incumbent operator's franchise.

Tax legislation and administrative initiatives or challenges to our tax and fee positions could adversely affect our results of operations and financial condition.

We operate cable systems in locations throughout the United States and, as a result, we are subject to the tax laws and regulations of federal, state and local governments. From time to time, various legislative and/or administrative initiatives may be proposed that could adversely affect our tax positions. There can be no assurance that our effective tax rate or tax payments will not be adversely affected by these initiatives. Certain states and localities have imposed or are considering imposing new or additional taxes or fees on our services or changing the methodologies or base on which certain fees and taxes are computed. Potential changes include additional taxes or fees on our services which could impact our customers, changes to income tax sourcing rules and other changes to general business taxes, central/unit-level assessment of property taxes and other matters that could increase our income, franchise, sales, use and/or property tax liabilities. For example, some local franchising authorities are seeking to impose franchise fee assessments on our broadband Internet access service, and more may do so in the future. If they do so, and challenges to such assessments are unsuccessful, it could adversely impact our costs. In addition, federal, state and local tax laws and regulations are extremely complex and subject to varying interpretations. There can be no assurance that our tax positions will not be challenged by relevant tax authorities or that we would be successful in any such challenge.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our principal physical assets consist of cable distribution plant and equipment, including signal receiving, encoding and decoding devices, headend reception facilities, distribution systems, and customer premise equipment for each of our cable systems.

Our cable plant and related equipment are generally attached to utility poles under pole rental agreements with local public utilities and telephone companies, and in certain locations are buried in underground ducts or trenches. We own or lease real property for signal reception sites, and own our service vehicles.

We generally lease space for business offices. Our headend and tower locations are located on owned or leased parcels of land, and we generally own the towers on which our equipment is located.

The physical components of our cable systems require maintenance as well as periodic upgrades to support the new services and products we introduce. See “Item 1. Business – Our Network Technology and Customer Premise Equipment.” We believe that our properties are generally in good operating condition and are suitable for our business operations.

Item 3. *Legal Proceedings.*

The legal proceedings information set forth in Note 18 to the accompanying consolidated financial statements contained in “Part II. Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K is incorporated herein by reference.

Item 4. *Mine Safety Disclosures.*

Not applicable.

PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

(A) Market Information

Our membership interests are not publicly traded.

(B) Holders

All of the membership interests of CCO Holdings are owned by CCH I Holdings, LLC. All of the outstanding capital stock of CCO Holdings Capital Corp. is owned by CCO Holdings.

(C) Dividends

None.

(D) Securities Authorized for Issuance Under Equity Compensation Plans

The following information is provided as of December 31, 2017 with respect to Charter's equity compensation plans:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by security holders	12,039,412 (1)	\$ 200.07	5,844,588 (1)
Equity compensation plans not approved by security holders	—	\$ —	—
TOTAL	12,039,412 (1)		5,844,588 (1)

(1) This total does not include 9,517 shares issued pursuant to restricted stock grants made under Charter's 2009 Stock Incentive Plan, which are subject to vesting based on continued employment and market conditions.

For information regarding securities issued under Charter's equity compensation plans, see Note 15 to our accompanying consolidated financial statements contained in “Part II. Item 8. Financial Statements and Supplementary Data.”

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Reference is made to “Part I. Item 1A. Risk Factors” and “Cautionary Statement Regarding Forward-Looking Statements,” which describe important factors that could cause actual results to differ from expectations and non-historical information contained herein. In addition, the following discussion should be read in conjunction with the audited consolidated financial statements and accompanying notes thereto of CCO Holdings included in “Part II. Item 8. Financial Statements and Supplementary Data.”

Overview

We are the second largest cable operator in the United States and a leading broadband communications services company providing video, Internet and voice services to approximately 27.2 million residential and business customers at December 31, 2017. In addition, we sell video and online advertising inventory to local, regional and national advertising customers and fiber-delivered communications and managed IT solutions to large enterprise customers. We also own and operate regional sports networks and local sports, news and community channels and sell security and home management services in the residential marketplace. See “Part I. Item 1. Business — Products and Services” for further description of these services, including customer statistics for different services.

In the first half of 2017, we completed the roll-out of SPP to Legacy TWC and Legacy Bright House markets simplifying our offers and improving our packaging of products, allowing us to deliver more value to new and existing customers. As of December 31, 2017, approximately 60% of our residential customers are in an SPP package. In the second half of 2017, we began converting the remaining Legacy TWC and Legacy Bright House analog markets to an all-digital platform enabling us to deliver more HD channels and higher Internet speeds. The bulk of this all-digital initiative will take place in 2018. Our corporate organization, as well as our marketing, sales and product development departments, are centralized. Field operations are managed through eleven regional areas, each designed to represent a combination of designated marketing areas. In 2017, we began migrating Legacy TWC and Legacy Bright House customer care centers to Legacy Charter's model of using virtualized, U.S.-based in-house call centers. We are focused on deploying superior products and service with minimal service disruptions as we integrate our information technology and network operations. We intend to continue to insource the Legacy TWC and Legacy Bright House workforces in our call centers and in our field operations which we expect to lead to lower customer churn and longer customer lifetimes.

Our integration activities will continue in 2018 with the expectation that by 2019 we will have substantially integrated the practices and systems of Legacy Charter, Legacy TWC and Legacy Bright House. In 2018, we will also launch our mobile product. As a result of growth costs for a new product line and implementing our operating strategy across Legacy TWC and Legacy Bright House, we cannot be certain that we will be able to grow revenues or maintain our margins at recent historical rates.

The Company realized revenue, Adjusted EBITDA and income from operations during the periods presented as follows (in millions; all percentages are calculated using whole numbers. Minor differences may exist due to rounding).

	Years ended December 31,			Growth	
	2017	2016	2015	2017 over 2016	2016 over 2015
Actual					
Revenues	\$ 41,578	\$ 29,003	\$ 9,754	43.4%	197.3%
Adjusted EBITDA	\$ 15,279	\$ 10,577	\$ 3,406	44.5%	210.5%
Income from operations	\$ 3,995	\$ 2,709	\$ 1,114	47.5%	143.2%
Pro Forma					
Revenues	\$ 41,578	\$ 40,023	\$ 37,394	3.9%	7.0%
Adjusted EBITDA	\$ 15,279	\$ 14,450	\$ 12,991	5.7%	11.2%
Income from operations ^(a)	\$ 3,995	\$ 3,881	\$ 3,318	2.9%	17.0%

^(a) Income from operations for the year ended December 31, 2016 has been reduced from what was previously reported by \$899 million to reflect the adoption of pension accounting guidance, and on a pro forma basis, income from operations for the years ended December 31, 2016 and 2015 have been reduced from what was previously reported by \$915 million and \$73 million, respectively. For more information, see Note 20 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data."

Adjusted EBITDA is defined as consolidated net income plus net interest expense, income taxes, depreciation and amortization, stock compensation expense, loss on extinguishment of debt, (gain) loss on financial instruments, net, other pension benefits, other (income) expense, net and other operating (income) expenses, such as merger and restructuring costs, special charges and gain (loss) on sale or retirement of assets. See "—Use of Adjusted EBITDA and Free Cash Flow" for further information on Adjusted EBITDA and free cash flow.

Growth in total revenue, Adjusted EBITDA and income from operations was primarily due to the Transactions. On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, total revenue growth was primarily due to growth in our Internet and commercial businesses. Revenue growth during 2017 was offset by lower advertising sales revenue due to a decrease in political and local advertising and an early contract termination benefit at Legacy TWC and Legacy Bright House in 2016. In addition to the items noted above, Adjusted EBITDA growth on a pro forma basis was affected by increases in programming costs and, in 2017, offset by decreases in costs to service customers and other operating costs and expenses. Income from operations on a pro forma basis was additionally affected by increases in depreciation and amortization as well as changes in merger and restructuring costs.

Approximately 91%, 90% and 91% of our revenues for years ended December 31, 2017, 2016 and 2015, respectively, are attributable to monthly subscription fees charged to customers for our video, Internet, voice and commercial services provided by

our cable systems. Generally, these customer subscriptions may be discontinued by the customer at any time subject to a fee for certain commercial customers. The remaining 9%, 10% and 9% of revenue for fiscal years 2017, 2016 and 2015, respectively, is derived primarily from advertising revenues, franchise and other regulatory fee revenues (which are collected by us but then paid to local authorities), VOD and pay-per-view programming, installation, processing fees or reconnection fees charged to customers to commence or reinstate service, revenue from regional sports and news channels and commissions related to the sale of merchandise by home shopping services.

We incurred the following transition costs in connection with the Transactions (in millions).

	Years ended December 31,		
	2017	2016	2015
Operating expenses	\$ 124	\$ 156	\$ 72
Other operating expenses	\$ 351	\$ 708	\$ 70
Capital expenditures	\$ 489	\$ 460	\$ 115

Amounts included in transition operating expenses and transition capital expenditures represent incremental costs incurred to integrate the Legacy TWC and Legacy Bright House operations and to bring the three companies' systems and processes into a uniform operating structure. Costs are incremental and would not be incurred absent the integration. Other operating expenses associated with the Transactions represent merger and restructuring costs and include advisory, legal and accounting fees, employee retention costs, employee termination costs and other exit costs.

Critical Accounting Policies and Estimates

Certain of our accounting policies require our management to make difficult, subjective and/or complex judgments. Management has discussed these policies with the Audit Committee of Charter's board of directors, and the Audit Committee has reviewed the following disclosure. We consider the following policies to be the most critical in understanding the estimates, assumptions and judgments that are involved in preparing our financial statements, and the uncertainties that could affect our results of operations, financial condition and cash flows:

- Property, plant and equipment
 - Capitalization of labor and overhead costs
 - Valuation and impairment of property, plant and equipment
 - Useful lives of property, plant and equipment
- Intangible assets
 - Valuation and impairment of franchises
 - Valuation and impairment of goodwill
 - Valuation, impairment and amortization of customer relationships
- Income taxes
- Litigation
- Programming agreements
- Pension plans

In addition, there are other items within our financial statements that require estimates or judgment that are not deemed critical, such as the allowance for doubtful accounts and valuations of our financial instruments, but changes in estimates or judgment in these other items could also have a material impact on our financial statements.

Property, plant and equipment

The cable industry is capital intensive, and a large portion of our resources are spent on capital activities associated with extending, rebuilding, and upgrading our cable network. As of December 31, 2017 and 2016, the net carrying amount of our property, plant and equipment (consisting primarily of cable distribution systems) was approximately \$33.6 billion (representing 23% of total assets) and \$32.7 billion (representing 22% of total assets), respectively. Total capital expenditures for the years ended December 31, 2017, 2016 and 2015 were approximately \$8.7 billion, \$5.3 billion and \$1.8 billion, respectively.

Capitalization of labor and overhead costs. Costs associated with network construction or upgrades, initial placement of the customer drop to the dwelling and the initial placement of outlets within a dwelling along with the costs associated with the initial deployment of customer premise equipment necessary to provide video, Internet or voice services, are capitalized. Costs capitalized

include materials, direct labor and certain indirect costs. These indirect costs are associated with the activities of personnel who assist in installation activities, and consist of compensation and overhead costs associated with these support functions. While our capitalization is based on specific activities, once capitalized, we track these costs on a composite basis by fixed asset category at the cable system level, and not on a specific asset basis. For assets that are sold or retired, we remove the estimated applicable cost and accumulated depreciation. The costs of disconnecting service and removing customer premise equipment from a dwelling and the costs to reconnect a customer drop or to redeploy previously installed customer premise equipment are charged to operating expense as incurred. Costs for repairs and maintenance are charged to operating expense as incurred, while plant and equipment replacement, including replacement of certain components, betterments, and replacement of cable drops and outlets, are capitalized.

We make judgments regarding the installation and construction activities to be capitalized. We capitalize direct labor and overhead using standards developed from actual costs and applicable operational data. We calculate standards annually (or more frequently if circumstances dictate) for items such as the labor rates, overhead rates, and the actual amount of time required to perform a capitalizable activity. For example, the standard amounts of time required to perform capitalizable activities are based on studies of the time required to perform such activities. Overhead rates are established based on an analysis of the nature of costs incurred in support of capitalizable activities, and a determination of the portion of costs that is directly attributable to capitalizable activities. The impact of changes that resulted from these studies were not material in the periods presented.

Labor costs directly associated with capital projects are capitalized. Capitalizable activities performed in connection with installations include such activities as:

- dispatching a “truck roll” to the customer’s dwelling or business for service connection or placement of new equipment;
- verification of serviceability to the customer’s dwelling or business (i.e., determining whether the customer’s dwelling is capable of receiving service by our cable network);
- customer premise activities performed by in-house field technicians and third-party contractors in connection with the installation, replacement and betterment of equipment and materials to enable video, Internet or voice services; and
- verifying the integrity of the customer’s network connection by initiating test signals downstream from the headend to the customer premise equipment, as well as testing signal levels at the utility pole or pedestal.

Judgment is required to determine the extent to which overhead costs incurred result from specific capital activities, and therefore should be capitalized. The primary costs that are included in the determination of the overhead rate are (i) employee benefits and payroll taxes associated with capitalized direct labor, (ii) direct variable costs associated with capitalizable activities, (iii) the cost of support personnel, such as care personnel and dispatchers, who assist with capitalizable installation activities, and (iv) indirect costs directly attributable to capitalizable activities.

While we believe our existing capitalization policies are appropriate, a significant change in the nature or extent of our system activities could affect management’s judgment about the extent to which we should capitalize direct labor or overhead in the future. We monitor the appropriateness of our capitalization policies, and perform updates to our internal studies on an ongoing basis to determine whether facts or circumstances warrant a change to our capitalization policies. We capitalized direct labor and overhead of \$1.7 billion, \$991 million and \$420 million, respectively, for the years ended December 31, 2017, 2016 and 2015.

Valuation and impairment of property, plant and equipment. We evaluate the recoverability of our property, plant and equipment upon the occurrence of events or changes in circumstances indicating that the carrying amount of an asset may not be recoverable. Such events or changes in circumstances could include such factors as the impairment of our indefinite life assets, changes in technological advances, fluctuations in the fair value of such assets, adverse changes in relationships with local franchise authorities, adverse changes in market conditions, or a deterioration of current or expected future operating results. A long-lived asset is deemed impaired when the carrying amount of the asset exceeds the projected undiscounted future cash flows associated with the asset. No impairments of long-lived assets to be held and used were recorded in the years ended December 31, 2017, 2016 and 2015.

We utilize the cost approach as the primary method used to establish fair value for our property, plant and equipment in connection with business combinations. The cost approach considers the amount required to replace an asset by constructing or purchasing a new asset with similar utility, then adjusts the value in consideration of physical depreciation and functional and economic obsolescence as of the valuation date. The cost approach relies on management’s assumptions regarding current material and labor costs required to rebuild and repurchase significant components of our property, plant and equipment along with assumptions regarding the age and estimated remaining useful lives of our property, plant and equipment.

Useful lives of property, plant and equipment. We evaluate the appropriateness of estimated useful lives assigned to our property, plant and equipment, based on annual analysis of such useful lives, and revise such lives to the extent warranted by changing facts and circumstances. Any changes in estimated useful lives as a result of this analysis are reflected prospectively beginning in the

period in which the study is completed. Our analysis of useful lives in 2017 did not indicate any significant changes in useful lives. The effect of a one-year decrease in the weighted average remaining useful life of our property, plant and equipment as of December 31, 2017 would be an increase in annual depreciation expense of approximately \$943 million. The effect of a one-year increase in the weighted average remaining useful life of our property, plant and equipment as of December 31, 2017 would be a decrease in annual depreciation expense of approximately \$1.4 billion.

Depreciation expense related to property, plant and equipment totaled \$7.8 billion, \$5.0 billion and \$1.9 billion for the years ended December 31, 2017, 2016 and 2015, respectively, representing approximately 21%, 19% and 21% of costs and expenses, respectively. Depreciation is recorded using the straight-line composite method over management's estimate of the useful lives of the related assets as listed below:

Cable distribution systems	8-20 years
Customer premise equipment and installations	3-8 years
Vehicles and equipment	4-9 years
Buildings and improvements	15-40 years
Furniture, fixtures and equipment	7-10 years

Intangible assets

Valuation and impairment of franchises. The net carrying value of franchises as of December 31, 2017 and 2016 was approximately \$67.3 billion (representing 46% of total assets) and \$67.3 billion (representing 45% of total assets), respectively. For more information and a complete discussion of how we value and test franchise assets for impairment, see Note 6 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data."

We perform an impairment assessment of franchise assets annually or more frequently as warranted by events or changes in circumstances. We performed a qualitative assessment in 2017. Our assessment included consideration of a fair value appraisal performed for tax purposes in the beginning of 2017 as of a December 31, 2016 valuation date (the "Appraisal") along with a multitude of factors that affect the fair value of our franchise assets. Examples of such factors include environmental and competitive changes within our operating footprint, actual and projected operating performance, the consistency of our operating margins, equity and debt market trends, including changes in our market capitalization, and changes in our regulatory and political landscape, among other factors. Based on our assessment, we concluded that it was more likely than not that the estimated fair values of our franchise assets equals or exceeds their carrying values and that a quantitative impairment test is not required.

The Appraisal indicated that the fair value of our franchise assets exceeded carrying value by more than 40% in the aggregate. At our unit of accounting level for franchise asset impairment testing, the amount by which fair value exceeded carrying value varied based on the extent to which the unit of accounting was comprised of operations acquired in 2016. For units of accounting comprised entirely or substantially of newly-acquired operations, the Appraisal fair value exceeded carrying value by a range of 16% to 46% due to the recency of the Transactions, while fair value for units of accounting comprised of at least 25% Legacy Charter operations, exceeded carrying value by a range of 29% to 264%.

Valuation and impairment of goodwill. The net carrying value of goodwill as of December 31, 2017 and 2016 was approximately \$29.6 billion (representing 20% of total assets) and \$29.5 billion (representing 20% of total assets), respectively. For more information and a complete discussion on how we test goodwill for impairment, see Note 6 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data." We perform our impairment assessment of goodwill annually as of November 30. As with our franchise impairment testing, we elected to perform a qualitative assessment of goodwill in 2017 which included the fair value appraisal and other factors described above. Based on the Appraisal, we determined that the fair value of our goodwill exceeded carrying value by approximately 53%. Given the completion of the assessment and absence of significant adverse changes in factors impacting our fair value estimates, we concluded that it is more likely than not that our goodwill is not impaired.

Valuation, impairment and amortization of customer relationships. The net carrying value of customer relationships as of December 31, 2017 and 2016 was approximately \$12.0 billion (representing 8% of total assets) and \$14.6 billion (representing 10% of total assets), respectively. Amortization expense related to customer relationships for the years ended December 31, 2017, 2016 and 2015 was approximately \$2.7 billion, \$1.9 billion and \$249 million, respectively. No impairment of customer relationships was recorded in the years ended December 31, 2017, 2016 and 2015. For more information and a complete discussion on our valuation methodology and amortization method, see Note 6 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data."

Income taxes

In determining our tax provision for financial reporting purposes, we establish a reserve for uncertain tax positions unless such positions are determined to be “more likely than not” of being sustained upon examination, based on their technical merits. In evaluating whether a tax position has met the more-likely-than-not recognition threshold, we presume the position will be examined by the appropriate taxing authority that has full knowledge of all relevant information. A tax position that meets the more-likely-than-not recognition threshold is measured to determine the amount of benefit to be recognized in our financial statements. The tax position is measured as the largest amount of benefit that has a greater than 50% likelihood of being realized when the position is ultimately resolved. There is considerable judgment involved in determining whether positions taken on the tax return are “more likely than not” of being sustained. We adjust our uncertain tax reserve estimates periodically because of ongoing examinations by, and settlements with, the various taxing authorities, as well as changes in tax laws, regulations and interpretations.

No tax years for Charter, Charter Holdings or Charter Holdco, our indirect parent companies, for income tax purposes, are currently under examination by the IRS. Charter and Charter Holdings' 2016 and 2017 tax years remain open for examination and assessment. Legacy Charter's tax years ending 2014 through the short period return dated May 17, 2016 remain subject to examination and assessment. Years prior to 2014 remain open solely for purposes of examination of Legacy Charter's loss and credit carryforwards. The IRS is currently examining Legacy TWC's income tax returns for 2011 through 2014. Legacy TWC's tax year 2015 remains subject to examination and assessment. Prior to Legacy TWC's separation from Time Warner Inc. (“Time Warner”) in March 2009 (the “Separation”), Legacy TWC was included in the consolidated U.S. federal and certain state income tax returns of Time Warner. The IRS is currently examining Time Warner's 2008 through 2010 income tax returns. Time Warner's income tax returns for 2005 to 2007, which are periods prior to the Separation, were settled with the exception of an immaterial item that has been referred to the IRS Appeals Division. We do not anticipate that these examinations will have a material impact on our consolidated financial position or results of operations. In addition, we are also subject to ongoing examinations of our tax returns by state and local tax authorities for various periods. Activity related to these state and local examinations did not have a material impact on our consolidated financial position or results of operations during the year ended December 31, 2017, nor do we anticipate a material impact in the future.

Litigation

Legal contingencies have a high degree of uncertainty. When a loss from a contingency becomes estimable and probable, a reserve is established. The reserve reflects management's best estimate of the probable cost of ultimate resolution of the matter and is revised as facts and circumstances change. A reserve is released when a matter is ultimately brought to closure or the statute of limitations lapses. We have established reserves for certain matters. Although these matters are not expected individually to have a material adverse effect on our consolidated financial condition, results of operations or liquidity, such matters could have, in the aggregate, a material adverse effect on our consolidated financial condition, results of operations or liquidity.

Programming agreements

We exercise judgment in estimating programming expense associated with certain video programming contracts. Our policy is to record video programming costs based on the substance of our contractual agreements with our programming vendors, which are generally multi-year agreements that provide for us to make payments to the programming vendors at agreed upon market rates based on the number of customers to which we provide the programming service. If a programming contract expires prior to the parties' entry into a new agreement and we continue to distribute the service, we estimate the programming costs during the period there is no contract in place. In doing so, we consider the previous contractual rates, inflation and the status of the negotiations in determining our estimates. When the programming contract terms are finalized, an adjustment to programming expense is recorded, if necessary, to reflect the terms of the new contract. We also make estimates in the recognition of programming expense related to other items including the allocation of consideration exchanged between the parties among the various items in multiple-element transactions.

Judgment is also involved when we enter into agreements that result in us receiving cash consideration from the programming vendor, usually in the form of advertising sales, channel positioning fees, launch support or marketing support. In these situations, we must determine based upon facts and circumstances if such cash consideration should be recorded as revenue, a reduction in programming expense or a reduction in another expense category (e.g., marketing).

Pension plans

We sponsor two qualified defined benefit pension plans, the TWC Pension Plan and the TWC Union Pension Plan (collectively, the “TWC Pension Plans”), that provide pension benefits to a majority of Legacy TWC employees. We also provide a nonqualified

defined benefit pension plan for certain employees under the TWC Excess Pension Plan. As of December 31, 2017, the accumulated benefit obligation and fair value of plan assets for the TWC Pension Plans was \$3.6 billion and \$3.3 billion, respectively, and the net underfunded liability of the TWC Pension Plans was recorded as a \$1 million noncurrent asset, \$5 million current liability and \$292 million long-term liability. As of December 31, 2016, the accumulated benefit obligation and fair value of plan assets for the TWC Pension Plans was \$3.3 billion and \$2.9 billion, respectively, and the net underfunded liability of the TWC Pension Plans was recorded as a \$1 million noncurrent asset, \$6 million current liability and \$309 million long-term liability.

Pension benefits are based on formulas that reflect the employees' years of service and compensation during their employment period. Actuarial gains or losses are changes in the amount of either the benefit obligation or the fair value of plan assets resulting from experience different from that assumed or from changes in assumptions. We have elected to follow a mark-to-market pension accounting policy for recording the actuarial gains or losses annually during the fourth quarter, or earlier if a remeasurement event occurs during an interim period. We use a December 31 measurement date for our pension plans.

We recognized net periodic pension benefits of \$1 million and \$813 million in 2017 and 2016, respectively. Net periodic pension benefit or expense is determined using certain assumptions, including the expected long-term rate of return on plan assets, discount rate and mortality assumptions. We determined the discount rate used to compute pension expense based on the yield of a large population of high-quality corporate bonds with cash flows sufficient in timing and amount to settle projected future defined benefit payments. In developing the expected long-term rate of return on assets, we considered the current pension portfolio's composition, past average rate of earnings, and our asset allocation targets. We used a discount rate of 4.20% from January 1, 2017 to September 30, 2017 and 3.88% from October 1, 2017 to December 31, 2017 to compute 2017 pension expense. A decrease in the discount rate of 25 basis points would result in a \$173 million increase in our pension plan benefit obligation as of December 31, 2017 and net periodic pension expense recognized in 2017 under our mark-to-market accounting policy. Our expected long-term rate of return on plan assets used to compute 2017 pension expense was 6.50%. A decrease in the expected long-term rate of return of 25 basis points, from 6.50% to 6.25%, while holding all other assumptions constant, would result in an increase in our 2018 net periodic pension expense of approximately \$8 million. See Note 19 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data" for additional discussion on these assumptions.

Results of Operations

The following table sets forth the consolidated statements of operations for the periods presented (dollars in millions, except per share data):

	Year Ended December 31,		
	2017	2016	2015
Revenues	\$ 41,578	\$ 29,003	\$ 9,754
Costs and Expenses:			
Operating costs and expenses (exclusive of items shown separately below)	26,560	18,670	6,426
Depreciation and amortization	10,579	6,902	2,125
Other operating expenses, net	444	722	89
	37,583	26,294	8,640
Income from operations	3,995	2,709	1,114
Other Expenses:			
Interest expense, net	(3,115)	(2,123)	(840)
Loss on extinguishment of debt	(40)	(111)	(126)
Gain (loss) on financial instruments, net	69	89	(4)
Other pension benefits	1	899	—
Other expense, net	(4)	(3)	—
	(3,089)	(1,249)	(970)
Income before income taxes	906	1,460	144
Income tax benefit (expense)	(23)	(3)	210
Consolidated net income	883	1,457	354
Less: Net income attributable to noncontrolling interests	(1)	(1)	(46)
Net income attributable to CCO Holdings member	\$ 882	\$ 1,456	\$ 308

Revenues. Total revenues grew \$12.6 billion or 43.4% in the year ended December 31, 2017 as compared to 2016 and grew \$19.2 billion or 197.3% in the year ended December 31, 2016 as compared to 2015. Revenue growth primarily reflects the Transactions and increases in the number of residential Internet and commercial business customers, price adjustments as well as growth in expanded basic video penetration offset by a decrease in limited basic video customers. The Transactions increased revenues for the years ended 2017 and 2016 as compared to the corresponding prior periods by approximately \$11.4 billion and \$18.6 billion, respectively. On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, total revenue growth was 3.9% and 7.0% for the years ended December 31, 2017 and 2016 as compared to the corresponding prior periods.

Revenues by service offering were as follows (dollars in millions; all percentages are calculated using whole numbers. Minor differences may exist due to rounding):

	Years ended December 31,					Years ended December 31,				
	Actual			2017 vs. 2016 Growth		Pro Forma			2017 vs. 2016 Growth	
	2017	2016	2015			2017	2016	2015		
Video	\$ 16,641	\$ 11,967	\$ 4,587	39.1%	160.9%	\$ 16,641	\$ 16,390	\$ 16,029	1.5 %	2.3%
Internet	14,105	9,272	3,003	52.1%	208.7%	14,105	12,688	11,295	11.2 %	12.3%
Voice	2,542	2,005	539	26.8%	272.2%	2,542	2,905	2,842	(12.5)%	2.2%
Residential revenue	33,288	23,244	8,129	43.2%	185.9%	33,288	31,983	30,166	4.1 %	6.0%
Small and medium business	3,686	2,480	764	48.6%	224.7%	3,686	3,409	3,009	8.1 %	13.3%
Enterprise	2,210	1,429	363	54.7%	293.0%	2,210	2,025	1,818	9.1 %	11.4%
Commercial revenue	5,896	3,909	1,127	50.8%	246.7%	5,896	5,434	4,827	8.5 %	12.6%
Advertising sales	1,510	1,235	309	22.3%	300.3%	1,510	1,696	1,524	(10.9)%	11.3%
Other	884	615	189	43.7%	225.0%	884	910	877	(2.9)%	4.0%
	<u>\$ 41,578</u>	<u>\$ 29,003</u>	<u>\$ 9,754</u>	43.4%	197.3%	<u>\$ 41,578</u>	<u>\$ 40,023</u>	<u>\$ 37,394</u>	3.9 %	7.0%

Video revenues consist primarily of revenues from basic and digital video services provided to our residential customers, as well as franchise fees, equipment and video installation revenue. Residential video customers decreased by 292,000 in 2017 and, excluding the impacts of the Transactions, increased by 42,000 in 2016. The increases in video revenues are attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Bundle revenue allocation and price adjustments	\$ 383	\$ 103
Increase (decrease) in VOD and pay-per-view	35	(22)
Increase (decrease) in average basic video customers	(179)	35
TWC Transaction	3,806	6,263
Bright House Transaction	629	1,001
	<u>\$ 4,674</u>	<u>\$ 7,380</u>

On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, residential video customers decreased by 226,000 in 2016 and the increases in video revenues is attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Bundle revenue allocation and price adjustments	\$ 513	\$ 498
Increase (decrease) in VOD and pay-per-view	32	(69)
Decrease in average basic video customers	(294)	(68)
	<u>\$ 251</u>	<u>\$ 361</u>

Residential Internet customers grew by 1,171,000 in 2017 and, excluding the impacts of the Transactions, grew by 461,000 customers in 2016. The increases in Internet revenues from our residential customers are attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Increase in average residential Internet customers	\$ 599	\$ 284
Price adjustments, bundle revenue allocation and service level changes	395	62
TWC Transaction	3,268	5,063
Bright House Transaction	571	860
	<u>\$ 4,833</u>	<u>\$ 6,269</u>

On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, residential Internet customers increased by 1,463,000 in 2016 and the increases in Internet revenues is attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Increase in average residential Internet customers	\$ 818	\$ 957
Price adjustments, bundle revenue allocation and service level changes	599	436
	<u>\$ 1,417</u>	<u>\$ 1,393</u>

Residential voice customers grew by 100,000 in 2017 and, excluding the impacts of the Transactions, grew by 95,000 customers in 2016. The increases in voice revenues from our residential customers is attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Increase in average residential voice customers	\$ 27	\$ 28
Bundle revenue allocation and price adjustments	(319)	(18)
TWC Transaction	707	1,247
Bright House Transaction	122	209
	<u>\$ 537</u>	<u>\$ 1,466</u>

On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, residential voice customers increased by 368,000 in 2016 and the increase in voice revenues is attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Increase in average residential voice customers	\$ 49	\$ 229
Price adjustments and bundle revenue allocation	(412)	(166)
	<u>\$ (363)</u>	<u>\$ 63</u>

Small and medium business PSUs increased by 326,000 in 2017 and, excluding the impacts of the Transactions, increased by 128,000 in 2016. The increases in small and medium business commercial revenues are attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Increase in small and medium business customers	\$ 295	\$ 127
Price adjustments related to SPP	(118)	(38)
TWC Transaction	890	1,408
Bright House Transaction	139	219
	<u>\$ 1,206</u>	<u>\$ 1,716</u>

On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, small and medium business PSUs increased by 291,000 in 2016 and the increases in small and medium business commercial revenues is attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Increase in small and medium business customers	\$ 393	\$ 359
Price adjustments related to SPP	(116)	41
	<u>\$ 277</u>	<u>\$ 400</u>

Enterprise PSUs increased by 17,000 in 2017 and, excluding the impacts of the Transactions, increased by 6,000 in 2016. On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, enterprise PSUs increased by 16,000 in 2016. The Transactions increased enterprise commercial revenues for years ended 2017 and 2016 as compared to the corresponding prior periods by approximately \$655 million and \$1.0 billion, respectively. On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, enterprise commercial revenues increased \$185 million and \$207 million during the years ended 2017 and 2016, respectively, as compared to the corresponding prior periods primarily due to growth in customers.

Advertising sales revenues consist primarily of revenues from commercial advertising customers, programmers and other vendors, as well as local cable and advertising on regional sports and news channels. Advertising sales revenues increased in 2017 and 2016 primarily due to the Transactions. The Transactions increased advertising sales revenues for the years ended 2017 and 2016 as compared to the corresponding prior periods by \$425 million and \$898 million, respectively. On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, advertising sales revenues decreased \$186 million and increased \$172 million during the years ended 2017 and 2016, respectively, as compared to the corresponding prior periods primarily due to political advertising.

Other revenues consist of revenue from regional sports and news channels (excluding intercompany charges or advertising sales on those channels), home shopping, late payment fees, wire maintenance fees and other miscellaneous revenues. The increase in 2017 and 2016 was primarily due to the Transactions. The Transactions increased other revenues for the years ended 2017 and 2016 as compared to the corresponding prior periods by \$255 million and \$429 million, respectively. On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, other revenues decreased \$26 million and increased \$33 million during the years ended 2017 and 2016, respectively, as compared to the corresponding prior periods primarily due to a settlement incurred in 2016 related to an early contract termination at Legacy TWC and Legacy Bright House.

Operating costs and expenses. The increases in our operating costs and expenses are attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Programming	\$ 3,562	\$ 4,356
Regulatory, connectivity and produced content	597	1,032
Costs to service customers	2,126	3,774
Marketing	713	1,078
Transition costs	(32)	84
Other	924	1,920
	<u>\$ 7,890</u>	<u>\$ 12,244</u>

Programming costs were approximately \$10.6 billion, \$7.0 billion and \$2.7 billion, representing 40%, 38% and 42% of operating costs and expenses for each of the years ended December 31, 2017, 2016 and 2015, respectively. The increase in operating costs and expenses for the years ended 2017 and 2016 as compared to the corresponding prior periods was primarily due to the Transactions.

The increase in other expense is attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Enterprise	\$ 245	\$ 383
Advertising sales expense	244	405
Corporate costs	207	607
Property tax and insurance	109	198
Stock compensation expense	17	166
Other	102	161
	<u>\$ 924</u>	<u>\$ 1,920</u>

The increases in other expense for the years ended 2017 and 2016 as compared to the corresponding prior periods were primarily due to the Transactions.

On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, increases in our operating costs and expenses, exclusive of items shown separately in the consolidated statements of operations, are attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Programming	\$ 982	\$ 661
Regulatory, connectivity and produced content	(29)	28
Costs to service customers	(144)	72
Marketing	52	59
Transition costs	(32)	84
Other	(137)	315
	<u>\$ 692</u>	<u>\$ 1,219</u>

On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, programming costs were approximately \$9.6 billion and \$9.0 billion, representing 37% and 36% of total operating costs and expenses for the years ended December 31, 2016 and 2015, respectively.

Programming costs consist primarily of costs paid to programmers for basic, digital, premium, VOD, and pay-per-view programming. The increase in programming costs on a pro forma basis, assuming the Transactions occurred as of January 1, 2015, is primarily a result of contractual rate adjustments, including renewals and increases in amounts paid for retransmission consents, higher expanded basic video package customers and higher pay-per-view events offset by synergies as a result of the Transactions. We expect programming expenses will continue to increase due to a variety of factors, including annual increases imposed by programmers with additional selling power as a result of media consolidation, increased demands by owners of broadcast stations for payment for retransmission consent or linking carriage of other services to retransmission consent, and additional programming, particularly new services. We have been unable to fully pass these increases on to our customers nor do we expect to be able to do so in the future without a potential loss of customers.

Costs to service customers decreased \$144 million during 2017 as compared to 2016, on a pro forma basis, assuming the Transactions occurred as of January 1, 2015, primarily due to benefits from combining Legacy TWC and Legacy Bright House into Charter, including lower employee benefit and maintenance costs, higher labor and material capitalization with increases in placement of new customer equipment and improved productivity.

On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, the change in other expense is attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Corporate costs	\$ (157)	\$ 114
Stock compensation expense	(34)	49
Property, tax and insurance	(21)	—
Advertising sales expense	37	100
Enterprise	25	42
Other	13	10
	<u>\$ (137)</u>	<u>\$ 315</u>

Corporate costs and stock compensation expense decreased in 2017 as compared to 2016 primarily as a result of lower headcount as a result of integration synergies.

The increase in corporate costs during 2016 as compared to 2015 relates primarily to increases in the number of employees including increases in engineering and IT. The increase in advertising sales expense relates primarily to higher advertising sales revenue. Stock compensation expense increased during 2016 as compared to 2015 primarily due to increases in headcount and the value of equity issued.

Depreciation and amortization. Depreciation and amortization expense increased by \$3.7 billion and \$4.8 billion in 2017 and 2016 as compared to the corresponding prior periods primarily as a result of additional depreciation and amortization related to the Transactions, inclusive of the incremental amounts as a result of the higher fair values recorded in acquisition accounting and, in 2017, higher capital expenditures.

Other operating expenses, net. The changes in other operating expenses, net are attributable to the following (dollars in millions):

	2017 compared to 2016	2016 compared to 2015
Merger and restructuring costs	\$ (357)	\$ 638
Special charges, net	60	2
(Gain) loss on sale of assets, net	19	(7)
	<u>\$ (278)</u>	<u>\$ 633</u>

The changes in merger and restructuring costs is primarily due to approximately \$279 million and \$611 million of employee retention and employee termination costs incurred during 2017 and 2016, respectively. For more information, see Note 14 to the accompanying consolidated financial statements contained in “Part II. Item 8. Financial Statements and Supplementary Data.”

Interest expense, net. Net interest expense increased by \$992 million in 2017 from 2016 and by \$1.3 billion in 2016 from 2015. The increase in 2017 as compared to 2016 is primarily due to an increase in weighted average debt outstanding of \$11.7 billion primarily as a result of the issuance of notes in 2017 for general corporate purposes including distributions to parent companies for stock buybacks. Interest expense associated with debt assumed from Legacy TWC also increased interest expense during the year ended December 31, 2017 compared to the corresponding period in 2016 by approximately \$336 million. The increase in 2016 as compared to 2015 is primarily due to an increase of \$594 million of interest expense associated with the debt incurred to fund the Transactions and \$604 million associated with debt assumed from Legacy TWC.

Loss on extinguishment of debt. Loss on extinguishment of debt of \$40 million, \$111 million and \$126 million for the years ended December 31, 2017, 2016 and 2015 primarily represents losses recognized as a result of the repurchase of CCO Holdings notes and amendments to Charter Operating's credit facilities. For more information, see Note 9 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data."

Gain (loss) on financial instruments, net. Gains and losses on financial instruments are recognized due to changes in the fair value of our interest rate and our cross currency derivative instruments, and the foreign currency remeasurement of the fixed-rate British pound sterling denominated notes (the "Sterling Notes") into U.S. dollars. For more information, see Note 11 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data."

Other pension benefits. Other pension benefits decreased by \$898 million during 2017 compared to 2016 and increased \$899 million during 2016 compared to 2015 primarily due to the pension curtailment gain of \$675 million and remeasurement gain of \$195 million recognized in 2016 as opposed to remeasurement losses of \$55 million recognized in 2017. For more information, see Note 19 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data."

Other expense, net. Other expense, net primarily represents equity losses on our equity-method investments. For more information, see Note 7 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data."

Income tax benefit (expense). We recognized income tax expense of \$23 million and \$3 million for the years ended December 31, 2017 and 2016, respectively, and income tax benefit of \$210 million for the year ended December 31, 2015. Income tax expense was recognized in 2017 and 2016 primarily through increases in deferred tax liabilities, as well as through current federal and state income tax expense. The income tax benefit in 2015 was primarily due to the deemed liquidation of Charter Holdco solely for federal and state income tax purposes offset by income tax expense recognized primarily through increases in deferred tax liabilities. For more information, see Note 16 to the accompanying consolidated financial statements contained in "Part II. Item 8. Financial Statements and Supplementary Data."

Net income attributable to noncontrolling interest. Net income attributable to noncontrolling interest in 2017 and 2016 relates to our third-party interest in CV of Viera, LLP, a consolidated joint venture in a small cable system in Florida assumed in the Transactions. Net income attributable to noncontrolling interest in 2015 included the 2% accretion of the preferred membership interests in CC VIII, LLC ("CC VIII") plus approximately 18.6% of CC VIII's income, net of accretion. On December 31, 2015, the CC VIII preferred interest held by CCH I, LLC was contributed to CC VIII and subsequently canceled.

Net income attributable to CCO Holdings member. Net income attributable to CCO Holdings member was \$882 million, \$1.5 billion and \$308 million for the years ended December 31, 2017, 2016 and 2015, respectively, primarily as a result of the factors described above. On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, net income attributable to CCO Holdings member was \$1.9 billion and \$608 million for the years ended December 31, 2016 and 2015, respectively.

Use of Adjusted EBITDA and Free Cash Flow

We use certain measures that are not defined by U.S. generally accepted accounting principles ("GAAP") to evaluate various aspects of our business. Adjusted EBITDA and free cash flow are non-GAAP financial measures and should be considered in addition to, not as a substitute for, consolidated net income and net cash flows from operating activities reported in accordance with GAAP. These terms, as defined by us, may not be comparable to similarly titled measures used by other companies. Adjusted EBITDA and free cash flow are reconciled to consolidated net income and net cash flows from operating activities, respectively, below.

Adjusted EBITDA eliminates the significant non-cash depreciation and amortization expense that results from the capital-intensive nature of our businesses as well as other non-cash or special items, and is unaffected by our capital structure or investment activities.

However, this measure is limited in that it does not reflect the periodic costs of certain capitalized tangible and intangible assets used in generating revenues and our cash cost of financing. These costs are evaluated through other financial measures.

Free cash flow is defined as net cash flows from operating activities, less capital expenditures and changes in accrued expenses related to capital expenditures.

Management and Charter's board of directors use Adjusted EBITDA and free cash flow to assess our performance and our ability to service our debt, fund operations and make additional investments with internally generated funds. In addition, Adjusted EBITDA generally correlates to the leverage ratio calculation under our credit facilities or outstanding notes to determine compliance with the covenants contained in the facilities and notes (all such documents have been previously filed with the SEC). For the purpose of calculating compliance with leverage covenants, we use Adjusted EBITDA, as presented, excluding certain expenses paid by our operating subsidiaries to other Charter entities. Our debt covenants refer to these expenses as management fees, which fees were in the amount of \$1.1 billion, \$930 million and \$322 million for the years ended December 31, 2017, 2016 and 2015, respectively.

	Years ended December 31,		
	2017	2016	2015
	Actual		
Consolidated net income	\$ 883	\$ 1,457	\$ 354
Plus: Interest expense, net	3,115	2,123	840
Income tax (benefit) expense	23	3	(210)
Depreciation and amortization	10,579	6,902	2,125
Stock compensation expense	261	244	78
Loss on extinguishment of debt	40	111	126
(Gain) loss on financial instruments, net	(69)	(89)	4
Other pension benefits	(1)	(899)	—
Other, net	448	725	89
Adjusted EBITDA	<u>\$ 15,279</u>	<u>\$ 10,577</u>	<u>\$ 3,406</u>
Net cash flows from operating activities	\$ 11,608	\$ 8,765	\$ 2,557
Less: Purchases of property, plant and equipment	(8,681)	(5,325)	(1,840)
Change in accrued expenses related to capital expenditures	820	603	28
Free cash flow	<u>\$ 3,747</u>	<u>\$ 4,043</u>	<u>\$ 745</u>

	Year Ended December 31,	
	2016	2015
	Pro Forma	
Consolidated net income	\$ 1,891	\$ 654
Plus: Interest expense, net	2,892	2,968
Income tax (benefit) expense	3	(210)
Depreciation and amortization	9,547	9,340
Stock compensation expense	295	246
Loss on extinguishment of debt	111	126
(Gain) loss on financial instruments, net	(89)	4
Other pension benefits	(915)	(73)
Other, net	715	(64)
Adjusted EBITDA	<u>\$ 14,450</u>	<u>\$ 12,991</u>

Liquidity and Capital Resources

Overview

We have significant amounts of debt. The principal amount of our debt as of December 31, 2017 was \$69.0 billion, consisting of \$9.5 billion of credit facility debt, \$40.6 billion of investment grade senior secured notes and \$18.9 billion of high-yield senior unsecured notes. Our business requires significant cash to fund principal and interest payments on our debt.

Our projected cash needs and projected sources of liquidity depend upon, among other things, our actual results, and the timing and amount of our expenditures. As we launch our new mobile services, we expect an initial funding period to grow a new product as well as negative working capital impacts from the timing of device-related cash flows when we provide the handset or tablet to customers pursuant to equipment installment plans. Free cash flow was \$3.7 billion, \$4.0 billion and \$745 million for the years ended December 31, 2017, 2016 and 2015, respectively. As of December 31, 2017, the amount available under our credit facilities was approximately \$3.6 billion and cash on hand was approximately \$330 million. We expect to utilize free cash flow, cash on hand and availability under our credit facilities as well as future refinancing transactions to further extend the maturities of our obligations. The timing and terms of any refinancing transactions will be subject to market conditions among other considerations. Additionally, we may, from time to time, and depending on market conditions and other factors, use cash on hand and the proceeds from securities offerings or other borrowings to retire our debt through open market purchases, privately negotiated purchases, tender offers or redemption provisions. We believe we have sufficient liquidity from cash on hand, free cash flow and Charter Operating's revolving credit facility as well as access to the capital markets to fund our projected cash needs.

We continue to evaluate the deployment of our cash on hand and anticipated future free cash flow including to invest in our business growth and other strategic opportunities, including mergers and acquisitions as well as distributions to our parent company for stock repurchases and dividends. Charter's target leverage remains at 4 to 4.5 times, and up to 3.5 times at the Charter Operating level. Our leverage ratio was 4.5 as of December 31, 2017. We may increase the total amount of our indebtedness to maintain leverage within Charter's target leverage range. During the years ended December 31, 2017 and 2016, Charter purchased approximately 33.4 million and 5.1 million shares, respectively, of Charter Class A common stock for approximately \$11.6 billion and \$1.3 billion, respectively. As of December 31, 2017, Charter had remaining board authority to purchase an additional \$1.1 billion of Charter's Class A common stock and/or Charter Holdings common units. Charter is not obligated to acquire any particular amount of common stock, and the timing of any purchases that may occur cannot be predicted and will largely depend on market conditions and other potential uses of capital. Purchases may include open market purchases, tender offers or negotiated transactions. To the extent such purchases occur, CCO Holdings and its subsidiaries are the primary source for funding such purchases through distributions to their parent companies.

As possible acquisitions, swaps or dispositions arise, we actively review them against our objectives including, among other considerations, improving the operational efficiency, clustering, product development or technology capabilities of our business and achieving appropriate return targets, and we may participate to the extent we believe these possibilities present attractive opportunities. However, there can be no assurance that we will actually complete any acquisitions, dispositions or system swaps, or that any such transactions will be material to our operations or results.

In December 2016, Charter and A/N entered into a letter agreement (the "Letter Agreement") that requires A/N to sell to Charter or to Charter Holdings, on a monthly basis, a number of shares of Charter Class A common stock or Charter Holdings common units that represents a pro rata participation by A/N and its affiliates in any repurchases of shares of Charter Class A common stock from persons other than A/N effected by Charter during the immediately preceding calendar month, at a purchase price equal to the average price paid by Charter for the shares repurchased from persons other than A/N during such immediately preceding calendar month. A/N and Charter both have the right to terminate or suspend the pro rata repurchase arrangement on a prospective basis once Charter or Charter Holdings have repurchased shares of Class A common stock or Charter Holdings common units from A/N and its affiliates for an aggregate purchase price of \$537 million, which threshold has been met. On December 21, 2017, Charter and A/N entered into an amendment to the Letter Agreement resetting the aggregate purchase price to \$400 million. Charter Holdings purchased from A/N 4.8 million and 0.8 million Charter Holdings common units at an average price per unit of \$347.03 and \$289.83, or \$1.7 billion and \$218 million during the years ended December 31, 2017 and 2016, respectively.

Free Cash Flow

Free cash flow decreased \$296 million and increased \$3.3 billion during the years ended December 31, 2017 and 2016 compared to the corresponding prior periods, respectively, due to the following.

	2017 compared to 2016	2016 compared to 2015
Increase in Adjusted EBITDA	\$ 4,702	\$ 7,171
Increase in capital expenditures	(3,356)	(3,485)
Increase in cash paid for interest, net	(1,215)	(1,355)
Changes in working capital, excluding change in accrued interest, net of effects from acquisitions	(595)	1,360
(Increase) decrease in merger and restructuring costs	158	(390)
Other, net	10	(3)
	<u>\$ (296)</u>	<u>\$ 3,298</u>

Contractual Obligations

The following table summarizes our payment obligations as of December 31, 2017 under our long-term debt and certain other contractual obligations and commitments inclusive of parent company obligations and commitments, the expense of which are pushed down to us (dollars in millions).

	Payments by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Long-Term Debt Principal Payments ^(a)	\$ 69,003	\$ 2,207	\$ 7,164	\$ 6,864	\$ 52,768
Long-Term Debt Interest Payments ^(b)	44,013	3,762	6,850	6,315	27,086
Capital and Operating Lease Obligations ^(c)	1,512	286	434	297	495
Programming Minimum Commitments ^(d)	164	103	61	—	—
Other ^(e)	13,626	1,917	1,870	1,152	8,687
	<u>\$ 128,318</u>	<u>\$ 8,275</u>	<u>\$ 16,379</u>	<u>\$ 14,628</u>	<u>\$ 89,036</u>

^(a) The table presents maturities of long-term debt outstanding as of December 31, 2017. Refer to Notes 9 and 18 to our accompanying consolidated financial statements contained in “Part II. Item 8. Financial Statements and Supplementary Data” for a description of our long-term debt and other contractual obligations and commitments.

^(b) Interest payments on variable debt are estimated using amounts outstanding at December 31, 2017 and the average implied forward London Interbank Offering Rate (“LIBOR”) rates applicable for the quarter during the interest rate reset based on the yield curve in effect at December 31, 2017. Actual interest payments will differ based on actual LIBOR rates and actual amounts outstanding for applicable periods.

^(c) We lease certain facilities and equipment under noncancelable capital and operating leases. Capital lease obligations represented \$123 million of total capital and operating lease obligations as of December 31, 2017. Leases and rental costs charged to expense for the years ended December 31, 2017, 2016 and 2015, were \$321 million, \$215 million and \$49 million, respectively.

^(d) We pay programming fees under multi-year contracts typically based on a flat fee per customer, which may be fixed for the term, or may in some cases escalate over the term. Programming costs included in the accompanying statement of operations were approximately \$10.6 billion, \$7.0 billion and \$2.7 billion, for the years ended December 31, 2017, 2016 and 2015, respectively. Certain of our programming agreements are based on a flat fee per month or have guaranteed minimum payments. The table sets forth the aggregate guaranteed minimum commitments under our programming contracts.

^(e) “Other” represents other guaranteed minimum commitments, including rights negotiated directly with content owners for distribution on company-owned channels or networks, commitments related to our role as an advertising and distribution sales agent for third party-owned channels or networks, commitments to our customer premise equipment vendors and contractual obligations related to third-party network augmentation.

The following items are not included in the contractual obligations table because the obligations are not fixed and/or determinable due to various factors discussed below. However, we incur these costs as part of our operations:

- We rent utility poles used in our operations. Generally, pole rentals are cancelable on short notice, but we anticipate that such rentals will recur. Rent expense incurred for pole rental attachments for the years ended December 31, 2017, 2016 and 2015 was \$167 million, \$115 million and \$53 million, respectively.
- We pay franchise fees under multi-year franchise agreements based on a percentage of revenues generated from video service per year. We also pay other franchise related costs, such as public education grants, under multi-year agreements. Franchise fees and other franchise-related costs included in the accompanying statement of operations were \$705 million, \$534 million and \$212 million for the years ended December 31, 2017, 2016 and 2015, respectively.
- We have \$291 million in letters of credit, of which \$137 million is secured under the Charter Operating credit facility, primarily to our various casualty carriers as collateral for reimbursement of workers' compensation, auto liability and general liability claims.
- Minimum pension funding requirements have not been presented in the table above as such amounts have not been determined beyond 2017. We made no cash contributions to the qualified pension plans in 2017; however, we are permitted to make discretionary cash contributions to the qualified pension plans in 2018. For the nonqualified pension plan, we contributed \$18 million during 2017 and will continue to make contributions in 2018 to the extent benefits are paid.

See "Part I. Item 1. Business — Transaction-Related Commitments" for a listing of commitments as a result of the Transactions.

Historical Operating, Investing, and Financing Activities

Cash and Cash Equivalents. We held \$330 million and \$1.3 billion in cash and cash equivalents as of December 31, 2017 and 2016, respectively.

Operating Activities. Net cash provided by operating activities increased \$2.8 billion during the year ended December 31, 2017 compared to the year ended December 31, 2016, primarily due to an increase in Adjusted EBITDA of \$4.7 billion offset by an increase in cash paid for interest, net of \$1.2 billion as a result of the Transactions and long-term debt issued for general corporate purposes including distributions to our parent companies for stock buybacks as well as changes in operating assets and liabilities, excluding the change in accrued interest, that provided \$595 million less cash during the year ended December 31, 2017.

Net cash provided by operating activities increased \$6.2 billion during the year ended December 31, 2016 compared to the year ended December 31, 2015, primarily due to an increase in Adjusted EBITDA of \$7.2 billion offset by an increase in cash paid for interest, net of \$1.4 billion primarily as a result of the Transactions.

Investing Activities. Net cash used in investing activities for the years ended December 31, 2017 and 2016 was \$8.0 billion and \$4.8 billion, respectively, and net cash provided by investing activities for the year ended December 31, 2015 was \$1.7 billion. The increase in cash used during 2017 as compared to 2016 was primarily due to increases in capital expenditures as a result of the Transactions. The increase in cash used during 2016 as compared to 2015 was primarily due to the repayment in 2015 of \$3.5 billion of net proceeds held in escrow upon the termination of the proposed transactions with Comcast Corporation as well as an increase in capital expenditures.

Financing Activities. Net cash used in financing activities for the years ended December 31, 2017, 2016 and 2015 was \$4.6 billion, \$2.7 billion and \$4.2 billion, respectively. The increases in cash used during the years was primarily due to increases in distributions offset by increases in borrowings of long-term debt exceeding repayments.

Capital Expenditures

We have significant ongoing capital expenditure requirements. Capital expenditures were \$8.7 billion, \$5.3 billion and \$1.8 billion for the years ended December 31, 2017, 2016 and 2015, respectively. The increase was driven by the Transactions. On a pro forma basis, assuming the Transactions occurred as of January 1, 2015, the increase during 2017 as compared to 2016 was driven by higher CPE purchases for SPP, our all-digital initiative and early inventory purchases to operationally stage 2018 activity, higher support capital investments and line extensions. See the table below for more details.

The actual amount of our capital expenditures in 2018 will depend on a number of factors, including our all-digital transition in the Legacy TWC and Legacy Bright House markets, further spend related to product development and growth rates of both our residential and commercial businesses.

Our capital expenditures are funded primarily from cash flows from operating activities and borrowings on our credit facility. In addition, our accrued liabilities related to capital expenditures increased by \$820 million, \$603 million and \$28 million for the years ended December 31, 2017, 2016 and 2015, respectively.

The following tables present our major capital expenditures categories on an actual and pro forma basis, assuming the Transactions occurred as of January 1, 2015, in accordance with National Cable and Telecommunications Association (“NCTA”) disclosure guidelines for the years ended December 31, 2017, 2016 and 2015. The disclosure is intended to provide more consistency in the reporting of capital expenditures among peer companies in the cable industry. These disclosure guidelines are not required disclosures under GAAP, nor do they impact our accounting for capital expenditures under GAAP (dollars in millions):

	Year ended December 31,		
	2017	2016	2015
	Actual		
Customer premise equipment ^(a)	\$ 3,385	\$ 1,864	\$ 582
Scalable infrastructure ^(b)	2,007	1,390	523
Line extensions ^(c)	1,176	721	194
Upgrade/rebuild ^(d)	572	456	128
Support capital ^(e)	1,541	894	413
Total capital expenditures	<u>\$ 8,681</u>	<u>\$ 5,325</u>	<u>\$ 1,840</u>

Capital expenditures included in total related to:

Commercial services	\$ 1,298	\$ 824	\$ 260
Transition ^(f)	\$ 489	\$ 460	\$ 115

	Year ended December 31,	
	2016	2015
	Pro Forma	
Customer premise equipment ^(a)	\$ 2,761	\$ 2,650
Scalable infrastructure ^(b)	2,009	1,702
Line extensions ^(c)	1,005	977
Upgrade/rebuild ^(d)	610	594
Support capital ^(e)	1,160	1,046
Total capital expenditures	<u>\$ 7,545</u>	<u>\$ 6,969</u>

^(a) Customer premise equipment includes costs incurred at the customer residence to secure new customers and revenue generating units. It also includes customer installation costs and customer premise equipment (e.g., set-top boxes and cable modems).

^(b) Scalable infrastructure includes costs not related to customer premise equipment, to secure growth of new customers and revenue generating units, or provide service enhancements (e.g., headend equipment).

^(c) Line extensions include network costs associated with entering new service areas (e.g., fiber/coaxial cable, amplifiers, electronic equipment, make-ready and design engineering).

^(d) Upgrade/rebuild includes costs to modify or replace existing fiber/coaxial cable networks, including betterments.

^(e) Support capital includes costs associated with the replacement or enhancement of non-network assets due to technological and physical obsolescence (e.g., non-network equipment, land, buildings and vehicles).

^(f) Transition represents incremental costs incurred to integrate the Legacy TWC and Legacy Bright House operations and to bring the three companies’ systems and processes into a uniform operating structure.

Debt

As of December 31, 2017, the accreted value of our total debt was approximately \$70.2 billion, as summarized below (dollars in millions):

	December 31, 2017		Interest Payment Dates	Maturity Date ^(b)
	Principal Amount	Accreted Value ^(a)		
CCO Holdings, LLC:				
5.250% senior notes due 2021	\$ 500	\$ 497	3/15 & 9/15	3/15/2021
5.250% senior notes due 2022	1,250	1,235	3/30 & 9/30	9/30/2022
5.125% senior notes due 2023	1,000	993	2/15 & 8/15	2/15/2023
4.000% senior notes due 2023	500	495	3/1 & 9/1	3/1/2023
5.125% senior notes due 2023	1,150	1,143	5/1 & 11/1	5/1/2023
5.750% senior notes due 2023	500	496	3/1 & 9/1	9/1/2023
5.750% senior notes due 2024	1,000	992	1/15 & 7/15	1/15/2024
5.875% senior notes due 2024	1,700	1,687	4/1 & 10/1	4/1/2024
5.375% senior notes due 2025	750	745	5/1 & 11/1	5/1/2025
5.750% senior notes due 2026	2,500	2,464	2/15 & 8/15	2/15/2026
5.500% senior notes due 2026	1,500	1,489	5/1 & 11/1	5/1/2026
5.875% senior notes due 2027	800	794	5/1 & 11/1	5/1/2027
5.125% senior notes due 2027	3,250	3,216	5/1 & 11/1	5/1/2027
5.000% senior notes due 2028	2,500	2,462	2/1 & 8/1	2/1/2028
Charter Communications Operating, LLC:				
3.579% senior notes due 2020	2,000	1,988	1/23 & 7/23	7/23/2020
4.464% senior notes due 2022	3,000	2,977	1/23 & 7/23	7/23/2022
4.908% senior notes due 2025	4,500	4,462	1/23 & 7/23	7/23/2025
3.750% senior notes due 2028	1,000	985	2/15 & 8/15	2/15/2028
4.200% senior notes due 2028	1,250	1,238	3/15 & 9/15	3/15/2028
6.384% senior notes due 2035	2,000	1,981	4/23 & 10/23	10/23/2035
6.484% senior notes due 2045	3,500	3,466	4/23 & 10/23	10/23/2045
5.375% senior notes due 2047	2,500	2,506	5/1 & 11/1	5/1/2047
6.834% senior notes due 2055	500	495	4/23 & 10/23	10/23/2055
Credit facilities	9,479	9,387		Varies
Time Warner Cable, LLC:				
6.750% senior notes due 2018	2,000	2,045	1/1 & 7/1	7/1/2018
8.750% senior notes due 2019	1,250	1,337	2/14 & 8/14	2/14/2019
8.250% senior notes due 2019	2,000	2,148	4/1 & 10/1	4/1/2019
5.000% senior notes due 2020	1,500	1,579	2/1 & 8/1	2/1/2020
4.125% senior notes due 2021	700	730	2/15 & 8/15	2/15/2021
4.000% senior notes due 2021	1,000	1,045	3/1 & 9/1	9/1/2021
5.750% sterling senior notes due 2031 ^(c)	845	912	6/2	6/2/2031
6.550% senior debentures due 2037	1,500	1,686	5/1 & 11/1	5/1/2037
7.300% senior debentures due 2038	1,500	1,788	1/1 & 7/1	7/1/2038
6.750% senior debentures due 2039	1,500	1,724	6/15 & 12/15	6/15/2039
5.875% senior debentures due 2040	1,200	1,258	5/15 & 11/15	11/15/2040
5.500% senior debentures due 2041	1,250	1,258	3/1 & 9/1	9/1/2041
5.250% sterling senior notes due 2042 ^(d)	879	847	7/15	7/15/2042
4.500% senior debentures due 2042	1,250	1,137	3/15 & 9/15	9/15/2042
Time Warner Cable Enterprises LLC:				
8.375% senior debentures due 2023	1,000	1,232	3/15 & 9/15	3/15/2023
8.375% senior debentures due 2033	1,000	1,312	7/15 & 1/15	7/15/2033
	<u>\$ 69,003</u>	<u>\$ 70,231</u>		

- (a) The accreted values presented in the table above represent the principal amount of the debt less the original issue discount at the time of sale, deferred financing costs, and, in regards to the Legacy TWC debt assumed, fair value premium adjustments as a result of applying acquisition accounting plus the accretion of those amounts to the balance sheet date. However, the amount that is currently payable if the debt becomes immediately due is equal to the principal amount of the debt. In regards to the Sterling Notes, the principal amount of the debt and any premium or discount is remeasured into US dollars as of each balance sheet date. We have availability under our credit facilities of approximately \$3.6 billion as of December 31, 2017.
- (b) In general, the obligors have the right to redeem all of the notes set forth in the above table in whole or in part at their option, beginning at various times prior to their stated maturity dates, subject to certain conditions, upon the payment of the outstanding principal amount (plus a specified redemption premium) and all accrued and unpaid interest.
- (c) Principal amount includes £625 million valued at \$845 million as of December 31, 2017 using the exchange rate as of December 31, 2017.
- (d) Principal amount includes £650 million valued at \$879 million as of December 31, 2017 using the exchange rate as of December 31, 2017.

See Note 9 to the accompanying consolidated financial statements contained in “Part II. Item 8. Financial Statements and Supplementary Data” for further details regarding our outstanding debt and other financing arrangements, including certain information about maturities, covenants and restrictions related to such debt and financing arrangements. The agreements and instruments governing our debt and financing arrangements are complicated and you should consult such agreements and instruments which are filed with the SEC for more detailed information.

At December 31, 2017, Charter Operating had a consolidated leverage ratio of approximately 3.0 to 1.0 and a consolidated first lien leverage ratio of 2.9 to 1.0. Both ratios are in compliance with the ratios required by the Charter Operating credit facilities of 5.0 to 1.0 consolidated leverage ratio and 4.0 to 1.0 consolidated first lien leverage ratio. A failure by Charter Operating to maintain the financial covenants would result in an event of default under the Charter Operating credit facilities and the debt of CCO Holdings. See “Part I. Item 1A. Risk Factors — The agreements and instruments governing our debt contain restrictions and limitations that could significantly affect our ability to operate our business, as well as significantly affect our liquidity.”

Recently Issued Accounting Standards

See Note 20 to the accompanying consolidated financial statements contained in “Part II. Item 8. Financial Statements and Supplementary Data” for a discussion of recently issued accounting standards.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We use derivative instruments to manage interest rate risk on variable debt and foreign exchange risk on the Sterling Notes, and do not hold or issue derivative instruments for speculative trading purposes.

Cross-currency derivative instruments are used to effectively convert £1.275 billion aggregate principal amount of fixed-rate British pound sterling denominated debt, including annual interest payments and the payment of principal at maturity, to fixed-rate U.S. dollar denominated debt. The cross-currency derivative instruments have maturities of June 2031 and July 2042. We are required to post collateral on the cross-currency derivative instruments when such instruments are in a liability position. In May 2016, we entered into a collateral holiday agreement for 80% of both the 2031 and 2042 cross-currency swaps, which eliminates the requirement to post collateral for three years. The fair value of our cross-currency derivatives included in other long-term liabilities on our consolidated balance sheets was \$25 million and \$251 million as of December 31, 2017 and 2016, respectively. For more information, see Note 11 to the accompanying consolidated financial statements contained in “Part II. Item 8. Financial Statements and Supplementary Data.”

As of December 31, 2017 and 2016, the weighted average interest rate on the credit facility debt was approximately 3.4% and 2.9%, respectively, and the weighted average interest rate on the senior notes was approximately 5.7% and 5.9%, respectively, resulting in a blended weighted average interest rate of 5.4% and 5.4%, respectively. The interest rate on approximately 86% and 87% of the total principal amount of our debt was effectively fixed, including the effects of our interest rate swap agreements, as of December 31, 2017 and 2016, respectively. All of our interest rate derivatives were expired as of December 31, 2017.

The table set forth below summarizes the fair values and contract terms of financial instruments subject to interest rate risk maintained by us as of December 31, 2017 (dollars in millions):

	2018	2019	2020	2021	2022	Thereafter	Total	Fair Value
Debt:								
Fixed Rate	\$ 2,000	\$ 3,250	\$ 3,500	\$ 2,200	\$ 4,250	\$ 44,324	\$ 59,524	\$ 63,443
Average Interest Rate	6.75%	8.44%	4.19%	4.32%	4.70%	5.70%	5.67%	
Variable Rate	\$ 207	\$ 207	\$ 207	\$ 207	\$ 207	\$ 8,444	\$ 9,479	\$ 9,440
Average Interest Rate	3.60%	3.90%	3.98%	4.01%	4.05%	4.39%	4.34%	

Interest rates on variable-rate debt are estimated using the average implied forward LIBOR for the year of maturity based on the yield curve in effect at December 31, 2017 including applicable bank spread.

Item 8. Financial Statements and Supplementary Data.

Our consolidated financial statements, the related notes thereto, and the reports of independent accountants are included in this annual report beginning on page F-1.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

As of the end of the period covered by this report, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of the design and operation of disclosure controls and procedures with respect to the information generated for use in this annual report. The evaluation was based upon reports and certifications provided by a number of executives. Based on, and as of the date of that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective to provide reasonable assurances that information required to be disclosed in the reports we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

In designing and evaluating the disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based upon the above evaluation, we believe that our controls provide such reasonable assurances.

During the quarter ended December 31, 2017, there was no change in our internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) for the Company. Our internal control system was designed to provide reasonable assurance to our management and board of directors regarding the preparation and fair presentation of published financial statements.

Management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control — Integrated Framework* (2013). Based on management's assessment utilizing these criteria we believe that, as of December 31, 2017, our internal control over financial reporting was effective.

Item 9B. Other Information.

None.

PART III

Item 14. Principal Accounting Fees and Services.

Principal Accounting Firm

KPMG acted as Charter and its subsidiaries' independent registered public accounting firm since 2002, and, subject to ratification by stockholders at Charter's annual meeting, KPMG is expected to serve as our independent registered public accounting firm for 2018.

Services of Independent Registered Public Accounting Firm

Charter's Audit Committee has adopted policies and procedures requiring the pre-approval of non-audit services that may be provided by our independent registered public accounting firm. We have also complied and will continue to comply with the provisions of the Sarbanes-Oxley Act of 2002 and the related SEC rules pertaining to auditor independence and audit committee pre-approval of audit and non-audit services.

Audit Fees

During the years ended December 31, 2017 and 2016, we incurred fees and related expenses for professional services rendered by KPMG for the audits of Charter and its subsidiaries' financial statements (including CCO Holdings), for the review of Charter and its subsidiaries' interim financial statements (including CCO Holdings), registration statement filings and offering memoranda filings totaling approximately \$9 million and \$12 million, respectively.

Audit-Related Fees

Charter incurred audit-related fees to KPMG of approximately \$0.2 million and \$1 million during the years ended December 31, 2017 and 2016, respectively. These services were primarily related to accounting and reporting consultation and services related to the Transactions.

Tax Fees

Charter incurred tax fees to KPMG of approximately \$2 million and \$3 million during the years ended December 31, 2017 and 2016, respectively.

All Other Fees

None.

Charter's Audit Committee appoints, retains, compensates and oversees the independent registered public accounting firm (subject, if applicable, to board of director and/or stockholder ratification), and approves in advance all fees and terms for the audit engagement and non-audit engagements where non-audit services are not prohibited by Section 10A of the Securities Exchange Act of 1934, as amended with respect to independent registered public accounting firms. Pre-approvals of non-audit services are sometimes delegated to a single member of Charter's Audit Committee. However, any pre-approvals made by Charter's Audit Committee's designee are presented at Charter's Audit Committee's next regularly scheduled meeting. Charter's Audit Committee has an obligation to consult with management on these matters. Charter's Audit Committee approved 100% of the KPMG fees for the years ended December 31, 2017 and 2016. Each year, including 2017, with respect to the proposed audit engagement, Charter's Audit Committee reviews the proposed risk assessment process in establishing the scope of examination and the reports to be rendered.

In its capacity as a committee of the board, Charter's Audit Committee oversees the work of the independent registered public accounting firm (including resolution of disagreements between management and the public accounting firm regarding financial reporting) for the purpose of preparing or issuing an audit report or performing other audit, review or attest services. The independent registered public accounting firm reports directly to Charter's Audit Committee. In performing its functions, Charter's Audit Committee undertakes those tasks and responsibilities that, in its judgment, most effectively contribute to and implement the purposes of Charter's Audit Committee charter. For more detail of Charter's Audit Committee's authority and responsibilities, see Charter's Audit Committee charter on Charter's website, www.charter.com.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) The following documents are filed as part of this annual report:

(1) Financial Statements.

A listing of the financial statements, notes and reports of independent public accountants required by "Part II. Item 8. Financial Statements and Supplementary Data" begins on page F-1 of this annual report.

(2) Financial Statement Schedules.

No financial statement schedules are required to be filed by Items 8 and 15(c) because they are not required or are not applicable, or the required information is set forth in the applicable financial statements or notes thereto.

(3) The index to the exhibits begins on page E-1 of this annual report.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, CCO Holdings, LLC and CCO Holdings Capital Corp. have duly caused this annual report to be signed on their behalf by the undersigned, thereunto duly authorized.

CCO HOLDINGS, LLC
Registrant

By: /s/ Kevin D. Howard
Kevin D. Howard
Senior Vice President – Finance, Controller and
Chief Accounting Officer

Date: February 13, 2018

CCO HOLDINGS CAPITAL CORP.
Registrant

By: /s/ Kevin D. Howard
Kevin D. Howard
Senior Vice President – Finance, Controller and
Chief Accounting Officer

Date: February 13, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of CCO Holdings, LLC and CCO Holdings Capital Corp. and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Thomas M. Rutledge</u> Thomas M. Rutledge	Chairman, Chief Executive Officer, Director (Principal Executive Officer)	February 13, 2018
<u>/s/ Christopher L. Winfrey</u> Christopher L. Winfrey	Chief Financial Officer (Principal Financial Officer)	February 13, 2018
<u>/s/ Kevin D. Howard</u> Kevin D. Howard	Senior Vice President – Finance, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 13, 2018

CHARTER COMMUNICATIONS, INC., in its sole capacity as
manager of CCO Holdings, LLC

By: /s/ Kevin D. Howard
Kevin D. Howard
Senior Vice President – Finance, Controller and
Chief Accounting Officer

Date: February 13, 2018

Exhibit Index

Exhibits are listed by numbers corresponding to the Exhibit Table of Item 601 in Regulation S-K.

Exhibit	Description
2.1	<u>Agreement and Plan of Mergers, dated as of May 23, 2015, among Time Warner Cable Inc., Charter Communications, Inc., CCH I, LLC, Nina Corporation I, Inc., Nina Company II, LLC and Nina Company III, LLC (incorporated by reference to Exhibit 2.1 to the current report on Form 8-K filed by Charter Communications, Inc. on May 29, 2015 (File No. 001-33664)).</u>
2.2	<u>Contribution Agreement, dated March 31, 2015, by and among Advance/Newhouse Partnership, A/NPC Holdings LLC, Charter Communications, Inc., CCH I, LLC, and Charter Communications Holding Company, LLC (incorporated by reference to Exhibit 2.1 to the current report on Form 8-K filed by Charter Communications, Inc. on April 1, 2015 (File No. 001-33664)).</u>
3.1	<u>Certificate of Formation of CCO Holdings, LLC (incorporated by reference to Exhibit 3.1 to the registration statement on Form S-4 of CCO Holdings, LLC and CCO Holdings Capital Corporation filed on February 6, 2004 (File No. 333-112593)).</u>
3.2	<u>By-laws of CCO Holdings Capital Corp. (incorporated by reference to Exhibit 3.6 to the registration statement on Form S-4 of CCO Holdings, LLC and CCO Holdings Capital Corporation filed on February 6, 2004 (File No. 333-112593)).</u>
3.3	<u>Amended and Restated Limited Liability Company Agreement of CCO Holdings, LLC (incorporated by reference to Exhibit 3.3 to the quarterly report on Form 10-Q of CCO Holdings, LLC and CCO Holdings Capital Corporation filed on August 15, 2016 (File No. 001-37789)).</u>
4.1(a)	<u>Amended and Restated Stockholders Agreement, dated March 31, 2015, by and among Charter Communications, Inc., Liberty Broadband Corporation and Advance/Newhouse Partnership (incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by Charter Communications, Inc. on April 1, 2015 (File No. 001-33664)).</u>
4.1(b)	<u>Second Amended and Restated Stockholders Agreement, dated May 23, 2015, by and among Charter Communications, Inc., CCH I, LLC, Liberty Broadband Corporation and Advance/Newhouse Partnership (incorporated by reference to Annex C to the registration statement on Form S-4 filed by CCH I, LLC on June 26, 2015 (File No. 333-205240)).</u>
10.1	<u>Indenture dated as of May 10, 2011, by and among CCO Holdings, LLC, and CCO Holdings Capital Corp., as Issuers, Charter Communications, Inc., as Parent Guarantor, and The Bank of New York Mellon Trust Company, N.A., as Trustee (incorporated by reference to Exhibit 4.1 to the current report on Form 8-K of Charter Communications, Inc. filed on May 16, 2011 (File No. 001-33664)).</u>
10.2	<u>Third Supplemental Indenture dated as of January 26, 2012 by and among CCO Holdings, LLC, and CCO Holdings Capital Corp., as Issuers, Charter Communications, Inc., as Parent Guarantor, and The Bank of New York Mellon Trust Company, N.A., as Trustee (incorporated by reference to Exhibit 4.2 to the current report on Form 8-K of Charter Communications, Inc. filed on February 1, 2012 (File No. 001-33664)).</u>
10.3	<u>Fourth Supplemental Indenture dated August 22, 2012 relating to the 5.25% Senior Notes due 2022 by and among CCO Holdings, LLC, CCO Holdings Capital Corp. and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 10.1 to the quarterly report on Form 10-Q of Charter Communications, Inc. filed on November 6, 2012 (File No. 001-33664)).</u>
10.4	<u>Fifth Supplemental Indenture dated December 17, 2012 relating to the 5.125% Senior Notes due 2023 by and among CCO Holdings, LLC, CCO Holdings Capital Corp. and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 10.9 to the annual report on Form 10-K of Charter Communications, Inc. filed February 22, 2013 (File No. 001-33664)).</u>
10.5	<u>Sixth Supplemental Indenture relating to the 5.25% senior notes due 2021, dated as of March 14, 2013, by and among CCO Holdings, LLC, and CCO Holdings Capital Corp., as Issuers, Charter Communications, Inc., as Parent Guarantor, and The Bank of New York Mellon Trust Company, N.A., as Trustee (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K of Charter Communications, Inc. filed March 15, 2013 (File No. 001-33664)).</u>
10.6	<u>Seventh Supplemental Indenture relating to the 5.75% senior notes due 2023, dated as of March 14, 2013, by and among CCO Holdings, LLC, and CCO Holdings Capital Corp., as Issuers, Charter Communications, Inc., as Parent Guarantor, and The Bank of New York Mellon Trust Company, N.A., as Trustee (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K of Charter Communications, Inc. filed March 15, 2013 (File No. 001-33664)).</u>
10.7	<u>Eighth Supplemental Indenture relating to the 5.75% senior notes due 2024, dated as of May 3, 2013, by and among CCO Holdings, LLC and CCO Holdings Capital Corp., as Issuers, Charter Communications, Inc., as Parent Guarantor, and The Bank of New York Mellon Trust Company, N.A., as Trustee (incorporated by reference to Exhibit 10.7 to the quarterly report on Form 10-Q of Charter Communications, Inc. filed on May 7, 2013 (File No. 001-33664)).</u>

- 10.8 [Indenture dated as of November 5, 2014, by and among CCO Holdings, LLC, CCO Holdings Capital Corp. and CCOH Safari, LLC, as Issuers, Charter Communications, Inc., as Parent Guarantor, and The Bank of New York Mellon Trust Company, N.A., as Trustee \(incorporated by reference to Exhibit 4.1 to the current report on Form 8-K of Charter Communications, Inc. filed on November 10, 2014 \(File No. 001-33664\)\).](#)
- 10.9 [Third Supplemental Indenture, dated as of April 21, 2015, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by Charter Communications, Inc. on April 22, 2015 \(File No. 001-33664\)\).](#)
- 10.10 [Fourth Supplemental Indenture, dated as of April 21, 2015, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.2 to the current report on Form 8-K filed by Charter Communications, Inc. on April 22, 2015 \(File No. 001-33664\)\).](#)
- 10.11 [Fifth Supplemental Indenture, dated as of April 21, 2015, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.3 to the current report on Form 8-K filed by Charter Communications, Inc. on April 22, 2015 \(File No. 001-33664\)\).](#)
- 10.12 [Exchange and Registration Rights Agreement, dated as of April 21, 2015 relating to the 5.125% Senior Notes due 2023, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and Credit Suisse Securities \(USA\) LLC, Deutsche Bank Securities Inc., Goldman, Sachs & Co. and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on April 22, 2015 \(File No. 001-33664\)\).](#)
- 10.13 [Exchange and Registration Rights Agreement relating to the 5.375% Senior Notes due 2025, dated as of April 21, 2015, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and Credit Suisse Securities \(USA\) LLC, Deutsche Bank Securities Inc., Goldman, Sachs & Co. and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed by Charter Communications, Inc. on April 22, 2015 \(File No. 001-33664\)\).](#)
- 10.14 [Exchange and Registration Rights Agreement relating to the 5.875% Senior Notes due 2027, dated as of April 21, 2015, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and Credit Suisse Securities \(USA\) LLC, Deutsche Bank Securities Inc., Goldman, Sachs & Co. and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.3 to the current report on Form 8-K filed by Charter Communications, Inc. on April 22, 2015 \(File No. 001-33664\)\).](#)
- 10.15 [Indenture, dated as of July 23, 2015, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp. and CCO Safari II, LLC, as issuers, and The Bank of New York Mellon Trust Company, N.A., as trustee and collateral agent \(incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by Charter Communications, Inc. on July 27, 2015 \(File No. 001-33664\)\).](#)
- 10.16 [First Supplemental Indenture, dated as of July 23, 2015, among CCO Safari II, LLC, as escrow issuer, CCH II, LLC, as limited guarantor, and The Bank of New York Mellon Trust Company, N.A., as trustee and collateral agent \(incorporated by reference to Exhibit 4.2 to the current report on Form 8-K filed by Charter Communications, Inc. on July 27, 2015 \(File No. 001-33664\)\).](#)
- 10.17 [Exchange and Registration Rights Agreement, dated July 23, 2015 relating to the 3.579% Senior Secured Notes due 2020, 4.464% Senior Secured Notes due 2022, 4.908% Senior Secured Notes due 2025, 6.384% Senior Secured Notes due 2035, 6.484% Senior Secured Notes due 2045 and 6.834% Senior Secured Notes due 2055, between CCO Safari II, LLC and Goldman, Sachs & Co., Credit Suisse Securities \(USA\) LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated, Deutsche Bank Securities Inc. and UBS Securities LLC, as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on July 27, 2015 \(File No. 001-33664\)\).](#)
- 10.18 [Indenture, dated as of November 20, 2015, among CCO Holdings, LLC, CCO Holdings Capital Corp. and CCOH Safari, LLC, as issuers, and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by Charter Communications, Inc. on November 25, 2015 \(File No. 001-33664\)\).](#)
- 10.19 [First Supplemental Indenture, dated as of November 20, 2015, between CCOH Safari, LLC, as escrow issuer, and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.2 to the current report on Form 8-K filed by Charter Communications, Inc. on November 25, 2015 \(File No. 001-33664\)\).](#)
- 10.20 [Exchange and Registration Rights Agreement, dated November 20, 2015 relating to the 5.750% Senior Notes due 2026, between CCOH Safari, LLC and Credit Suisse Securities \(USA\) LLC, Goldman, Sachs & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated, UBS Securities LLC and Deutsche Bank Securities Inc., as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on November 25, 2015 \(File No. 001-33664\)\).](#)

- 10.21 [Sixth Supplemental Indenture, dated as of February 19, 2016, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by Charter Communications, Inc. on February 22, 2016 \(File No. 001-33664\)\).](#)
- 10.22 [Exchange and Registration Rights Agreement, dated February 19, 2016, relating to the 5.875% Senior Notes due 2024, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and Deutsche Bank Securities Inc., Credit Suisse Securities \(USA\) LLC, Goldman, Sachs & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated, UBS Securities LLC, Citigroup Global Markets Inc. and Wells Fargo Securities, LLC, as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on February 22, 2016 \(File No. 001-33664\)\).](#)
- 10.23 [Seventh Supplemental Indenture, dated as of April 21, 2016, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by Charter Communications, Inc. on April 27, 2016 \(File No. 001-33664\)\).](#)
- 10.24 [Exchange and Registration Rights Agreement, dated April 21, 2016, relating to the 5.500% Senior Notes due 2026, among CCO Holdings, LLC, CCO Holdings Capital Corp., Charter Communications, Inc., as guarantor, and Merrill Lynch, Pierce, Fenner & Smith Incorporated, Citigroup Global Markets Inc., Credit Suisse Securities \(USA\) LLC, Deutsche Bank Securities Inc., Goldman, Sachs & Co., UBS Securities LLC and Wells Fargo Securities, LLC, as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on April 27, 2016 \(File No. 001-33664\)\).](#)
- 10.25 [Second Supplemental Indenture, dated as of May 18, 2016, by and among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., CCO Safari II, LLC and The Bank of New York Mellon Trust Company, N.A., as trustee and collateral agent \(incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by Charter Communications, Inc. on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.26 [Third Supplemental Indenture, dated as of May 18, 2016, by and among CCO Holdings, LLC, the subsidiary guarantors party thereto and The Bank of New York Mellon Trust Company, N.A., as trustee and collateral agent \(incorporated by reference to Exhibit 4.2 to the current report on Form 8-K filed by Charter Communications, Inc. on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.27 [Second Supplemental Indenture, dated as of May 18, 2016, by and among CCO Holdings, LLC, CCO Holdings Capital Corp., CCOH Safari, LLC and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.3 to the current report on Form 8-K filed by Charter Communications, Inc. on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.28 [Third Supplemental Indenture, dated as of February 6, 2017, among CCO Holdings, LLC, CCO Holdings Capital Corp., and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated herein by reference to Exhibit 4.1 to the current report on Form 8-K filed by Charter Communications, Inc. on February 6, 2017 \(File No. 001-33664\)\).](#)
- 10.29 [Exchange and Registration Rights Agreement, dated February 6, 2017, relating to the 5.125% Senior Notes due 2027, among CCO Holdings, LLC, CCO Holdings Capital Corp., and Merrill Lynch, Pierce, Fenner & Smith Incorporated, Citigroup Global Markets Inc., Credit Suisse Securities \(USA\) LLC, Deutsche Bank Securities Inc., Goldman, Sachs & Co., UBS Securities LLC, and Wells Fargo Securities, LLC, as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on February 6, 2017 \(File No. 001-33664\)\).](#)
- 10.30 [Exchange and Registration Rights Agreement, dated March 29, 2017, relating to the 5.125% Senior Notes due 2027, among CCO Holdings, LLC, CCO Holdings Capital Corp., and Deutsche Bank Securities Inc., Merrill Lynch, Pierce, Fenner & Smith Incorporated, Citigroup Global Markets Inc., Credit Suisse Securities \(USA\) LLC, Goldman, Sachs & Co., UBS Securities LLC, and Wells Fargo Securities, LLC, as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on March 31, 2017 \(File No. 001-33664\)\).](#)
- 10.31 [Fifth Supplemental Indenture, dated as of April 20, 2017, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., the guarantors party thereto and The Bank of New York Mellon Trust Company, N.A., as trustee and collateral agent \(incorporated by reference to Exhibit 4.3 to the current report on Form 8-K filed by Charter Communications, Inc. on April 26, 2017 \(File No. 001-33664\)\).](#)
- 10.32 [Exchange and Registration Rights Agreement, dated April 20, 2017, relating to the 5.125% Senior Notes due 2027, among CCO Holdings, LLC, CCO Holdings Capital Corp. and Citigroup Global Markets Inc., as a representative of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on April 26, 2017 \(File No. 001-33664\)\).](#)
- 10.33 [Exchange and Registration Rights Agreement, dated April 20, 2017, relating to the 5.375% Senior Notes due 2047, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., the guarantors party thereto and Citigroup Global Markets Inc., as representative of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed by Charter Communications, Inc. on April 26, 2017 \(File No. 001-33664\)\).](#)

- 10.34 [Sixth Supplemental Indenture, dated as of July 6, 2017, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., the guarantors party thereto and The Bank of New York Mellon Trust Company, N.A., as trustee and collateral agent \(incorporated by reference to Exhibit 4.3 to the current report on Form 8-K filed by Charter Communications, Inc. on July 12, 2017 \(File No. 001-33664\)\).](#)
- 10.35 [Exchange and Registration Rights Agreement, dated July 6, 2017, relating to the 3.750% Senior Notes due 2028, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., the guarantors party thereto and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on July 12, 2017 \(File No. 001-33664\)\).](#)
- 10.36 [Exchange and Registration Rights Agreement, dated July 6, 2017, relating to the 5.375% Senior Notes due 2047, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., the guarantors party thereto and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed by Charter Communications, Inc. on July 12, 2017 \(File No. 001-33664\)\).](#)
- 10.37 [Fourth Supplemental Indenture, dated as of August 8, 2017, among CCO Holdings, LLC, CCO Holdings Capital Corp. and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed by Charter Communications, Inc. on August 14, 2017 \(File No. 001-33664\)\).](#)
- 10.38 [Exchange and Registration Rights Agreement, dated August 8, 2017, relating to the 5.000% Senior Notes due 2028, among CCO Holdings, LLC, CCO Holdings Capital Corp. and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on August 14, 2017 \(File No. 001-33664\)\).](#)
- 10.39 [Seventh Supplemental Indenture, dated as of September 18, 2017, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., the guarantors party thereto and The Bank of New York Mellon Trust Company, N.A., as trustee and collateral agent \(incorporated by reference to Exhibit 4.3 to the current report on Form 8-K filed by Charter Communications, Inc. on September 21, 2017 \(File No. 001-33664\)\).](#)
- 10.40 [Exchange and Registration Rights Agreement, dated September 18, 2017, relating to the 4.200% Senior Secured Notes due 2028, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., the guarantors party thereto and Merrill Lynch, Pierce, Fenner & Smith Incorporated and Citigroup Global Markets Inc., as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on September 21, 2017 \(File No. 001-33664\)\).](#)
- 10.41 [Exchange and Registration Rights Agreement, dated September 18, 2017, relating to the 5.375% Senior Secured Notes due 2047, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., the guarantors party thereto and Merrill Lynch, Pierce, Fenner & Smith Incorporated and Citigroup Global Markets Inc., as representatives of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed by Charter Communications, Inc. on September 21, 2017 \(File No. 001-33664\)\).](#)
- 10.42 [Fifth Supplemental Indenture, dated as of October 17, 2017, among CCO Holdings, LLC, CCO Holdings Capital Corp. and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.3 to the current report on Form 8-K filed by Charter Communications, Inc. on October 20, 2017 \(File No. 001-33664\)\).](#)
- 10.43 [Exchange and Registration Rights Agreement, dated October 17, 2017, relating to the 5.000% Senior Notes due 2028, among CCO Holdings, LLC, CCO Holdings Capital Corp. and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on October 20, 2017 \(File No. 001-33664\)\).](#)
- 10.44 [Exchange and Registration Rights Agreement, dated October 17, 2017, relating to the 4.000% Senior Notes due 2023, among CCO Holdings, LLC, CCO Holdings Capital Corp. and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the several Purchasers \(as defined therein\) \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed by Charter Communications, Inc. on October 20, 2017 \(File No. 001-33664\)\).](#)
- 10.45 [Eighth Supplemental Indenture, dated as of December 21, 2017, among Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., CCO Holdings, LLC, the subsidiary guarantor parties thereto and The Bank of New York Mellon Trust Company, N.A., as trustee \(incorporated by reference to Exhibit 4.5 to the current report on Form S-3 filed by Charter Communications, Inc. on December 22, 2017 \(File No. 333-222241\)\).](#)
- 10.46 Indenture, dated as of April 30, 1992 (the "TWCE Indenture"), as amended by the First Supplemental Indenture, dated as of June 30, 1992, among Time Warner Entertainment Company, L.P. ("TWE"), Time Warner Companies, Inc. ("TWCI"), certain of TWCI's subsidiaries that are parties thereto and The Bank of New York, as Trustee (incorporated herein by reference to Exhibits 10(g) and 10(h) to TWCI's current report on Form 8-K dated June 26, 1992 and filed with the SEC on July 15, 1992 (File No. 1-8637)). (P)

- 10.47 Second Supplemental Indenture to the TWCE Indenture, dated as of December 9, 1992, among TWE, TWCI, certain of TWCI's subsidiaries that are parties thereto and The Bank of New York, as Trustee (incorporated herein by reference to Exhibit 4.2 to Amendment No. 1 to TWE's Registration Statement on Form S-4 dated and filed with the SEC on October 25, 1993 (Registration No. 33-67688) (the "TWE October 25, 1993 Registration Statement")). (P)
- 10.48 Third Supplemental Indenture to the TWCE Indenture, dated as of October 12, 1993, among TWE, TWCI, certain of TWCI's subsidiaries that are parties thereto and The Bank of New York, as Trustee (incorporated herein by reference to Exhibit 4.3 to the TWE October 25, 1993 Registration Statement). (P)
- 10.49 Fourth Supplemental Indenture to the TWCE Indenture, dated as of March 29, 1994, among TWE, TWCI, certain of TWCI's subsidiaries that are parties thereto and The Bank of New York, as Trustee (incorporated herein by reference to Exhibit 4.4 to TWE's Annual Report on Form 10-K for the year ended December 31, 1993 and filed with the SEC on March 30, 1994 (File No. 1-12878)). (P)
- 10.5 Fifth Supplemental Indenture to the TWCE Indenture, dated as of December 28, 1994, among TWE, TWCI, certain of TWCI's subsidiaries that are parties thereto and The Bank of New York, as Trustee (incorporated herein by reference to Exhibit 4.5 to TWE's Annual Report on Form 10-K for the year ended December 31, 1994 and filed with the SEC on March 30, 1995 (File No. 1-12878)). (P)
- 10.51 [Sixth Supplemental Indenture to the TWCE Indenture, dated as of September 29, 1997, among TWE, TWCI, certain of TWCI's subsidiaries that are parties thereto and The Bank of New York, as Trustee \(incorporated herein by reference to Exhibit 4.7 to Historic TW Inc.'s \("Historic TW"\) Annual Report on Form 10-K for the year ended December 31, 1997 and filed with the SEC on March 25, 1998 \(File No. 1-12259\) \(the "Time Warner 1997 Form 10-K"\).](#)
- 10.52 [Seventh Supplemental Indenture to the TWCE Indenture, dated as of December 29, 1997, among TWE, TWCI, certain of TWCI's subsidiaries that are parties thereto and The Bank of New York, as Trustee \(incorporated herein by reference to Exhibit 4.8 to the Time Warner 1997 Form 10-K\).](#)
- 10.53 [Eighth Supplemental Indenture to the TWCE Indenture, dated as of December 9, 2003, among Historic TW, TWE, Warner Communications Inc. \("WCI"\), American Television and Communications Corporation \("ATC"\), TWC and The Bank of New York, as Trustee \(incorporated herein by reference to Exhibit 4.10 to Time Warner Inc.'s \("Time Warner"\) Annual Report on Form 10-K for the year ended December 31, 2003 \(File No. 1-15062\)\).](#)
- 10.54 [Ninth Supplemental Indenture to the TWCE Indenture, dated as of November 1, 2004, among Historic TW, TWE, Time Warner NY Cable Inc., WCI, ATC, TWC and The Bank of New York, as Trustee \(incorporated herein by reference to Exhibit 4.1 to Time Warner's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004 \(File No. 1-15062\)\).](#)
- 10.55 [Tenth Supplemental Indenture to the TWCE Indenture, dated as of October 18, 2006, among Historic TW, TWE, TW NY Cable Holding Inc. \("TW NY"\), Time Warner NY Cable LLC \("TW NY Cable"\), TWC, WCI, ATC and The Bank of New York, as Trustee \(incorporated herein by reference to Exhibit 4.1 to Time Warner's current report on Form 8-K dated and filed October 18, 2006 \(File No. 1-15062\)\).](#)
- 10.56 [Eleventh Supplemental Indenture to the TWCE Indenture, dated as of November 2, 2006, among TWE, TW NY, TWC and The Bank of New York, as Trustee \(incorporated herein by reference to Exhibit 99.1 to Time Warner's current report on Form 8-K dated and filed November 2, 2006 \(File No. 1-15062\)\).](#)
- 10.57 [Twelfth Supplemental Indenture to the TWCE Indenture, dated as of September 30, 2012, among Time Warner Cable Enterprises LLC \("TWCE"\), TWC, TW NY, Time Warner Cable Internet Holdings II LLC \("TWC Internet Holdings II"\) and The Bank of New York Mellon, as trustee, supplementing the Indenture dated April 30, 1992, as amended \(incorporated herein by reference to Exhibit 4.2 to TWC's current report on Form 8-K dated September 30, 2012 and filed with the SEC on October 1, 2012 \(File No. 1-33335\) \(the "TWC September 30, 2012 Form 8-K"\).](#)
- 10.58 [Thirteenth Supplemental Indenture, dated as of May 18, 2016, by and among Time Warner Cable Enterprises LLC, the guarantors party thereto and The Bank of New York Mellon \(formerly known as The Bank of New York\), as trustee \(incorporated by reference to Exhibit 4.4 to the current report on Form 8-K filed by Charter Communications, Inc. on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.59 [Indenture, dated as of April 9, 2007 \(the "TWC Indenture"\), among TWC, TW NY, TWE and The Bank of New York, as trustee \(incorporated herein by reference to Exhibit 4.1 to TWC's current report on Form 8-K dated April 4, 2007 and filed with the SEC on April 9, 2007 \(File No. 1-33335\) \(the "TWC April 4, 2007 Form 8-K"\).](#)
- 10.60 [First Supplemental Indenture to the TWC Indenture, dated as of April 9, 2007, among TWC, TW NY, TWE and The Bank of New York, as trustee \(incorporated herein by reference to Exhibit 4.2 to the TWC April 4, 2007 Form 8-K\).](#)
- 10.61 [Second Supplemental Indenture to the TWC Indenture, dated as of September 30, 2012, among TWC, TW NY, TWCE, TWC Internet Holdings II and The Bank of New York Mellon, as trustee, supplementing the Indenture dated April 9, 2007, as amended \(incorporated herein by reference to Exhibit 4.1 to the TWC September 30, 2012 Form 8-K\).](#)

- 10.62 [Third Supplemental Indenture, dated as of May 18, 2016, by and among Time Warner Cable Inc., TWC NewCo LLC and The Bank of New York Mellon \(formerly known as The Bank of New York\), as trustee \(incorporated by reference to Exhibit 4.5 to the current report on Form 8-K filed by Charter Communications, Inc. on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.63 [Fourth Supplemental Indenture, dated as of May 18, 2016, by and among TWC NewCo LLC, the guarantors party thereto and The Bank of New York Mellon \(formerly known as The Bank of New York\), as trustee \(incorporated by reference to Exhibit 4.6 to the current report on Form 8-K filed by Charter Communications, Inc. on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.64 [Form of TWC 5.85% Exchange Notes due 2017 \(included as Exhibit B to the First Supplemental Indenture incorporated herein by reference to Exhibit 4.2 to the TWC April 4, 2007 Form 8-K\).](#)
- 10.65 [Form of TWC 6.55% Exchange Debentures due 2037 \(included as Exhibit C to the First Supplemental Indenture incorporated herein by reference to Exhibit 4.2 to the TWC April 4, 2007 Form 8-K\).](#)
- 10.66 [Form of TWC 6.75% Notes due 2018 \(incorporated herein by reference to Exhibit 4.2 to TWC's current report on Form 8-K dated June 16, 2008 and filed with the SEC on June 19, 2008 \(File No. 1-33335\) \(the "TWC June 16, 2008 Form 8-K"\).](#)
- 10.67 [Form of TWC 7.30% Debentures due 2038 \(incorporated herein by reference to Exhibit 4.3 to the TWC June 16, 2008 Form 8-K\).](#)
- 10.68 [Form of TWC 8.75% Notes due 2019 \(incorporated herein by reference to Exhibit 4.2 to TWC's current report on Form 8-K dated November 13, 2008 and filed with the SEC on November 18, 2008\) \(File No. 1-33335\).](#)
- 10.69 [Form of TWC 8.25% Notes due 2019 \(incorporated herein by reference to Exhibit 4.2 to TWC's current report on Form 8-K dated March 23, 2009 and filed with the SEC on March 26, 2009 \(File No. 1-33335\)\).](#)
- 10.70 [Form of TWC 6.75% Debentures due 2039 \(incorporated herein by reference to Exhibit 4.1 to TWC's current report on Form 8-K dated June 24, 2009 and filed with the SEC on June 29, 2009 \(File No. 1-33335\)\).](#)
- 10.71 [Form of TWC 3.5% Notes due 2015 \(incorporated herein by reference to Exhibit 4.1 to TWC's current report on Form 8-K dated December 8, 2009 and filed with the SEC on December 11, 2009 \(File No. 1-33335\) \(the "TWC December 8, 2009 Form 8-K"\).](#)
- 10.72 [Form of TWC 5.0% Notes due 2020 \(incorporated herein by reference to Exhibit 4.2 to the TWC December 8, 2009 Form 8-K\).](#)
- 10.73 [Form of TWC 4.125% Notes due 2021 \(incorporated herein by reference to Exhibit 4.1 to TWC's current report on Form 8-K dated November 9, 2010 and filed with the SEC on November 15, 2010 \(File No. 1-33335\) \(the "TWC November 9, 2010 Form 8-K"\).](#)
- 10.74 [Form of TWC 5.875% Debentures due 2040 \(incorporated herein by reference to Exhibit 4.2 to the TWC November 9, 2010 Form 8-K\).](#)
- 10.75 [Form of TWC 5.75% Note due 2031 \(incorporated herein by reference to Exhibit 4.1 to TWC's current report on Form 8-K dated and filed with the SEC on May 26, 2011 \(File No. 1-33335\)\).](#)
- 10.76 [Form of TWC 4% Note due 2021 \(incorporated herein by reference to Exhibit 4.1 to TWC's current report on Form 8-K dated September 7, 2011 and filed with the SEC on September 12, 2011 \(File No. 1-33335\) \(the "TWC September 7, 2011 Form 8-K"\).](#)
- 10.77 [Form of TWC 5.5% Debenture due 2041 \(incorporated herein by reference to Exhibit 4.2 to the TWC September 7, 2011 Form 8-K\).](#)
- 10.78 [Form of TWC 4.5% Debenture due 2042 \(incorporated herein by reference to Exhibit 4.1 to TWC's current report on Form 8-K dated August 7, 2012 and filed with the SEC on August 10, 2012 \(File No. 1-33335\)\).](#)
- 10.79 [Form of TWC 5.25% Note due 2042 \(incorporated herein by reference to Exhibit 4.1 to TWC's current report on Form 8-K dated and filed with the SEC on June 27, 2012 \(File No. 1-33335\)\).](#)
- 10.80 [Form of 5.500% Senior Notes due 2026 \(incorporated herein by reference to Exhibit 10.1 to the current report on Form 8-K of Charter Communications, Inc. filed April 27, 2016\).](#)
- 10.81 [Amendment No. 5, dated as of August 24, 2015, to the Amended and Restated Credit Agreement dated as of April 11, 2012 between Charter Communications Operating, LLC, as borrower, CCO Holdings, LLC, as guarantor, and Bank of America, N.A., as administrative agent \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K of Charter Communications, Inc. filed on August 28, 2015 \(File No. 001-33664\)\).](#)
- 10.82 [Incremental Activation Notice, dated as of August 24, 2015 delivered by Charter Communications Operating, LLC, CCO Holdings, LLC, the subsidiary guarantors party thereto, each Term H Lender party thereto to, each Term I Lender party thereto and Bank of America, N.A., as Administrative Agent under the Amended and Restated Credit Agreement, dated as of April 11, 2012 \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K of Charter Communications, Inc. filed on August 28, 2015 \(File No. 001-33664\)\).](#)
- 10.83 [Escrow Credit Agreement, dated as of August 24, 2015, between CCO Safari III, LLC, as borrower, and Bank of America, N.A., as administrative agent, and the lenders party thereto \(incorporated by reference to Exhibit 10.3 to the current report on Form 8-K of Charter Communications, Inc. filed on August 28, 2015 \(File No. 001-33664\)\).](#)

- 10.84(a) [Restatement Agreement dated as of May 18, 2016, by and among Charter Communications Operating, LLC, CCO Holdings, LLC, the subsidiary guarantors party thereto, Bank of America, N.A., as administrative agent and the lenders party thereto \(incorporated by reference to Exhibit 10.5 to the current report on Form 8-K of Charter Communications, Inc. filed on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.84(b) [Amendment No. 1 dated as of December 23, 2016, to the Amended and Restated Credit Agreement dated as of March 18, 1999, as amended and restated on May 18, 2016, by and among Chart Communications Operating, LLC, CCO Holdings, LLC, the Lenders Party thereto and Bank of America, N.A., as Administrative Agent \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K of Charter Communications, Inc. filed on December 30, 2016 \(File No. 001-33664\)\).](#)
- 10.84(c) [Restatement Agreement dated as of December 21, 2017 to the Amended and Restated Credit Agreement dated as of March 18, 1999, as amended and restated on May 18, 2016, as amended by Amendment No. 1, dated as of December 23, 2016 and as further amended by that certain Incremental Activation Notice No. 1, dated as of January 19, 2017, by and among Charter Communications Operating, LLC, CCO Holdings, LLC, the Lenders Party thereto and Bank of America, N.A., as Administrative Agent \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K of Charter Communications, Inc. filed on December 28, 2017 \(File No. 001-33664\)\).](#)
- 10.84(d) [Incremental Activation Notice, dated as of May 18, 2016, by and among Charter Communications Operating, LLC, CCO Holdings, LLC, the subsidiary guarantors party thereto, Bank of America, N.A., as administrative agent and the lenders party thereto \(incorporated by reference to Exhibit 10.4 to the current report on Form 8-K of Charter Communications, Inc. filed on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.85 [Amended and Restated Guarantee and Collateral Agreement made by CCO Holdings, LLC, Charter Communications Operating, LLC and certain of its subsidiaries in favor of Bank of America, N.A., as administrative agent, as amended and restated as of March 31, 2010 \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K of Charter Communications, Inc. filed on April 6, 2010 \(File No. 001-33664\)\).](#)
- 10.86 [Collateral Agreement, dated as of May 18, 2016, by Charter Communications Operating, LLC, Charter Communications Operating Capital Corp. and the other grantors party thereto in favor of The Bank of New York Mellon Trust Company, N.A., as collateral agent \(incorporated by reference to Exhibit 10.6 to the current report on Form 8-K of Charter Communications, Inc. filed on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.87 [First Lien Intercreditor Agreement, dated as of May 18, 2016, by and among Charter Communications Operating, LLC, the other grantors party thereto, Bank of America, N.A., as credit agreement collateral agent for the credit agreement secured parties, The Bank of New York Mellon Trust Company, N.A., as notes collateral agent for the indenture secured parties, and each additional agent from time to time party thereto \(incorporated by reference to Exhibit 10.7 to the current report on Form 8-K of Charter Communications, Inc. filed on May 24, 2016 \(File No. 001-33664\)\).](#)
- 10.88 [Joinder Agreement to Registration Rights Agreement, dated as of May 18, 2016, by and among CCO Safari II, LLC, CCH II, LLC, Charter Communications Operating, LLC, Charter Communications Operating Capital Corp., CCO Holdings, LLC and the other guarantors party thereto \(incorporated herein by reference to Exhibit 10.1 to the current report on Form 8-K of Charter Communications, Inc. filed May 24, 2016\).](#)
- 10.89 [Joinder Agreement to Registration Rights Agreement, dated as of May 18, 2016, by CCO Holdings, LLC and CCO Holdings Capital Corp \(incorporated herein by reference to Exhibit 10.2 to the current report on Form 8-K of Charter Communications, Inc. filed May 24, 2016\).](#)
- 10.90 [Escrow Assumption Agreement, dated as of May 18, 2016, by and among CCO Safari III, LLC, Charter Communications Operating, LLC, Bank of America, N.A., as escrow administrative agent and Bank of America, N.A., as administrative agent \(incorporated herein by reference to Exhibit 10.3 to the current report on Form 8-K of Charter Communications, Inc. filed May 24, 2016\).](#)
- 10.91 [Amended and Restated Limited Liability Company Agreement of Charter Communications Holdings, LLC, dated as of May 18, 2016, by and among Charter Holdings, Charter, CCH II, LLC, Advance/Newhouse Partnership and the other party or parties thereto \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K of Charter Communications, Inc. filed on May 19, 2016 \(File No. 001-33664\)\).](#)
- 10.92 [Exchange Agreement, dated as of May 18, 2016, by and among Charter Holdings, Charter, Advance/Newhouse Partnership and the other party or parties thereto \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K of Charter Communications, Inc. filed on May 19, 2016 \(File No. 001-33664\)\).](#)
- 10.93 [Registration Rights Agreement, dated as of May 18, 2016, by and among Charter, Advance/Newhouse Partnership and Liberty Broadband \(incorporated by reference to Exhibit 10.3 to the current report on Form 8-K of Charter Communications, Inc. filed on May 19, 2016 \(File No. 001-33664\)\).](#)
- 10.94 [Tax Receivables Agreement, dated as of May 18, 2016, by and among Charter, Advance/Newhouse Partnership and the other party or parties thereto \(incorporated by reference to Exhibit 10.4 to the current report on Form 8-K of Charter Communications, Inc. filed on May 19, 2016 \(File No. 001-33664\)\).](#)
- 10.95 [Wireless Operational Cooperation Agreement dated as of May 5, 2017 between Charter Communications, Inc. and Comcast Corporation \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on May 8, 2017 \(File No. 001-33664\)\).](#)

- 10.96+ [Charter Communications, Inc. Executive Bonus Plan \(incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of Charter Communications, Inc. filed on May 8, 2012 \(File No. 001-33664\)\).](#)
- 10.97+ [Charter Communications, Inc. 2016 Executive Incentive Performance Plan \(incorporated by reference to Appendix A to the proxy statement for the Charter Communications, Inc. 2016 Annual Meeting of Stockholders filed March 17, 2016 \(File No. 001-33664\)\).](#)
- 10.98+ [Charter Communications, Inc. Amended and Restated 2009 Stock Incentive Plan \(incorporated by reference to Exhibit 10.6 to the Current Report on Form 8-K of Charter Communications, Inc. filed on May 19, 2016 \(File No. 001-33664\)\).](#)
- 10.99+ [Amendment to the Charter Communications, Inc. Amended and Restated 2009 Stock Incentive Plan, dated as of October 25, 2016 \(incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K of Charter Communications, Inc. filed on October 28, 2016 \(File No. 001-33664\)\).](#)
- 10.100+ [Charter Communications, Inc.'s Amended and Restated Supplemental Deferred Compensation Plan, dated as of September 1, 2011\(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on September 2, 2011 \(File No. 001-33664\)\).](#)
- 10.101+ [Form of Non-Qualified Time Vesting Stock Option Agreement dated April 26, 2011\(incorporated by reference to Exhibit 10.3 to the quarterly report on Form 10-Q filed by Charter Communications, Inc. on August 2, 2011 \(File No. 001-33664\)\).](#)
- 10.102+ [Form of Non-Qualified Price Vesting Stock Option Agreement dated April 26, 2011\(incorporated by reference to Exhibit 10.2 to the quarterly report on Form 10-Q filed by Charter Communications, Inc. on August 2, 2011 \(File No. 001-33664\)\).](#)
- 10.103+ [Form of Notice of LTIP Award Agreement Changes \(RSU Awards\).\(incorporated by reference to Exhibit 10.3 to the current report on Form 8-K filed by Charter Communications, inc. on January 22, 2014 \(File No. 001-33664\)\).](#)
- 10.104+ [Form of Notice of LTIP Award Agreement Changes \(Time-Vesting Option Awards\).\(incorporated by reference to Exhibit 10.4 to the current report on Form 8-K filed by Charter Communications, Inc. on January 22, 2014 \(File No. 001-33664\)\).](#)
- 10.105+ [Form of Notice of LTIP Award Agreement Changes \(Restricted Stock Awards\) \(incorporated by reference to Exhibit 10.5 to the current report on Form 8-K filed by Charter Communications, inc. on January 22, 2014 \(File No. 001-33664\)\).](#)
- 10.106+ [Form of Notice of LTIP Award Agreement Changes \(Performance-Vesting Option Awards\) \(incorporated by reference to Exhibit 10.6 to the current report on Form 8-K filed by Charter Communications, Inc. on January 22, 2014 \(File No. 001-33664\)\).](#)
- 10.107+ [Form of Stock Option Agreement dated January 15, 2014 \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on January 22, 2014 \(File No. 001-33664\)\).](#)
- 10.108+ [Form of Restricted Stock Unit Agreement dated January 15, 2014 \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed by Charter Communications, Inc. on January 22, 2014 \(File No. 001-33664\)\).](#)
- 10.109(a)+ [Employment Agreement between Thomas Rutledge and Charter Communications, Inc., dated as of May 17, 2016 \(incorporated by reference to Exhibit 10.5 to the current report on Form 8-K of Charter Communications, Inc. filed on May 19, 2016 \(File No. 001-33664\)\).](#)
- 10.109(b)+ [Time-Vesting Stock Option Agreement dated as of December 19, 2011 by and between Charter Communications, Inc. and Thomas M. Rutledge \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed by Charter Communications, Inc. on December 19, 2011 \(File No. 001-33664\)\).](#)
- 10.109(c)+ [Performance-Vesting Stock Option Agreement dated as of December 19, 2011 by and between Charter Communications, Inc. and Thomas M. Rutledge \(incorporated by reference to Exhibit 10.4 to the current report on Form 8-K filed by Charter Communications, Inc. on December 19, 2011 \(File No. 001-33664\)\).](#)
- 10.110(a)+ [Employment Agreement dated effective as of November 2, 2016 by and between Charter Communications, Inc. and John Bickham \(incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of Charter Communications, Inc. filed on November 3, 2016 \(File No. 001-33664\)\).](#)
- 10.110(b)+ [Time-Vesting Stock Option Agreement dated as of April 30, 2012 by and between Charter Communications, Inc. and John Bickham \(incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed by Charter Communications, Inc. on May 1, 2012 \(File No. 001-33664\)\).](#)
- 10.110(c)+ [Performance-Vesting Stock Option Agreement dated as of April 30, 2012 by and between Charter Communications, Inc. and John Bickham \(incorporated by reference to Exhibit 10.4 to the current report on Form 8-K filed by Charter Communications, Inc. on May 1, 2012 \(File No. 001-33664\)\).](#)
- 10.111+ [Form of First Amended and Restated Indemnification Agreement \(incorporated by reference to Exhibit 10.3 to the quarterly report on Form 10-Q of Charter Communications, Inc. filed on August 6, 2013 \(File No. 001-33664\)\).](#)
- 10.112+ [Amendment to the Employment Agreement, dated as of February 11, 2016, by and between Charter Communications, Inc. and Thomas Rutledge \(incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed by Charter Communications, Inc. on February 12, 2016 \(File No. 001-33664\)\).](#)

- 10.113+ [Time Warner Cable Inc. 2006 Stock Incentive Plan \(incorporated herein by reference to Exhibit 10.45 to TWC's current report on Form 8-K dated February 13, 2007 and filed with the SEC on February 13, 2007\).](#)
- 10.114+ [Time Warner Cable Inc. 2006 Stock Incentive Plan, as amended, effective March 12, 2009 \(incorporated herein by reference to Exhibit 10.1 to TWC's Quarterly Report on Form 10-Q for the quarter ended March 31, 2009\).](#)
- 10.115+ [Time Warner Cable Inc. 2011 Stock Incentive Plan \(incorporated herein by reference to Annex A to TWC's definitive Proxy Statement dated April 6, 2011 and filed with the SEC on April 6, 2011\).](#)
- 10.116+ [Form of Amendment to Nonqualified Stock Option Agreements Granted Under the Charter Communications, Inc. Amended and Restated 2009 Stock Incentive Plan, dated as of October 25, 2016 \(incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K of Charter Communications, Inc. filed on October 28, 2016 \(File No. 001-33664\)\).](#)
- 10.117+ [Employment Agreement dated effective as of November 2, 2016 by and between Charter Communications, Inc. and Christopher L. Winfrey \(incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q of Charter Communications, Inc. filed on November 3, 2016 \(File No. 001-33664\)\).](#)
- 10.118+ [Employment Agreement dated effective as of November 2, 2016 by and between Charter Communications, Inc. and Jonathan Hargis \(incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q of Charter Communications, Inc. filed on November 3, 2016 \(File No. 001-33664\)\).](#)
- 10.119+ [Employment Agreement dated as of November 10, 2016 by and between Charter Communications, Inc. and David Ellen \(incorporated by reference to Exhibit 10.101 to the Annual Report on Form 10-K of Charter Communications, Inc. filed on February 16, 2017 \(File No. 001-33664\)\).](#)
- 10.120+ [Form of Performance-Vesting Stock Option Agreement granted to certain executive officers in 2016 under the Charter Communications, Inc. Amended and Restated 2009 Stock Incentive Plan \(incorporated by reference to Exhibit 10.102 to the Annual Report on Form 10-K of Charter Communications, Inc. filed on February 16, 2017 \(File No. 001-33664\)\).](#)
- 10.121+ [Form of Performance-Vesting Restricted Stock Unit Agreement granted to certain executive officers in 2016 under the Charter Communications, Inc. Amended and Restated 2009 Stock Incentive Plan \(incorporated by reference to Exhibit 10.103 to the Annual Report on Form 10-K of Charter Communications, Inc. filed on February 16, 2017 \(File No. 001-33664\)\).](#)
- 10.122 [Letter Agreement, dated as of December 23, 2016, between Charter Communications, Inc. and Advance/Newhouse Partnership \(incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K of Charter Communications, Inc. filed on December 28, 2016 \(File No. 001-33664\)\).](#)
- 10.123 [Amendment to Letter Agreement, dated as of December 21, 2017, between Charter Communications, Inc. and Advance/Newhouse Partnership \(incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K of Charter Communications, Inc. filed on December 22, 2017 \(File No. 001-33664\)\).](#)
- 12.1* [Computation of Ratio of Earnings to Fixed Charges.](#)
- 31.1* [Certificate of Chief Executive Officer pursuant to Rule 13a-14\(a\)/Rule 15d-14\(a\) under the Securities Exchange Act of 1934.](#)
- 31.2* [Certificate of Chief Financial Officer pursuant to Rule 13a-14\(a\)/Rule 15d-14\(a\) under the Securities Exchange Act of 1934.](#)
- 32.1* [Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 \(Chief Executive Officer\).](#)
- 32.2* [Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 \(Chief Financial Officer\).](#)
- 101 The following financial information from the Annual Report of CCO Holdings, LLC and CCO Holdings Capital Corp. on Form 10-K for the year ended December 31, 2017, filed with the SEC on February 13, 2018, formatted in eXtensible Business Reporting Language: (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Comprehensive Income, (iv) Consolidated Statements of Changes in Member's Equity, (v) Consolidated Statements of Cash Flows, and (vi) Notes to Consolidated Financial Statements.

* Filed herewith.

+ Management compensatory plan or arrangement

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Report of Independent Registered Public Accounting Firm

To the Manager and the Member of
CCO Holdings, LLC and CCO Holdings Capital Corp.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of CCO Holdings, LLC and CCO Holdings Capital Corp. and subsidiaries (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income, member's equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

(signed) KPMG LLP

We have served as the Company's auditor since 2003.

St. Louis, Missouri
February 13, 2018

CCO HOLDINGS, LLC AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(dollars in millions)

ASSETS	December 31,	
	2017	2016
CURRENT ASSETS:		
Cash and cash equivalents	\$ 330	\$ 1,324
Accounts receivable, less allowance for doubtful accounts of \$113 and \$124, respectively	1,611	1,387
Prepaid expenses and other current assets	243	300
Total current assets	2,184	3,011
INVESTMENT IN CABLE PROPERTIES:		
Property, plant and equipment, net of accumulated depreciation of \$18,049 and \$11,085, respectively	33,552	32,718
Customer relationships, net	11,951	14,608
Franchises	67,319	67,316
Goodwill	29,554	29,509
Total investment in cable properties, net	142,376	144,151
OTHER NONCURRENT ASSETS	1,133	1,157
Total assets	\$ 145,693	\$ 148,319
LIABILITIES AND MEMBER'S EQUITY		
CURRENT LIABILITIES:		
Accounts payable and accrued liabilities	\$ 8,141	\$ 6,897
Payables to related party	635	621
Current portion of long-term debt	2,045	2,028
Total current liabilities	10,821	9,546
LONG-TERM DEBT	68,186	59,719
LOANS PAYABLE - RELATED PARTY	888	640
DEFERRED INCOME TAXES	32	25
OTHER LONG-TERM LIABILITIES	2,184	2,526
MEMBER'S EQUITY:		
Member's equity	63,559	75,845
Accumulated other comprehensive loss	(1)	(7)
Total CCO Holdings member's equity	63,558	75,838
Noncontrolling interests	24	25
Total member's equity	63,582	75,863
Total liabilities and member's equity	\$ 145,693	\$ 148,319

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

CCO HOLDINGS, LLC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(dollars in millions)

	Year Ended December 31,		
	2017	2016	2015
REVENUES	\$ 41,578	\$ 29,003	\$ 9,754
COSTS AND EXPENSES:			
Operating costs and expenses (exclusive of items shown separately below)	26,560	18,670	6,426
Depreciation and amortization	10,579	6,902	2,125
Other operating expenses, net	444	722	89
	<u>37,583</u>	<u>26,294</u>	<u>8,640</u>
Income from operations	<u>3,995</u>	<u>2,709</u>	<u>1,114</u>
OTHER EXPENSES:			
Interest expense, net	(3,115)	(2,123)	(840)
Loss on extinguishment of debt	(40)	(111)	(126)
Gain (loss) on financial instruments, net	69	89	(4)
Other pension benefits	1	899	—
Other expense, net	(4)	(3)	—
	<u>(3,089)</u>	<u>(1,249)</u>	<u>(970)</u>
Income before income taxes	906	1,460	144
Income tax benefit (expense)	(23)	(3)	210
Consolidated net income	<u>883</u>	<u>1,457</u>	<u>354</u>
Less: Net income attributable to noncontrolling interests	(1)	(1)	(46)
Net income attributable to CCO Holdings member	<u>\$ 882</u>	<u>\$ 1,456</u>	<u>\$ 308</u>

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

CCO HOLDINGS, LLC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(dollars in millions)

	Year Ended December 31,		
	2017	2016	2015
Consolidated net income	\$ 883	\$ 1,457	\$ 354
Net impact of interest rate derivative instruments	5	8	9
Foreign currency translation adjustment	1	(2)	—
Consolidated comprehensive income	889	1,463	363
Less: Comprehensive income attributable to noncontrolling interests	(1)	(1)	(46)
Comprehensive income attributable to CCO Holdings member	\$ 888	\$ 1,462	\$ 317

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

CCO HOLDINGS, LLC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN MEMBER'S EQUITY
(dollars in millions)

	Member's Equity	Accumulated Other Comprehensive Loss	Total CCO Holdings Member's Equity	Non- controlling Interests	Total Member's Equity
BALANCE, December 31, 2014	\$ 534	\$ (22)	\$ 512	\$ 436	\$ 948
Net income	308	—	308	46	354
Stock compensation expense	78	—	78	—	78
Distributions to parent	(82)	—	(82)	—	(82)
Contributions from parent	15	—	15	—	15
Cancellation of the CC VIII, LLC preferred interest	482	—	482	(482)	—
Changes in accumulated other comprehensive loss, net	—	9	9	—	9
BALANCE, December 31, 2015	1,335	(13)	1,322	—	1,322
Net income	1,456	—	1,456	1	1,457
Stock compensation expense	244	—	244	—	244
Accelerated vesting of equity awards	248	—	248	—	248
Distributions to parent	(4,546)	—	(4,546)	—	(4,546)
Contributions from parent	478	—	478	—	478
Contributions of net assets acquired in the TWC Transaction	87,676	—	87,676	—	87,676
Contributions of net assets acquired in the Bright House Transaction	12,156	—	12,156	—	12,156
Merger of parent companies and the Safari Escrow Entities	(23,202)	—	(23,202)	—	(23,202)
Contribution of noncontrolling interests	—	—	—	24	24
Changes in accumulated other comprehensive loss, net	—	6	6	—	6
BALANCE, December 31, 2016	75,845	(7)	75,838	25	75,863
Net income	882	—	882	1	883
Stock compensation expense	261	—	261	—	261
Accelerated vesting of equity awards	49	—	49	—	49
Distributions to parent	(13,488)	—	(13,488)	—	(13,488)
Contributions from parent	10	—	10	—	10
Distributions to noncontrolling interest	—	—	—	(2)	(2)
Changes in accumulated other comprehensive loss, net	—	6	6	—	6
BALANCE, December 31, 2017	\$ 63,559	\$ (1)	\$ 63,558	\$ 24	\$ 63,582

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

CCO HOLDINGS, LLC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(dollars in millions)

	Year Ended December 31,		
	2017	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES:			
Consolidated net income	\$ 883	\$ 1,457	\$ 354
Adjustments to reconcile consolidated net income to net cash flows from operating activities:			
Depreciation and amortization	10,579	6,902	2,125
Stock compensation expense	261	244	78
Accelerated vesting of equity awards	49	248	—
Noncash interest (income) expense	(371)	(256)	28
Other pension benefits	(1)	(899)	—
Loss on extinguishment of debt	40	111	126
(Gain) loss on financial instruments, net	(69)	(89)	4
Deferred income taxes	7	6	(214)
Other, net	105	(2)	4
Changes in operating assets and liabilities, net of effects from acquisitions and dispositions:			
Accounts receivable	(115)	(161)	10
Prepaid expenses and other assets	118	141	(5)
Accounts payable, accrued liabilities and other	77	940	(14)
Receivables from and payables to related party, including deferred management fees	45	123	61
Net cash flows from operating activities	<u>11,608</u>	<u>8,765</u>	<u>2,557</u>
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchases of property, plant and equipment	(8,681)	(5,325)	(1,840)
Change in accrued expenses related to capital expenditures	820	603	28
Purchases of cable systems, net	(9)	(7)	—
Change in restricted cash and cash equivalents	—	—	3,514
Other, net	(123)	(22)	(12)
Net cash flows from investing activities	<u>(7,993)</u>	<u>(4,751)</u>	<u>1,690</u>
CASH FLOWS FROM FINANCING ACTIVITIES:			
Borrowings of long-term debt	25,276	12,344	4,255
Repayments of long-term debt	(16,507)	(10,521)	(7,826)
Borrowings (repayments) of loans payable - related parties	234	(253)	(581)
Payments for debt issuance costs	(111)	(284)	(24)
Contributions from parent	—	478	15
Distributions to parent	(13,488)	(4,546)	(82)
Distributions to noncontrolling interest	(2)	—	—
Proceeds from termination of interest rate derivatives	—	88	—
Other, net	(11)	(1)	1
Net cash flows from financing activities	<u>(4,609)</u>	<u>(2,695)</u>	<u>(4,242)</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(994)	1,319	5
CASH AND CASH EQUIVALENTS, beginning of period	<u>1,324</u>	<u>5</u>	<u>—</u>
CASH AND CASH EQUIVALENTS, end of period	<u>\$ 330</u>	<u>\$ 1,324</u>	<u>\$ 5</u>
CASH PAID FOR INTEREST	<u>\$ 3,421</u>	<u>\$ 2,200</u>	<u>\$ 841</u>
CASH PAID FOR TAXES	<u>\$ 22</u>	<u>\$ 3</u>	<u>\$ 1</u>

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

CCO HOLDINGS, LLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2017, 2016 AND 2015
(dollars in millions, except where indicated)

1. Organization and Basis of Presentation

Organization

CCO Holdings, LLC (together with its subsidiaries, “CCO Holdings,” or the “Company”) is the second largest cable operator in the United States and a leading broadband communications company providing video, Internet and voice services to residential and business customers. In addition, the Company sells video and online advertising inventory to local, regional and national advertising customers and fiber-delivered communications and managed information technology solutions to larger enterprise customers. The Company also owns and operates regional sports networks and local sports, news and lifestyle channels and sells security and home management services to the residential marketplace.

CCO Holdings is a holding company whose principal assets are the equity interests in its operating subsidiaries. CCO Holdings is a direct subsidiary of CCH I Holdings, LLC (“CCH I”), which is an indirect subsidiary of Charter Communications, Inc. (“Charter”), Charter Communications Holdings, LLC (“Charter Holdings”) and Spectrum Management Holding Company, LLC (“Spectrum Management”). The consolidated financial statements include the accounts of CCO Holdings and all of its subsidiaries where the underlying operations reside. All significant intercompany accounts and transactions among consolidated entities have been eliminated. Charter, Charter Holdings and Spectrum Management have performed financing, cash management, treasury and other services for CCO Holdings on a centralized basis. Changes in member’s equity in the consolidated balance sheets related to these activities have been considered cash receipts (contributions) and payments (distributions) for purposes of the consolidated statements of cash flows and are reflected in financing activities.

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”) and the rules and regulations of the Securities and Exchange Commission (the “SEC”).

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Areas involving significant judgments and estimates include capitalization of labor and overhead costs; depreciation and amortization costs; purchase accounting valuations of assets and liabilities including, but not limited to, property, plant and equipment, intangibles and goodwill; pension benefits; income taxes; contingencies and programming expense. Actual results could differ from those estimates.

Certain prior period amounts have been reclassified to conform with the 2017 presentation.

2. Summary of Significant Accounting Policies

Consolidation

The accompanying consolidated financial statements include the accounts of CCO Holdings and all entities in which CCO Holdings has a controlling interest. The noncontrolling interest on the Company’s balance sheet represents the third-party interest in CV of Viera, LLP, the Company’s consolidated joint venture in a small cable system in Florida. See Note 7. All significant inter-company accounts and transactions among consolidated entities have been eliminated in consolidation.

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. These investments are carried at cost, which approximates market value. Cash and cash equivalents consist primarily of money market funds.

Property, Plant and Equipment

Additions to property, plant and equipment are recorded at cost, including all material, labor and certain indirect costs associated with the construction of cable transmission and distribution facilities. While the Company’s capitalization is based on specific

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activities, once capitalized, costs are tracked on a composite basis by fixed asset category at the cable system level and not on a specific asset basis. For assets that are sold or retired, the estimated historical cost and related accumulated depreciation is removed. Costs associated with the initial placement of the customer drop to the dwelling and the initial placement of outlets within a dwelling along with the costs associated with the initial deployment of customer premise equipment necessary to provide video, Internet or voice services are capitalized. Costs capitalized include materials, direct labor and certain indirect costs. Indirect costs are associated with the activities of the Company's personnel who assist in installation activities and consist of compensation and other costs associated with these support functions. Indirect costs primarily include employee benefits and payroll taxes, vehicle and occupancy costs, and the costs of sales and dispatch personnel associated with capitalizable activities. The costs of disconnecting service and removing customer premise equipment from a dwelling and the costs to reconnect a customer drop or to redeploy previously installed customer premise equipment are charged to operating expense as incurred. Costs for repairs and maintenance are charged to operating expense as incurred, while plant and equipment replacement, including replacement of certain components, betterments, including replacement of cable drops and outlets, are capitalized.

Depreciation is recorded using the straight-line composite method over management's estimate of the useful lives of the related assets as follows:

Cable distribution systems	8-20 years
Customer premise equipment and installations	3-8 years
Vehicles and equipment	4-9 years
Buildings and improvements	15-40 years
Furniture, fixtures and equipment	7-10 years

Asset Retirement Obligations

Certain of the Company's franchise agreements and leases contain provisions requiring the Company to restore facilities or remove equipment in the event that the franchise or lease agreement is not renewed. The Company expects to continually renew its franchise agreements and therefore cannot reasonably estimate any liabilities associated with such agreements. A remote possibility exists that franchise agreements could be terminated unexpectedly, which could result in the Company incurring significant expense in complying with restoration or removal provisions. The Company does not have any significant liabilities related to asset retirements recorded in its consolidated financial statements.

Valuation of Long-Lived Assets

The Company evaluates the recoverability of long-lived assets (e.g., property, plant and equipment and finite-lived intangible assets) to be held and used when events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Such events or changes in circumstances could include such factors as impairment of the Company's indefinite life assets, changes in technological advances, fluctuations in the fair value of such assets, adverse changes in relationships with local franchise authorities, adverse changes in market conditions or a deterioration of current or expected future operating results. If a review indicates that the carrying value of such asset is not recoverable from estimated undiscounted cash flows, the carrying value of such asset is reduced to its estimated fair value. While the Company believes that its estimates of future cash flows are reasonable, different assumptions regarding such cash flows could materially affect its evaluations of asset recoverability. No impairments of long-lived assets to be held and used were recorded in 2017, 2016 and 2015.

Other Noncurrent Assets

Other noncurrent assets primarily include investments, right-of-entry costs and other intangible assets. The Company accounts for its investments in less than majority owned investees under either the equity or cost method. The Company applies the equity method to investments when it has the ability to exercise significant influence over the operating and financial policies of the investee. The Company's share of the investee's earnings (losses) is included in other expense, net in the consolidated statements of operations. The Company monitors its investments for indicators that a decrease in investment value has occurred that is other than temporary. If it has been determined that an investment has sustained an other than temporary decline in value, the investment is written down to fair value with a charge to earnings. Investments acquired are measured at fair value utilizing the acquisition method of accounting. The difference between the fair value and the amount of underlying equity in net assets for most equity method investments is due to previously unrecognized intangible assets at the investee. These amounts are amortized as a component

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of equity earnings (losses), recorded within other expense, net over the estimated useful life of the asset. Right-of-entry costs represent upfront costs incurred related to agreements entered into with multiple dwelling units (“MDUs”) including landlords, real estate companies or owners to gain access to a building in order to market and service customers who reside in the building. Right-of-entry costs are deferred and amortized to amortization expense over the term of the agreement.

Revenue Recognition

Revenues from residential and commercial video, Internet and voice services are recognized when the related services are provided. Advertising sales are recognized at estimated realizable values in the period that the advertisements are broadcast. In some cases, the Company coordinates the advertising sales efforts of other cable operators in a certain market and remits amounts received from customers less an agreed-upon percentage to such cable operator. For those arrangements in which the Company acts as a principal, the Company records the revenues earned from the advertising customer on a gross basis and the amount remitted to the cable operator as an operating expense.

Fees imposed on the Company by various governmental authorities are passed through on a monthly basis to the Company’s customers and are periodically remitted to authorities. Fees of \$961 million, \$711 million and \$255 million for the years ended December 31, 2017, 2016 and 2015, respectively, are reported in video, voice and commercial revenues, on a gross basis with a corresponding operating expense because the Company is acting as a principal. Other taxes, such as sales taxes imposed on the Company’s customers, collected and remitted to state and local authorities, are recorded on a net basis because the Company is acting as an agent in such situation.

The Company’s revenues by product line are as follows:

	Year Ended December 31,		
	2017	2016	2015
Video	\$ 16,641	\$ 11,967	\$ 4,587
Internet	14,105	9,272	3,003
Voice	2,542	2,005	539
Residential revenue	33,288	23,244	8,129
Small and medium business	3,686	2,480	764
Enterprise	2,210	1,429	363
Commercial revenue	5,896	3,909	1,127
Advertising sales	1,510	1,235	309
Other	884	615	189
	<u>\$ 41,578</u>	<u>\$ 29,003</u>	<u>\$ 9,754</u>

Programming Costs

The Company has various contracts to obtain video programming from vendors whose compensation is typically based on a flat fee per customer. The cost of the right to exhibit network programming under such arrangements is recorded in operating expenses in the month the programming is available for exhibition. Programming costs are paid each month based on calculations performed by the Company and are subject to periodic audits performed by the programmers. Certain programming contracts contain cash and non-cash consideration from the programmers. If consideration received does not relate to a separate product or service, the Company recognizes the consideration on a straight-line basis over the life of the programming agreement as a reduction of programming expense. Programming costs included in the statements of operations were \$10.6 billion, \$7.0 billion and \$2.7 billion for the years ended December 31, 2017, 2016 and 2015, respectively.

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Advertising Costs

Advertising costs associated with marketing the Company's products and services are generally expensed as costs are incurred.

Multiple-Element Transactions

In the normal course of business, the Company enters into multiple-element transactions where it is simultaneously both a customer and a vendor with the same counterparty or in which it purchases multiple products and/or services, or settles outstanding items contemporaneous with the purchase of a product or service from a single counterparty. Transactions, although negotiated contemporaneously, may be documented in one or more contracts. The Company's policy for accounting for each transaction negotiated contemporaneously is to record each element of the transaction based on the respective estimated fair values of the products or services purchased and the products or services sold. In determining the fair value of the respective elements, the Company refers to quoted market prices (where available), historical transactions or comparable cash transactions. Cash consideration received from a vendor is recorded as a reduction in the price of the vendor's product unless (i) the consideration is for the reimbursement of a specific, incremental, identifiable cost incurred, in which case the cash consideration received would be recorded as a reduction in such cost (e.g., marketing costs), or (ii) an identifiable benefit in exchange for the consideration is provided, in which case revenue would be recognized for this element.

Stock-Based Compensation

Restricted stock, restricted stock units, stock options as well as equity awards with market conditions are measured at the grant date fair value and amortized to stock compensation expense over the requisite service period. The fair value of options is estimated on the date of grant using the Black-Scholes option-pricing model and the fair value of equity awards with market conditions is estimated on the date of grant using Monte Carlo simulations. The grant date weighted average assumptions used during the years ended December 31, 2017, 2016 and 2015, respectively, were: risk-free interest rate of 1.8%, 1.7% and 1.5%; expected volatility of 25.0%, 25.4% and 34.7%; and expected lives of 4.6 years, 1.3 years and 6.5 years. Weighted average assumptions for 2016 include the assumptions used for the converted TWC awards (see Note 15). The Company's volatility assumptions represent management's best estimate and were based on historical volatility of Legacy Charter and Legacy TWC. See Note 3. Expected lives were estimated using historical exercise data. The valuations assume no dividends are paid.

Pension Plans

The Company sponsors the TWC Pension Plan, TWC Union Pension Plan and TWC Excess Pension Plan (as defined in Note 19). Pension benefits are based on formulas that reflect the employees' years of service and compensation during their employment period. Actuarial gains or losses are changes in the amount of either the benefit obligation or the fair value of plan assets resulting from experience different from that assumed or from changes in assumptions. The Company has elected to follow a mark-to-market pension accounting policy for recording the actuarial gains or losses annually during the fourth quarter, or earlier if a rereasurement event occurs during an interim period.

Income Taxes

CCO Holdings is a single member limited liability company not subject to income tax. CCO Holdings holds all operations through indirect subsidiaries. The majority of these indirect subsidiaries are limited liability companies that are not subject to income tax. Certain indirect subsidiaries that are required to file separate returns are subject to federal and state tax. CCO Holdings' tax provision reflects the tax provision of the entities required to file separate returns. The Company recognizes deferred tax assets and liabilities for temporary differences between the financial reporting basis and the tax basis of these indirect subsidiaries' assets and liabilities and expected benefits of utilizing loss carryforwards. The impact on deferred taxes of changes in tax rates and tax law, if any, applied to the years during which temporary differences are expected to be settled, are reflected in the consolidated financial statements in the period of enactment. See Note 16.

Charter, the Company's indirect parent company, is subject to income taxes. Accordingly, in addition to the Company's deferred tax liabilities, Charter has recorded net deferred tax liabilities of approximately \$17.3 billion and \$26.7 billion as December 31, 2017 and 2016, respectively, related to their investment in Charter Holdings, net of loss carryforwards, which is not reflected at the Company.

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Segments

The Company's operations are managed and reported to its Chief Executive Officer ("CEO"), the Company's chief operating decision maker, on a consolidated basis. The CEO assesses performance and allocates resources based on the consolidated results of operations. Under this organizational and reporting structure, the Company has one reportable segment, cable services.

3. Mergers and Acquisitions

The Transactions

On May 18, 2016, the transactions contemplated by the Agreement and Plan of Mergers dated as of May 23, 2015 (the "Merger Agreement"), by and among Time Warner Cable Inc. ("Legacy TWC"), Charter Communications, Inc. prior to the closing of the Merger Agreement ("Legacy Charter"), CCH I, LLC, previously a wholly owned subsidiary of Legacy Charter and certain other subsidiaries of CCH I, LLC were completed (the "TWC Transaction," and together with the Bright House Transaction described below, the "Transactions"). As a result of the TWC Transaction, CCH I, LLC became the new public parent company that holds the operations of the combined companies and was renamed Charter Communications, Inc. As of the date of completion of the Transactions, the total value of the TWC Transaction was approximately \$85 billion, including cash, equity and Legacy TWC assumed debt.

Also, on May 18, 2016, Legacy Charter and Advance/Newhouse Partnership ("A/N"), the former parent of Bright House Networks, LLC ("Legacy Bright House"), completed their previously announced transaction, pursuant to a definitive Contribution Agreement (the "Contribution Agreement"), under which Charter acquired Legacy Bright House (the "Bright House Transaction") for approximately \$12.2 billion consisting of cash and convertible preferred units of Charter Holdings and common units of Charter Holdings. Pursuant to the Bright House Transaction, Charter became the owner of the membership interests in Legacy Bright House and the other assets primarily related to Legacy Bright House (other than certain excluded assets and liabilities and non-operating cash).

In connection with the TWC Transaction, Liberty Broadband purchased shares of Charter Class A common stock to partially finance the cash portion of the TWC Transaction consideration, and in connection with the Bright House Transaction, Liberty Broadband purchased shares of Charter Class A common stock (the "Liberty Transaction").

Acquisition Accounting

Charter applied acquisition accounting to the Transactions. The total purchase price was allocated to the identifiable tangible and intangible assets acquired and the liabilities assumed based on their estimated fair values. The fair values were primarily based on third-party valuations using assumptions developed by management and other information compiled by management including, but not limited to, future expected cash flows. The excess of the purchase price over those fair values was recorded as goodwill.

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The tables below present the final allocation of the purchase price to the assets acquired and liabilities assumed in the Transactions.

TWC Allocation of Purchase Price

Cash and cash equivalents	\$	1,058
Current assets		1,417
Property, plant and equipment		21,413
Customer relationships		13,460
Franchises		54,085
Goodwill		28,337
Other noncurrent assets		1,040
Accounts payable and accrued liabilities		(4,107)
Debt		(24,900)
Deferred income taxes		(28,120)
Other long-term liabilities		(3,162)
Noncontrolling interests		(4)
	\$	60,517

Subsequent to December 31, 2016 and through the end of the measurement period, Charter made adjustments to the fair value of certain assets acquired and liabilities assumed in the TWC Transaction, including a decrease to working capital of \$73 million and a decrease of \$28 million to deferred income tax liabilities, resulting in a net increase of \$45 million to goodwill.

Bright House Allocation of Purchase Price

Current assets	\$	131
Property, plant and equipment		2,884
Customer relationships		2,150
Franchises		7,225
Goodwill		44
Other noncurrent assets		86
Accounts payable and accrued liabilities		(330)
Other long-term liabilities		(12)
Noncontrolling interests		(22)
	\$	12,156

In connection with the Transactions, subsidiaries of Charter contributed down to the Company the net assets and liabilities of Legacy TWC and Legacy Bright House except for the deferred tax liabilities of Charter, as noted above, and net assets of approximately \$1.0 billion primarily comprised of cash and cash equivalents used as a source for the cash portion of the TWC purchase price.

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Selected Pro Forma Financial Information

The following unaudited pro forma financial information of the Company is based on the historical consolidated financial statements of Legacy Charter, Legacy TWC and Legacy Bright House and is intended to provide information about how the Transactions and related financing may have affected the Company's historical consolidated financial statements if they had closed as of January 1, 2015. The pro forma financial information below is based on available information and assumptions that the Company believes are reasonable. The pro forma financial information is for illustrative and informational purposes only and is not intended to represent or be indicative of what the Company's financial condition or results of operations would have been had the transactions described above occurred on the date indicated. The pro forma financial information also should not be considered representative of the Company's future financial condition or results of operations.

	Year Ended December 31,	
	2016	2015
Revenues	\$ 40,023	\$ 37,394
Net income attributable to CCO Holdings member	\$ 1,890	\$ 608

4. Allowance for Doubtful Accounts

Activity in the allowance for doubtful accounts is summarized as follows for the years presented:

	Year Ended December 31,		
	2017	2016	2015
Balance, beginning of period	\$ 124	\$ 21	\$ 22
Charged to expense	469	328	135
Uncollected balances written off, net of recoveries	(480)	(225)	(136)
Balance, end of period	\$ 113	\$ 124	\$ 21

5. Property, Plant and Equipment

Property, plant and equipment consists of the following as of December 31, 2017 and 2016:

	December 31,	
	2017	2016
Cable distribution systems	\$ 26,104	\$ 23,314
Customer premise equipment and installations	15,909	12,867
Vehicles and equipment	1,477	1,187
Buildings and improvements	3,564	3,194
Furniture, fixtures and equipment	4,547	3,241
	51,601	43,803
Less: accumulated depreciation	(18,049)	(11,085)
	\$ 33,552	\$ 32,718

The Company periodically evaluates the estimated useful lives used to depreciate its assets and the estimated amount of assets that will be abandoned or have minimal use in the future. A significant change in assumptions about the extent or timing of future asset retirements, or in the Company's use of new technology and upgrade programs, could materially affect future depreciation expense.

Depreciation expense for the years ended December 31, 2017, 2016 and 2015 was \$7.8 billion, \$5.0 billion, and \$1.9 billion, respectively.

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6. Franchises, Goodwill and Other Intangible Assets

Franchise rights represent the value attributed to agreements or authorizations with local and state authorities that allow access to homes in cable service areas. For valuation purposes, they are defined as the future economic benefits of the right to solicit and service potential customers (customer marketing rights), and the right to deploy and market new services to potential customers (service marketing rights).

Management estimates the fair value of franchise rights at the date of acquisition and determines if the franchise has a finite life or an indefinite life. The Company has concluded that all of its franchises qualify for indefinite life treatment given that there are no legal, regulatory, contractual, competitive, economic or other factors which limit the period over which these rights will contribute to the Company's cash flows. The Company reassesses this determination periodically or whenever events or substantive changes in circumstances occur.

All franchises are tested for impairment annually or more frequently as warranted by events or changes in circumstances. Franchise assets are aggregated into essentially inseparable units of accounting to conduct valuations. The units of accounting generally represent geographical clustering of the Company's cable systems into groups. The Company assesses qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that an indefinite lived intangible asset has been impaired. If, after this optional qualitative assessment, the Company determines that it is not more likely than not that an indefinite lived intangible asset has been impaired, then no further quantitative testing is necessary. In completing the qualitative impairment testing, the Company evaluates a multitude of factors that affect the fair value of our franchise assets. Examples of such factors include environmental and competitive changes within our operating footprint, actual and projected operating performance, the consistency of our operating margins, equity and debt market trends, including changes in our market capitalization, and changes in our regulatory and political landscape, among other factors. The Company performed a qualitative assessment in 2017, which also included consideration of a fair value appraisal performed for tax purposes in the beginning of 2017 as of a December 31, 2016 valuation date (the "Appraisal"). After consideration of the qualitative factors in 2017, including the results of the Appraisal, the Company concluded that it is more likely than not that the fair value of the franchise assets in each unit of accounting exceeds the carrying value of such assets and therefore did not perform a quantitative analysis at the assessment date. Periodically, the Company will elect to perform a quantitative analysis for impairment testing. If the Company elects or is required to perform a quantitative analysis to test its franchise assets for impairment, the methodology described below is utilized.

If a quantitative analysis is performed, the estimated fair value of franchises is determined utilizing an income approach model based on the present value of the estimated discrete future cash flows attributable to each of the intangible assets identified assuming a discount rate. The fair value of franchises is determined based on estimated discrete discounted future cash flows using assumptions consistent with internal forecasts. The franchise after-tax cash flow is calculated as the after-tax cash flow generated by the potential customers obtained. The sum of the present value of the franchises' after-tax cash flow in years 1 through 10 and the continuing value of the after-tax cash flow beyond year 10 yields the fair value of the franchises.

This approach makes use of unobservable factors such as projected revenues, expenses, capital expenditures, customer trends, and a discount rate applied to the estimated cash flows. The determination of the franchise discount rate is derived from the Company's weighted average cost of capital, which uses a market participant's cost of equity and after-tax cost of debt and reflects the risks inherent in the cash flows. The Company estimates discounted future cash flows using reasonable and appropriate assumptions including among others, penetration rates for video, Internet, and voice; revenue growth rates; operating margins; and capital expenditures. The assumptions are based on the Company's and its peers' historical operating performance adjusted for current and expected competitive and economic factors surrounding the cable industry. The estimates and assumptions made in the Company's valuations are inherently subject to significant uncertainties, many of which are beyond its control, and there is no assurance that these results can be achieved. The primary assumptions for which there is a reasonable possibility of the occurrence of a variation that would significantly affect the measurement value include the assumptions regarding revenue growth, programming expense growth rates, the amount and timing of capital expenditures, actual customer trends and the discount rate utilized.

The fair value of goodwill is determined using both an income approach and market approach. The Company's income approach model used for its goodwill valuation is consistent with that used for its franchise valuation noted above except that cash flows from the entire business enterprise are used for the goodwill valuation. The Company's market approach model estimates the fair value of the reporting unit based on market prices in actual precedent transactions of similar businesses and market valuations of

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guideline public companies. Goodwill is tested for impairment as of November 30 of each year, or more frequently as warranted by events or changes in circumstances. Accounting guidance also permits an optional qualitative assessment for goodwill to determine whether it is more likely than not that the carrying value of a reporting unit exceeds its fair value. If, after this qualitative assessment, the Company determines that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount then no further quantitative testing would be necessary. If the Company elects or is required to perform the two-step test under the accounting guidance, the first step involves a comparison of the estimated fair value of the reporting unit to its carrying amount. If the estimated fair value of the reporting unit exceeds its carrying amount, goodwill of the reporting unit is not considered impaired and the second step of the goodwill impairment is not necessary. If the carrying amount of a reporting unit exceeds its estimated fair value, then the second step of the goodwill impairment test must be performed, and a comparison of the implied fair value of the reporting unit's goodwill is compared to its carrying amount to determine the amount of impairment, if any. As with the Company's franchise impairment testing, in 2017 the Company elected to perform a qualitative goodwill impairment assessment, which incorporated the results of the Appraisal and consideration of the same qualitative factors relevant to the Company's franchise impairment testing. As a result of that assessment, the Company concluded that goodwill is not impaired.

Customer relationships are recorded at fair value as of the date acquired less accumulated amortization. Customer relationships, for valuation purposes, represent the value of the business relationship with existing customers, and are calculated by projecting the discrete future after-tax cash flows from these customers, including the right to deploy and market additional services to these customers. The present value of these after-tax cash flows yields the fair value of the customer relationships. The use of different valuation assumptions or definitions of franchises or customer relationships, such as our inclusion of the value of selling additional services to our current customers within customer relationships versus franchises, could significantly impact our valuations and any resulting impairment. Customer relationships are amortized on an accelerated sum of years' digits method over useful lives of 8-15 years based on the period over which current customers are expected to generate cash flows. The Company periodically evaluates the remaining useful lives of its customer relationships to determine whether events or circumstances warrant revision to the remaining periods of amortization. Customer relationships are evaluated for impairment upon the occurrence of events or changes in circumstances indicating that the carrying amount of an asset may not be recoverable. Customer relationships are deemed impaired when the carrying value exceeds the projected undiscounted future cash flows associated with the customer relationships. No impairment of customer relationships was recorded in the years ended December 31, 2017, 2016 or 2015.

As of December 31, 2017 and 2016, indefinite-lived and finite-lived intangible assets are presented in the following table:

	December 31,					
	2017			2016		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Indefinite-lived intangible assets:						
Franchises	\$ 67,319	\$ —	\$ 67,319	\$ 67,316	\$ —	\$ 67,316
Goodwill	29,554	—	29,554	29,509	—	29,509
Other intangible assets	—	—	—	4	—	4
	<u>\$ 96,873</u>	<u>\$ —</u>	<u>\$ 96,873</u>	<u>\$ 96,829</u>	<u>\$ —</u>	<u>\$ 96,829</u>
Finite-lived intangible assets:						
Customer relationships	\$ 18,229	\$ (6,278)	\$ 11,951	\$ 18,226	\$ (3,618)	\$ 14,608
Other intangible assets	731	(201)	530	615	(128)	487
	<u>\$ 18,960</u>	<u>\$ (6,479)</u>	<u>\$ 12,481</u>	<u>\$ 18,841</u>	<u>\$ (3,746)</u>	<u>\$ 15,095</u>

Other intangible assets consist primarily of right-of-entry costs. Amortization expense related to customer relationships and other intangible assets for the years ended December 31, 2017, 2016 and 2015 was \$2.7 billion, \$1.9 billion and \$271 million, respectively.

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The Company expects amortization expense on its finite-lived intangible assets will be as follows.

2018	\$ 2,478
2019	2,195
2020	1,903
2021	1,619
2022	1,342
Thereafter	2,944
	<u>\$ 12,481</u>

Actual amortization expense in future periods could differ from these estimates as a result of new intangible asset acquisitions or divestitures, changes in useful lives, impairments, adoption of new accounting standards and other relevant factors.

7. Investments

Investments consisted of the following as of December 31, 2017 and 2016:

	December 31,	
	2017	2016
Equity-method investments	447	477
Other investments	15	11
Total investments	\$ 462	\$ 488

The Company's investments include Sterling Entertainment Enterprises, LLC ("Sterling" - d/b/a SportsNet New York - 26.8% owned), MLB Network, LLC ("MLB Network" - 6.4% owned), iN Demand L.L.C. ("iN Demand" - 39.5% owned) and National Cable Communications LLC ("NCC" - 20.0% owned), among other less significant equity-method and cost-method investments. Sterling and MLB Network are primarily engaged in the development of sports programming services. iN Demand provides programming on a video on demand, pay-per-view and subscription basis. NCC represents multi-video program distributors to advertisers.

The Company's equity-method investments balances reflected in the table above includes differences between the acquisition date fair value of certain investments acquired and the underlying equity in the net assets of the investee, referred to as a basis difference. This basis difference is amortized as a component of equity earnings. The remaining unamortized basis difference was \$407 million and \$436 million as of December 31, 2017 and 2016, respectively.

The Company applies the equity method of accounting to these and other less significant equity-method investments, all of which are recorded in other noncurrent assets in the consolidated balance sheets as of December 31, 2017 and 2016. For the years ended December 31, 2017 and 2016, net losses from equity-method investments were \$4 million and \$3 million, respectively, which were recorded in other expense, net in the consolidated statements of operations, and for the year ended December 31, 2015, gains (losses) from equity-method investments were insignificant.

Noncontrolling interests assumed in the Transactions were recorded at fair value on the acquisition date and primarily relate to the third-party interest in CV of Viera, LLP, the Company's consolidated joint venture in a small cable system in Florida. For the each of the years ended December 31, 2017 and 2016, net income attributable to noncontrolling interest was \$1 million.

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8. Accounts Payable and Accrued Liabilities

Accounts payable and accrued liabilities consist of the following as of December 31, 2017 and 2016:

	December 31,	
	2017	2016
Accounts payable – trade	\$ 673	\$ 416
Deferred revenue	395	352
Accrued liabilities:		
Programming costs	1,907	1,783
Compensation	747	953
Capital expenditures	1,935	1,107
Interest	1,054	958
Taxes and regulatory fees	548	529
Other	882	799
	<u>\$ 8,141</u>	<u>\$ 6,897</u>

9. Long-Term Debt

Long-term debt consists of the following as of December 31, 2017 and 2016:

	December 31,			
	2017		2016	
	Principal Amount	Accreted Value	Principal Amount	Accreted Value
CCO Holdings, LLC:				
5.250% senior notes due March 15, 2021	\$ 500	\$ 497	\$ 500	\$ 496
6.625% senior notes due January 31, 2022	—	—	750	741
5.250% senior notes due September 30, 2022	1,250	1,235	1,250	1,232
5.125% senior notes due February 15, 2023	1,000	993	1,000	992
4.000% senior notes due March 1, 2023	500	495	—	—
5.125% senior notes due May 1, 2023	1,150	1,143	1,150	1,141
5.750% senior notes due September 1, 2023	500	496	500	496
5.750% senior notes due January 15, 2024	1,000	992	1,000	991
5.875% senior notes due April 1, 2024	1,700	1,687	1,700	1,685
5.375% senior notes due May 1, 2025	750	745	750	744
5.750% senior notes due February 15, 2026	2,500	2,464	2,500	2,460
5.500% senior notes due May 1, 2026	1,500	1,489	1,500	1,487
5.875% senior notes due May 1, 2027	800	794	800	794
5.125% senior notes due May 1, 2027	3,250	3,216	—	—
5.000% senior notes due February 1, 2028	2,500	2,462	—	—
Charter Communications Operating, LLC:				
3.579% senior notes due July 23, 2020	2,000	1,988	2,000	1,983
4.464% senior notes due July 23, 2022	3,000	2,977	3,000	2,973
4.908% senior notes due July 23, 2025	4,500	4,462	4,500	4,458
3.750% senior notes due February 15, 2028	1,000	985	—	—
4.200% senior notes due March 15, 2028	1,250	1,238	—	—

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6.384% senior notes due October 23, 2035	2,000	1,981	2,000	1,980
6.484% senior notes due October 23, 2045	3,500	3,466	3,500	3,466
5.375% senior notes due May 1, 2047	2,500	2,506	—	—
6.834% senior notes due October 23, 2055	500	495	500	495
Credit facilities	9,479	9,387	8,916	8,814
Time Warner Cable, LLC:				
5.850% senior notes due May 1, 2017	—	—	2,000	2,028
6.750% senior notes due July 1, 2018	2,000	2,045	2,000	2,135
8.750% senior notes due February 14, 2019	1,250	1,337	1,250	1,412
8.250% senior notes due April 1, 2019	2,000	2,148	2,000	2,264
5.000% senior notes due February 1, 2020	1,500	1,579	1,500	1,615
4.125% senior notes due February 15, 2021	700	730	700	739
4.000% senior notes due September 1, 2021	1,000	1,045	1,000	1,056
5.750% sterling senior notes due June 2, 2031 ^(a)	845	912	770	834
6.550% senior debentures due May 1, 2037	1,500	1,686	1,500	1,691
7.300% senior debentures due July 1, 2038	1,500	1,788	1,500	1,795
6.750% senior debentures due June 15, 2039	1,500	1,724	1,500	1,730
5.875% senior debentures due November 15, 2040	1,200	1,258	1,200	1,259
5.500% senior debentures due September 1, 2041	1,250	1,258	1,250	1,258
5.250% sterling senior notes due July 15, 2042 ^(b)	879	847	800	771
4.500% senior debentures due September 15, 2042	1,250	1,137	1,250	1,135
Time Warner Cable Enterprises LLC:				
8.375% senior debentures due March 15, 2023	1,000	1,232	1,000	1,273
8.375% senior debentures due July 15, 2033	1,000	1,312	1,000	1,324
Total debt	69,003	70,231	60,036	61,747
Less current portion:				
5.850% senior notes due May 1, 2017	—	—	(2,000)	(2,028)
6.750% senior notes due July 1, 2018	(2,000)	(2,045)	—	—
Long-term debt	\$ 67,003	\$ 68,186	\$ 58,036	\$ 59,719

^(a) Principal amount includes £625 million valued at \$845 million and \$770 million as of December 31, 2017 and December 31, 2016, respectively, using the exchange rate at that date.

^(b) Principal amount includes £650 million valued at \$879 million and \$800 million as of December 31, 2017 and December 31, 2016, respectively, using the exchange rate at that date.

The accreted values presented in the table above represent the principal amount of the debt less the original issue discount at the time of sale, deferred financing costs, and, in regards to the Legacy TWC debt assumed, fair value premium adjustments as a result of applying acquisition accounting plus the accretion of those amounts to the balance sheet date. However, the amount that is currently payable if the debt becomes immediately due is equal to the principal amount of the debt. In regards to the fixed-rate British pound sterling denominated notes (the "Sterling Notes"), the principal amount of the debt and any premium or discount is remeasured into US dollars as of each balance sheet date. See Note 11. The Company has availability under the Charter Operating credit facilities of approximately \$3.6 billion as of December 31, 2017.

During 2015, CCO Holdings and CCO Holdings Capital closed on transactions in which they issued \$2.7 billion aggregate principal amount of senior unsecured notes with varying maturities and interest rates. The net proceeds were used to repurchase \$2.5 billion of various series of senior unsecured notes, as well as for general corporate purposes. These debt repurchases resulted in a loss on extinguishment of debt of \$123 million for the year ended December 31, 2015. The Company also recorded a loss on extinguishment of debt of approximately \$3 million for the year ended December 31, 2015 as a result of the repayment of debt upon termination of the proposed transactions with Comcast Corporation.

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During 2016, CCO Holdings and CCO Holdings Capital closed on transactions in which they issued \$3.2 billion aggregate principal amount of senior unsecured notes with varying maturities and interest rates. The net proceeds were used to repurchase \$2.9 billion of various series of senior unsecured notes, as well as for general corporate purposes. These debt repurchases resulted in a loss on extinguishment of debt of \$110 million for the year ended December 31, 2016.

During 2016, Charter Operating entered into an amendment to its Amended and Restated Credit Agreement dated May 18, 2016 (the "Credit Agreement") decreasing the applicable LIBOR margin, eliminating the LIBOR floor and extending the maturities on certain term loans. The Company recorded a loss on extinguishment of debt of \$1 million for the year ended December 31, 2016 related to these transactions.

During 2017, CCO Holdings and CCO Holdings Capital closed on transactions in which they issued \$6.25 billion aggregate principal amount of senior unsecured notes with varying maturities and interest rates. The net proceeds were distributed to the Company's parent companies to fund buybacks of Charter Class A common stock or Charter Holdings common units, repurchase \$2.75 billion of various series of senior secured and unsecured notes, as well as for general corporate purposes. These debt repurchases resulted in a loss on extinguishment of debt of \$34 million for the year ended December 31, 2017.

During 2017, Charter Operating and Charter Communications Operating Capital Corp. closed on transactions in which they issued \$4.75 billion aggregate principal amount of senior secured notes with varying maturities and interest rates. The net proceeds were distributed to the Company's parent companies to fund buybacks of Charter Class A common stock or Charter Holdings common units, as well as for general corporate purposes.

During 2017, Charter Operating also entered into amendments to its Credit Agreement decreasing the applicable LIBOR margins, eliminating the LIBOR floor, increasing the capacity of the revolving loan, extending the maturities and repaying the E, F, H and I term loans with the issuance of a new term B loan. The Company recorded a loss on extinguishment of debt of \$6 million for the year ended December 31, 2017 related to these transactions. See "Charter Operating Credit Facilities" below for details on the Company's term loans as of December 31, 2017.

CCO Holdings Notes

The CCO Holdings notes are senior debt obligations of CCO Holdings and CCO Holdings Capital and rank equally with all other current and future unsecured, unsubordinated obligations of CCO Holdings and CCO Holdings Capital. They are structurally subordinated to all obligations of subsidiaries of CCO Holdings.

CCO Holdings may redeem some or all of the CCO Holdings notes at any time at a premium. The optional redemption price declines to 100% of the respective series' principal amount, plus accrued and unpaid interest, if any, on or after varying dates in 2019 through 2025.

In addition, at any time prior to varying dates in 2018 through 2020, CCO Holdings may redeem up to 40% of the aggregate principal amount of certain notes at a premium plus accrued and unpaid interest to the redemption date, with the net cash proceeds of one or more equity offerings (as defined in the indenture); provided that certain conditions are met. In the event of specified change of control events, CCO Holdings must offer to purchase the outstanding CCO Holdings notes from the holders at a purchase price equal to 101% of the total principal amount of the notes, plus any accrued and unpaid interest.

High-Yield Restrictive Covenants; Limitation on Indebtedness.

The indentures governing the CCO Holdings notes contain certain covenants that restrict the ability of CCO Holdings, CCO Holdings Capital and all of their restricted subsidiaries to:

- incur additional debt;
- pay dividends on equity or repurchase equity;
- make investments;
- sell all or substantially all of their assets or merge with or into other companies;
- sell assets;
- in the case of restricted subsidiaries, create or permit to exist dividend or payment restrictions with respect to CCO Holdings, guarantee their parent companies debt, or issue specified equity interests;

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- engage in certain transactions with affiliates; and
- grant liens.

The above limitations in certain circumstances regarding incurrence of debt, payment of dividends and making investments contained in the indentures of CCO Holdings permit CCO Holdings and its restricted subsidiaries to perform the above, so long as, after giving pro forma effect to the above, the leverage ratio would be below a specified level for the issuer. The leverage ratio under the indentures is 6.0 to 1.0.

Charter Operating Notes

The Charter Operating notes are guaranteed by CCO Holdings and substantially all of the operating subsidiaries of Charter Operating. In addition, the Charter Operating notes are secured by a perfected first priority security interest in substantially all of the assets of Charter Operating to the extent such liens can be perfected under the Uniform Commercial Code by the filing of a financing statement and the liens rank equally with the liens on the collateral securing obligations under the Charter Operating credit facilities. Charter Operating may redeem some or all of the Charter Operating notes at any time at a premium.

The Charter Operating notes are subject to the terms and conditions of the indenture governing the Charter Operating notes. The Charter Operating notes contain customary representations and warranties and affirmative covenants with limited negative covenants. The Charter Operating indenture also contains customary events of default.

Charter Operating Credit Facilities

The Charter Operating credit facilities have an outstanding principal amount of \$9.5 billion at December 31, 2017 as follows:

- term loan A-2 with a remaining principal amount of \$2.9 billion, which is repayable in quarterly installments and aggregating \$144 million in each loan year, with the remaining balance due at final maturity on March 31, 2023. Pricing on term loan A-2 is LIBOR plus 1.50%;
- term loan B with a remaining principal amount of approximately \$6.4 billion, which is repayable in equal quarterly installments and aggregating \$64 million in each loan year, with the remaining balance due at final maturity on April 30, 2025. Pricing on term loan B is LIBOR plus 2.00%; and
- revolving loan with an outstanding balance of \$254 million at December 31, 2017 and allowing for borrowings of up to \$4.0 billion, maturing on March 31, 2023. Pricing on the revolving loan is LIBOR plus 1.50% with a commitment fee of 0.30%. As of December 31, 2017, \$137 million of the revolving loan was utilized to collateralize a like principal amount of letters of credit out of \$291 million of letters of credit issued on the Company's behalf.

Amounts outstanding under the Charter Operating credit facilities bear interest, at Charter Operating's election, at a base rate or LIBOR (1.56% and 0.77% as of December 31, 2017 and December 31, 2016, respectively), as defined, plus an applicable margin.

The Charter Operating credit facilities also allow us to enter into incremental term loans in the future, with amortization as set forth in the notices establishing such term loans. Although the Charter Operating credit facilities allow for the incurrence of a certain amount of incremental term loans subject to pro forma compliance with its financial maintenance covenants, no assurance can be given that the Company could obtain additional incremental term loans in the future if Charter Operating sought to do so or what amount of incremental term loans would be allowable at any given time under the terms of the Charter Operating credit facilities.

The obligations of Charter Operating under the Charter Operating credit facilities are guaranteed by CCO Holdings and substantially all of the operating subsidiaries of Charter Operating. The obligations are also secured by (i) a lien on substantially all of the assets of Charter Operating and its subsidiaries, to the extent such lien can be perfected under the Uniform Commercial Code by the filing of a financing statement, and (ii) a pledge by CCO Holdings of the equity interests owned by it in any of Charter Operating's subsidiaries, as well as intercompany obligations owing to it by any of such entities.

Restrictive Covenants

The Charter Operating credit facilities contain representations and warranties, and affirmative and negative covenants customary for financings of this type. The financial covenants measure performance against standards set for leverage to be tested as of the

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end of each quarter. The Charter Operating credit facilities contain provisions requiring mandatory loan prepayments under specific circumstances, including in connection with certain sales of assets, so long as the proceeds have not been reinvested in the business. Additionally, the Charter Operating credit facilities provisions contain an allowance for restricted payments with certain limitations. The Charter Operating credit facilities permit Charter Operating and its subsidiaries to make distributions to pay interest on the currently outstanding subordinated and parent company indebtedness, provided that, among other things, no default has occurred and is continuing under the Charter Operating credit facilities. The Charter Operating credit facilities also contain customary events of default.

TWC, LLC Senior Notes and Debentures

The TWC, LLC senior notes and debentures are guaranteed by CCO Holdings and substantially all of the operating subsidiaries of Charter Operating and rank equally with the liens on the collateral securing obligations under the Charter Operating notes and credit facilities. Interest on each series of TWC, LLC senior notes and debentures is payable semi-annually (with the exception of the Sterling Notes, which is payable annually) in arrears.

The TWC, LLC indenture contains customary covenants relating to restrictions on the ability of TWC, LLC or any material subsidiary to create liens and on the ability of TWC, LLC and Time Warner Cable Enterprises LLC ("TWCE") to consolidate, merge or convey or transfer substantially all of their assets. The TWC, LLC indenture also contains customary events of default.

The TWC, LLC senior notes and debentures may be redeemed in whole or in part at any time at TWC, LLC's option at a redemption price equal to the greater of (i) all of the applicable principal amount being redeemed and (ii) the sum of the present values of the remaining scheduled payments on the applicable TWC, LLC senior notes and debentures discounted to the redemption date on a semi-annual basis (with the exception of the Sterling Notes, which are on an annual basis), at a comparable government bond rate plus a designated number of basis points as further described in the indenture and the applicable note or debenture, plus, in each case, accrued but unpaid interest to, but not including, the redemption date.

The Company may offer to redeem all, but not less than all, of the Sterling Notes in the event of certain changes in the tax laws of the U.S. (or any taxing authority in the U.S.). This redemption would be at a redemption price equal to 100% of the principal amount, together with accrued and unpaid interest on the Sterling Notes to, but not including, the redemption date.

TWCE Senior Debentures

The TWCE senior debentures are guaranteed by CCO Holdings, substantially all of the operating subsidiaries of Charter Operating and TWC, LLC and rank equally with the liens on the collateral securing obligations under the Charter Operating notes and credit facilities. Interest on each series of TWCE senior debentures is payable semi-annually in arrears. The TWCE senior debentures are not redeemable before maturity.

The TWCE indenture contains customary covenants relating to restrictions on the ability of TWCE or any material subsidiary to create liens and on the ability of TWC, LLC and TWCE to consolidate, merge or convey or transfer substantially all of their assets. The TWCE indenture also contains customary events of default.

Limitations on Distributions

Distributions by the Company and its subsidiaries to a parent company for payment of principal on parent company notes are restricted under the indentures and credit facilities discussed above, unless there is no default under the applicable indenture and credit facilities, and unless each applicable subsidiary's leverage ratio test is met at the time of such distribution. As of December 31, 2017, there was no default under any of these indentures or credit facilities and each subsidiary met its applicable leverage ratio tests based on December 31, 2017 financial results. There can be no assurance that they will satisfy these tests at the time of the contemplated distribution. Distributions by Charter Operating for payment of principal on parent company notes are further restricted by the covenants in its credit facilities.

However, without regard to leverage, during any calendar year or any portion thereof during which the borrower is a flow-through entity for tax purposes, and so long as no event of default exists, the borrower may make distributions to the equity interests of the borrower in an amount sufficient to make permitted tax payments.

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In addition to the limitation on distributions under the various indentures, distributions by the Company's subsidiaries may be limited by applicable law, including the Delaware Limited Liability Company Act, under which the Company's subsidiaries may make distributions if they have "surplus" as defined in the act.

Liquidity and Future Principal Payments

The Company continues to have significant amounts of debt, and its business requires significant cash to fund principal and interest payments on its debt, capital expenditures and ongoing operations. As set forth below, the Company has significant future principal payments. The Company continues to monitor the capital markets, and it expects to undertake refinancing transactions and utilize free cash flow and cash on hand to further extend or reduce the maturities of its principal obligations. The timing and terms of any refinancing transactions will be subject to market conditions.

Based upon outstanding indebtedness as of December 31, 2017, the amortization of term loans, and the maturity dates for all senior and subordinated notes, total future principal payments on the total borrowings under all debt agreements are as follows:

Year	Amount
2018	\$ 2,207
2019	3,457
2020	3,707
2021	2,407
2022	4,457
Thereafter	52,768
	<u>\$ 69,003</u>

10. Loans Payable - Related Party

Loans payable - related party as of December 31, 2017 and 2016 consists of loans from Charter Communications Holdings Company, LLC ("Charter Holdco") to the Company of \$655 million and \$640 million, respectively. Loans payable - related party as of December 31, 2017 also includes a loan from Charter to the Company of \$233 million. Interest accrues on loans payable - related party at LIBOR plus 1.75%.

11. Accounting for Derivative Instruments and Hedging Activities

The Company uses derivative instruments to manage interest rate risk on variable debt and foreign exchange risk on the Sterling Notes, and does not hold or issue derivative instruments for speculative trading purposes.

Cross-currency derivative instruments are used to effectively convert £1.275 billion aggregate principal amount of fixed-rate British pound sterling denominated debt, including annual interest payments and the payment of principal at maturity, to fixed-rate U.S. dollar denominated debt. The cross-currency swaps have maturities of June 2031 and July 2042. The Company is required to post collateral on the cross-currency derivative instruments when the derivative contracts are in a liability position. In May 2016, the Company entered into a collateral holiday agreement for 80% of both the 2031 and 2042 cross-currency swaps, which eliminates the requirement to post collateral for three years. The fair value of the Company's cross-currency derivatives included in other long-term liabilities on the Company's consolidated balance sheets was \$25 million and \$251 million as of December 31, 2017 and 2016, respectively.

The Company's derivative instruments are not designated as hedges and are marked to fair value each period, with the impact recorded as a gain or loss on financial instruments, net in the consolidated statements of operations. While these derivative instruments are not designated as cash flow hedges for accounting purposes, management continues to believe such instruments are correlated with the respective debt, thus managing associated risk.

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The effect of financial instruments on the consolidated statements of operations is presented in the table below.

	Year Ended December 31,		
	2017	2016	2015
Gain (Loss) on Financial Instruments, Net:			
Change in fair value of interest rate derivative instruments	\$ 5	\$ 8	\$ 5
Change in fair value of cross-currency derivative instruments	226	(179)	—
Foreign currency remeasurement of Sterling Notes to U.S. dollars	(157)	279	—
Loss on termination of interest rate derivative instruments	—	(11)	—
Loss reclassified from accumulated other comprehensive loss due to discontinuance of hedge accounting	(5)	(8)	(9)
	<u>\$ 69</u>	<u>\$ 89</u>	<u>\$ (4)</u>

Upon closing of the TWC Transaction, the Company acquired interest rate derivative instrument assets which were terminated and settled with their respective counterparties in the second quarter of 2016 with an \$88 million cash payment to the Company. The termination resulted in an \$11 million loss for the year ended December 31, 2016 which was recorded in gain (loss) on financial instruments, net in the consolidated statements of operations. All of the Company's interest rate derivatives were expired as of December 31, 2017.

12. Fair Value Measurements

The accounting guidance establishes a three-level hierarchy for disclosure of fair value measurements, based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date, as follows:

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Financial Assets and Liabilities

The Company has estimated the fair value of its financial instruments as of December 31, 2017 and 2016 using available market information or other appropriate valuation methodologies. Considerable judgment, however, is required in interpreting market data to develop the estimates of fair value. Accordingly, the estimates presented in the accompanying consolidated financial statements are not necessarily indicative of the amounts the Company would realize in a current market exchange.

The carrying amounts of cash and cash equivalents, receivables, payables and other current assets and liabilities approximate fair value because of the short maturity of those instruments.

A portion of the Company's cash and cash equivalents as of December 31, 2016 were invested in money market funds. The money market funds are valued at the closing price reported by the fund sponsor from an actively traded exchange which approximates fair value. The money market funds potentially subject the Company to concentration of credit risk. The amount invested within any one financial instrument did not exceed \$250 million as of December 31, 2016. As of December 31, 2016, there were no significant concentrations of financial instruments in a single investee, industry or geographic location.

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The Company's financial instruments that are accounted for at fair value on a recurring basis as of December 31, 2017 and 2016 are presented in the table below.

	December 31,			
	2017		2016	
	Level 1	Level 2	Level 1	Level 2
Assets				
Money market funds	\$ —	\$ —	\$ 1,003	\$ —
Liabilities				
Cross-currency derivative instruments	\$ —	\$ 25	\$ —	\$ 251

A summary of the carrying value and fair value of the Company's debt at December 31, 2017 and 2016 is as follows:

	December 31,			
	2017		2016	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Debt				
Senior notes and debentures	\$ 60,844	\$ 63,443	\$ 52,933	\$ 55,203
Credit facilities	\$ 9,387	\$ 9,440	\$ 8,814	\$ 8,943

The estimated fair value of the Company's senior notes and debentures as of December 31, 2017 and 2016 is based on quoted market prices in active markets and is classified within Level 1 of the valuation hierarchy, while the estimated fair value of the Company's credit facilities is based on quoted market prices in inactive markets and is classified within Level 2.

Non-financial Assets and Liabilities

The Company's nonfinancial assets such as equity-method investments, franchises, property, plant, and equipment, and other intangible assets are not measured at fair value on a recurring basis; however, they are subject to fair value adjustments in certain circumstances, such as upon a business combination and when there is evidence that an impairment may exist. No impairments were recorded in 2017, 2016 and 2015.

13. Operating Costs and Expenses

Operating costs and expenses, exclusive of items shown separately in the consolidated statements of operations, consist of the following for the periods presented:

	Year Ended December 31,		
	2017	2016	2015
Programming	\$ 10,596	\$ 7,034	\$ 2,678
Regulatory, connectivity and produced content	2,064	1,467	435
Costs to service customers	7,780	5,654	1,880
Marketing	2,420	1,707	629
Transition costs	124	156	72
Other	3,576	2,652	732
	<u>\$ 26,560</u>	<u>\$ 18,670</u>	<u>\$ 6,426</u>

Programming costs consist primarily of costs paid to programmers for basic, premium, digital, video on demand, and pay-per-view programming. Regulatory, connectivity and produced content costs represent payments to franchise and regulatory authorities,

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costs directly related to providing video, Internet and voice services as well as payments for sports, local and news content produced by the Company. Included in regulatory, connectivity and produced content costs is content acquisition costs for the Los Angeles Lakers' basketball games and Los Angeles Dodgers' baseball games which are recorded as games are exhibited over the applicable season. Costs to service customers include costs related to field operations, network operations and customer care for the Company's residential and small and medium business customers, including internal and third-party labor for installations, service and repairs, maintenance, bad debt expense, billing and collection, occupancy and vehicle costs. Marketing costs represent the costs of marketing to current and potential commercial and residential customers including labor costs. Transition costs represent incremental costs incurred to integrate the TWC and Bright House operations and to increase the scale of the Company's business as a result of the Transactions. See Note 3. Other includes corporate overhead, advertising sales expenses, indirect costs associated with the Company's enterprise business customers and regional sports and news networks, property tax and insurance expense and stock compensation expense, among others.

14. Other Operating Expenses, Net

Other operating expenses, net consist of the following for the years presented:

	Year Ended December 31,		
	2017	2016	2015
Merger and restructuring costs	\$ 351	\$ 708	\$ 70
Special charges, net	77	17	15
(Gain) loss on sale of assets, net	16	(3)	4
	<u>\$ 444</u>	<u>\$ 722</u>	<u>\$ 89</u>

Merger and restructuring costs

Merger and restructuring costs represent costs incurred in connection with merger and acquisition transactions and related restructuring, such as advisory, legal and accounting fees, employee retention costs, employee termination costs related to the Transactions and other exit costs. The Company expects to incur additional merger and restructuring costs in connection with the Transactions. Changes in accruals for merger and restructuring costs from January 1, 2016 through December 31, 2017 are presented below:

	Employee Retention Costs	Employee Termination Costs	Transaction and Advisory Costs	Other Costs	Total
Liability, December 31, 2015	\$ —	\$ —	\$ 33	\$ —	\$ 33
Liability assumed in the Transactions	80	9	3	—	92
Costs incurred	26	337	66	31	460
Cash paid	(99)	(102)	(77)	(31)	(309)
Remaining liability, December 31, 2016	<u>7</u>	<u>244</u>	<u>25</u>	<u>—</u>	<u>276</u>
Costs incurred	4	226	4	68	302
Cash paid	(10)	(298)	(12)	(60)	(380)
Remaining liability, December 31, 2017	<u>\$ 1</u>	<u>\$ 172</u>	<u>\$ 17</u>	<u>\$ 8</u>	<u>\$ 198</u>

In addition to the costs indicated above, the Company recorded \$49 million and \$248 million of expense related to accelerated vesting of equity awards of terminated employees for the years ended December 31, 2017 and 2016, respectively.

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Special charges, net

Special charges, net primarily includes employee termination costs not related to the Transactions and net amounts of litigation settlements. In 2017, special charges, net also includes an \$83 million charge related to the Company's withdrawal liability from a multiemployer pension plan.

(Gain) loss on sale of assets, net

(Gain) loss on sale of assets, net represents the net (gain) loss recognized on the sales and disposals of fixed assets and cable systems.

15. Stock Compensation Plans

Charter's 2009 Stock Incentive Plan provides for grants of nonqualified stock options, incentive stock options, stock appreciation rights, dividend equivalent rights, performance units and performance shares, share awards, phantom stock, restricted stock units and restricted stock. Directors, officers and other employees of the Company and its subsidiaries, as well as others performing consulting services for the Company, are eligible for grants under the 2009 Stock Incentive Plan. The 2009 Stock Incentive Plan allows for the issuance of up to 21 million shares of Charter Class A common stock (or units convertible into Charter Class A common stock).

At the closing of the TWC Transaction, Legacy TWC employee equity awards were converted into Charter Class A common stock equity awards on the same terms and conditions as were applicable under the Legacy TWC equity awards, except that the number of shares covered by each award and the option exercise prices were adjusted for the Stock Award Exchange Ratio (as defined in the Merger Agreement) such that the intrinsic value of the converted TWC awards was approximately equal to that of the original awards at the closing of the Transactions. The converted TWC awards continue to be subject to the terms of the Legacy TWC equity plans. The Parent Merger Exchange Ratio was also applied to outstanding Legacy Charter equity awards and option exercise prices; however, the terms of the equity awards did not change as a result of the Transactions.

Charter Stock options and restricted stock units cliff vest upon the three year anniversary of each grant. Certain stock options and restricted stock units vest based on achievement of stock price hurdles. Stock options generally expire ten years from the grant date and restricted stock units have no voting rights. Restricted stock generally vests one year from the date of grant. Legacy TWC restricted stock units that were converted into Charter restricted stock units generally vest 50% on each of the third and fourth anniversary of the grant date.

As of December 31, 2017, total unrecognized compensation remaining to be recognized in future periods totaled \$211 million for stock options, \$1 million for restricted stock and \$173 million for restricted stock units and the weighted average period over which they are expected to be recognized is 3 years for stock options, 4 months for restricted stock and 2 years for restricted stock units. The Company recorded \$261 million, \$244 million and \$78 million of stock compensation expense for the years ended December 31, 2017, 2016 and 2015, respectively, which is included in operating costs and expenses. The Company also recorded \$49 million and \$248 million of expense for the years ended December 31, 2017 and 2016, respectively, related to accelerated vesting of equity awards of terminated employees which is recorded in merger and restructuring costs.

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A summary of the activity for Charter's stock options (after applying the Parent Merger Exchange Ratio) for the years ended December 31, 2017, 2016 and 2015, is as follows (shares in thousands, except per share data):

	Year Ended December 31,								
	2017			2016			2015		
	Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value	Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value	Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value
Outstanding, beginning of period	9,592	\$ 181.39		3,923	\$ 122.03		3,336	\$ 95.42	
Granted	1,175	\$ 302.87		5,999	\$ 218.91		1,176	\$ 177.14	
Converted TWC awards	—	\$ —		839	\$ 86.46		—	\$ —	
Exercised	(1,044)	\$ 124.32	\$ 219	(1,015)	\$ 96.33	\$ 146	(524)	\$ 72.27	\$ 68
Canceled	(74)	\$ 251.63		(154)	\$ 173.98		(65)	\$ 155.23	
Outstanding, end of period	<u>9,649</u>	<u>\$ 201.83</u>	<u>\$ 1,295</u>	<u>9,592</u>	<u>\$ 181.39</u>		<u>3,923</u>	<u>\$ 122.03</u>	
Weighted average remaining contractual life	8 years			8 years			7 years		
Options exercisable, end of period	<u>1,734</u>	<u>\$ 90.56</u>	<u>\$ 425</u>	<u>1,665</u>	<u>\$ 71.71</u>		<u>1,224</u>	<u>\$ 61.88</u>	
Options expected to vest, end of period	<u>7,915</u>	<u>\$ 226.20</u>	<u>\$ 869</u>						
Weighted average fair value of options granted	<u>\$ 73.67</u>			<u>\$ 47.42</u>			<u>\$ 66.20</u>		

A summary of the activity for Charter's restricted stock (after applying the Parent Merger Exchange Ratio) for the years ended December 31, 2017, 2016 and 2015, is as follows (shares in thousands, except per share data):

	Year Ended December 31,					
	2017		2016		2015	
	Shares	Weighted Average Grant Price	Shares	Weighted Average Grant Price	Shares	Weighted Average Grant Price
Outstanding, beginning of period	10	\$ 231.81	197	\$ 65.79	390	\$ 63.30
Granted	10	\$ 343.10	10	\$ 231.83	6	\$ 201.34
Vested	(10)	\$ 231.81	(197)	\$ 65.79	(199)	\$ 65.16
Canceled	—	\$ —	—	\$ —	—	\$ —
Outstanding, end of period	<u>10</u>	<u>\$ 343.10</u>	<u>10</u>	<u>\$ 231.81</u>	<u>197</u>	<u>\$ 65.79</u>

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A summary of the activity for Charter's restricted stock units (after applying the Parent Merger Exchange Ratio) for the years ended December 31, 2017, 2016 and 2015, is as follows (shares in thousands, except per share data):

	Year Ended December 31,					
	2017		2016		2015	
	Shares	Weighted Average Grant Price	Shares	Weighted Average Grant Price	Shares	Weighted Average Grant Price
Outstanding, beginning of period	3,313	\$ 192.41	337	\$ 150.96	294	\$ 115.01
Granted	285	\$ 302.76	895	\$ 213.09	148	\$ 179.17
Converted TWC awards	—	\$ —	4,162	\$ 224.90	—	\$ —
Vested	(1,159)	\$ 216.21	(1,739)	\$ 219.60	(90)	\$ 78.65
Canceled	(48)	\$ 234.99	(342)	\$ 219.91	(15)	\$ 155.43
Outstanding, end of period	<u>2,391</u>	<u>\$ 192.96</u>	<u>3,313</u>	<u>\$ 192.41</u>	<u>337</u>	<u>\$ 150.96</u>

16. Income Taxes

CCO Holdings is a single member limited liability company not subject to income tax. CCO Holdings holds all operations through indirect subsidiaries. The majority of these indirect subsidiaries are limited liability companies that are not subject to income tax. Certain indirect subsidiaries that are required to file separate returns are subject to federal and state tax. CCO Holdings' tax provision reflects the tax provision of the entities required to file separate returns.

Generally, the taxable income, gains, losses, deductions and credits of CCO Holdings are passed through to its indirect members, Charter and A/N. Charter is responsible for its share of taxable income or loss of CCO Holdings allocated to it in accordance with the Charter Holdings Limited Liability Company Agreement ("LLC Agreement") and partnership tax rules and regulations. Charter also records financial statement deferred tax assets and liabilities related to its investment, and its underlying net assets, in CCO Holdings.

Income Tax Benefit (Expense)

For the years ended December 31, 2017, 2016, and 2015, the Company recorded deferred income tax benefit (expense) as shown below. The tax provision in future periods will vary based on current and future temporary differences, as well as future operating results.

	Year Ended December 31,		
	2017	2016	2015
Current expense:			
Federal income taxes	\$ (1)	\$ —	\$ (1)
State income taxes	(15)	3	(3)
Current income tax benefit (expense)	<u>(16)</u>	<u>3</u>	<u>(4)</u>
Deferred benefit:			
Federal income taxes	—	—	180
State income taxes	(7)	(6)	34
Deferred income tax benefit (expense)	<u>(7)</u>	<u>(6)</u>	<u>214</u>
Income tax benefit (expense)	<u>\$ (23)</u>	<u>\$ (3)</u>	<u>\$ 210</u>

Income tax is recognized primarily through decreases (increases) in deferred tax liabilities, as well as through current federal and state income tax expense. Income tax benefit for the year ended December 31, 2015 was primarily the result of the deemed liquidation of Charter Holdco in July 2015. After the deemed liquidation of Charter Holdco, all taxable income, gains, losses,

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deductions and credits of Charter Holdco and its indirect subsidiaries were treated as income of Charter. The tax provision in future periods will vary based on future operating results, as well as future book versus tax differences.

In December 2017, the Tax Cuts & Jobs Act (“Tax Reform”) was enacted. While Charter received an income tax benefit as a result of Tax Reform, the Company was not materially impacted by the new provisions as it is a disregarded entity for federal tax purposes. Among other things, the primary provisions of Tax Reform impacting Charter was the reductions to the U.S. corporate income tax rate from 35% to 21% and temporary 100% bonus depreciation for certain assets. Where applicable, the change in tax law required Charter to remeasure existing net deferred tax liabilities using the lower rate in the period of enactment. Overall, the changes due to Tax Reform will favorably affect income tax expense on future U.S. earnings.

The Company’s effective tax rate differs from that derived by applying the applicable federal income tax rate of 35% for the years ended December 31, 2017, 2016, and 2015, respectively, as follows:

	Year Ended December 31,		
	2017	2016	2015
Statutory federal income taxes	\$ (317)	\$ (511)	\$ (50)
Statutory state income taxes, net	(23)	(3)	(3)
Income allocated to limited liability companies not subject to income taxes	317	511	50
Change in valuation allowance	—	—	20
Organizational restructuring	—	—	192
Other	—	—	1
Income tax benefit (expense)	<u>\$ (23)</u>	<u>\$ (3)</u>	<u>\$ 210</u>

Deferred Tax Assets (Liabilities)

The tax effects of these temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at December 31, 2017 and 2016 are presented below.

	December 31,	
	2017	2016
Deferred tax assets:		
Loss carryforwards	\$ 7	\$ —
Accrued and other	5	2
Deferred tax assets	<u>\$ 12</u>	<u>\$ 2</u>
Deferred tax liabilities:		
Indefinite-lived intangibles	\$ (25)	\$ (14)
Property, plant and equipment	(17)	(11)
Other intangibles	(2)	(2)
Deferred tax liabilities	<u>(44)</u>	<u>(27)</u>
Net deferred tax liabilities	<u>\$ (32)</u>	<u>\$ (25)</u>

Uncertain Tax Positions

In connection with the TWC Transaction, the Company assumed \$181 million of gross unrecognized tax benefits, exclusive of interest and penalties, which are recorded within other long-term liabilities. The net amount of the unrecognized tax benefits recorded as of December 31, 2017 that could impact the effective tax rate is \$144 million. The Company has determined that it is reasonably possible that its existing reserve for uncertain tax positions as of December 31, 2017 could decrease by approximately \$58 million during the year ended December 31, 2018 related to various ongoing audits, settlement discussions and expiration of statute of limitations with various state and local agencies; however, various events could cause the Company’s current expectations

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to change in the future. These uncertain tax positions, if ever recognized in the financial statements, would be recorded in the consolidated statements of operations as part of the income tax provision. A reconciliation of the beginning and ending amount of unrecognized tax benefits, exclusive of interest and penalties, included in other long-term liabilities on the accompanying consolidated balance sheets of the Company is as follows:

BALANCE, December 31, 2015	\$	—
Additions on tax positions assumed in the TWC Transaction		181
Reductions on settlements and expirations with taxing authorities		(22)
BALANCE, December 31, 2016	\$	159
Reductions on settlements and expirations with taxing authorities		(25)
BALANCE, December 31, 2017	\$	134

The Company recognizes interest and penalties accrued on uncertain income tax positions as part of the income tax provision. Interest and penalties included in other long-term liabilities on the accompanying consolidated balance sheets of the Company were \$38 million and \$33 million as of December 31, 2017 and 2016, respectively.

No tax years for Charter, Charter Holdings, or Charter Holdco, the Company's indirect parent companies, for income tax purposes, are currently under examination by the Internal Revenue Service ("IRS"). Charter and Charter Holdings' 2016 and 2017 tax years remain open for examination and assessment. Legacy Charter's tax years ending 2014 through the short period return dated May 17, 2016 remain subject to examination and assessment. Years prior to 2014 remain open solely for purposes of examination of Legacy Charter's loss and credit carryforwards. The IRS is currently examining Legacy TWC's income tax returns for 2011 through 2014. Legacy TWC's tax year 2015 remains subject to examination and assessment. Prior to Legacy TWC's separation from Time Warner Inc. ("Time Warner") in March 2009 (the "Separation"), Legacy TWC was included in the consolidated U.S. federal and certain state income tax returns of Time Warner. The IRS is currently examining Time Warner's 2008 through 2010 income tax returns. Time Warner's income tax returns for 2005 to 2007, which are periods prior to the Separation, were settled with the exception of an immaterial item that has been referred to the IRS Appeals Division. The Company does not anticipate that these examinations will have a material impact on the Company's consolidated financial position or results of operations. In addition, the Company is also subject to ongoing examinations of the Company's tax returns by state and local tax authorities for various periods. Activity related to these state and local examinations did not have a material impact on the Company's consolidated financial position or results of operations during the year ended December 31, 2017, nor does the Company anticipate a material impact in the future.

17. Related Party Transactions

The following sets forth certain transactions in which the Company and the directors, executive officers, and affiliates of the Company are involved or, in the case of the management arrangements, subsidiaries that are debt issuers that pay certain of their parent companies for services.

Charter is a party to management arrangements with Spectrum Management and certain of their subsidiaries. Under these agreements, Charter, Spectrum Management and Charter Holdco provide management services for the cable systems owned or operated by their subsidiaries. Costs associated with providing these services are charged directly to the Company's operating subsidiaries. All other costs incurred on behalf of Charter's operating subsidiaries are considered a part of the management fee. These costs are recorded as a component of operating costs and expenses, in the accompanying consolidated financial statements. The management fee charged to the Company's operating subsidiaries approximated the expenses incurred by Spectrum Management, Charter Holdco and Charter on behalf of the Company's operating subsidiaries in 2017, 2016 and 2015.

Liberty Broadband and A/N

On May 23, 2015, in connection with the execution of the Merger Agreement and the amendment of the Contribution Agreement, Charter entered into the Amended and Restated Stockholders Agreement with Liberty Broadband, A/N and Legacy Charter (the "Stockholders Agreement") and the LLC Agreement with Liberty Broadband and A/N. As of the closing of the Merger Agreement and the Contribution Agreement on May 18, 2016, the Stockholders Agreement replaced Legacy Charter's existing stockholders

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agreement with Liberty Broadband, dated September 29, 2014, and superseded the amended and restated stockholders agreement among Legacy Charter, Charter, Liberty Broadband and A/N, dated March 31, 2015.

Under the terms of the Stockholders Agreement, the number of Charter's directors is fixed at 13, and includes its CEO. Upon the closing of the Bright House Transaction, two designees selected by A/N became members of the board of directors of Charter and three designees selected by Liberty Broadband continued as members of the board of directors of Charter. The remaining eight directors are not affiliated with either A/N or Liberty Broadband. Each of A/N and Liberty Broadband is entitled to nominate at least one director to each of the committees of Charter's board of directors, subject to applicable stock exchange listing rules and certain specified voting or equity ownership thresholds for each of A/N and Liberty Broadband, and provided that the Nominating and Corporate Governance Committee and the Compensation and Benefit Committee each have at least a majority of directors independent from A/N, Liberty Broadband and the Company (referred to as the "unaffiliated directors"). Each of the Nominating and Corporate Governance Committee and the Compensation and Benefits Committee is currently comprised of three unaffiliated directors and one designee of each of A/N and Liberty Broadband. A/N and Liberty Broadband also have certain other committee designation and other governance rights. Upon the closing of the Bright House Transaction, Mr. Thomas Rutledge, the Company's CEO, became the chairman of the board of Charter.

In December 2016, Charter and A/N entered into a letter agreement (the "Letter Agreement") that requires A/N to sell to Charter or to Charter Holdings, on a monthly basis, a number of shares of Charter Class A common stock or Charter Holdings common units that represents a pro rata participation by A/N and its affiliates in any repurchases of shares of Charter Class A common stock from persons other than A/N effected by Charter during the immediately preceding calendar month, at a purchase price equal to the average price paid by Charter for the shares repurchased from persons other than A/N during such immediately preceding calendar month. A/N and Charter both have the right to terminate or suspend the pro rata repurchase arrangement on a prospective basis once Charter or Charter Holdings have repurchased shares of Class A common stock or Charter Holdings common units from A/N and its affiliates for an aggregate purchase price of \$537 million, which threshold has been met. On December 21, 2017, Charter and A/N entered into an amendment to the Letter Agreement resetting the aggregate purchase price to \$400 million. Pursuant to the TRA between Charter and A/N, Charter must pay to A/N 50% of the tax benefit when realized by Charter from the step-up in tax basis resulting from any future exchange or sale of the preferred and common units.

The Company is aware that Dr. John Malone may be deemed to have a 39.2% voting interest in Liberty Interactive and is Chairman of the board of directors, an executive officer position, of Liberty Interactive. Liberty Interactive wholly owns HSN, Inc. ("HSN") and QVC, Inc. ("QVC"). The Company has programming relationships with HSN and QVC which pre-date the transaction with Liberty Media Corporation. For the years ended December 31, 2017, 2016 and 2015, the Company recorded revenue in aggregate of approximately \$77 million, \$53 million and \$17 million, respectively, from HSN and QVC as part of channel carriage fees and revenue sharing arrangements for home shopping sales made to customers in the Company's footprint.

Dr. Malone and Mr. Steven Miron, each a member of Charter's board of directors, also serve on the board of directors of Discovery Communications, Inc., ("Discovery"). The Company is aware that Dr. Malone owns 93.6% of the series B common stock of Discovery, 6% of the series C common stock of Discovery and has a 28.1% voting interest in Discovery for the election of directors. The Company is aware that Advance/Newhouse Programming Partnership ("A/N PP"), an affiliate of A/N and in which Mr. Miron is the CEO, owns 100% of the Series A preferred stock of Discovery and 100% of the Series C preferred stock of Discovery and has a 31.1% voting interest for the election of directors. A/N PP has the right to appoint three directors out of a total of eleven directors to Discovery's board to be elected by the holders of Discovery's Series A preferred stock. In addition, Dr. Malone is a member of the board of directors of Lions Gate Entertainment Corp. ("Lions Gate," parent company of Starz, Inc.) and owns approximately 5.5% in the aggregate of the common stock of Lions Gate and has 7.9% of the voting power, pursuant to his ownership of Lions Gate Class A voting shares. The Company purchases programming from both Discovery and Lions Gate pursuant to agreements entered into prior to Dr. Malone and Mr. Miron joining Charter's board of directors. Based on publicly available information, the Company does not believe that either Discovery or Lions Gate would currently be considered related parties. The amounts paid in the aggregate to Discovery and Lions Gate represent less than 3% of total operating costs and expenses for the years ended December 31, 2017, 2016 and 2015.

Equity Investments

The Company and its parent companies have agreements with certain equity-method investees (see Note 7) pursuant to which the Company has made or received related party transaction payments. The Company and its parent companies recorded payments to equity-method investees totaling \$317 million, \$171 million and \$28 million during the years ended December 31, 2017, 2016

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and 2015, respectively. The Company recorded advertising revenues from transactions with equity-method investees totaling \$9 million and \$7 million during the years ended December 31, 2017 and 2016, respectively. There were no advertising revenues received in 2015.

18. Commitments and Contingencies

Commitments

The following table summarizes the Company's and its parent companies' payment obligations as of December 31, 2017 for its contractual obligations.

	Total	2018	2019	2020	2021	2022	Thereafter
Capital and Operating Lease Obligations ^(a)	\$ 1,512	\$ 286	\$ 235	\$ 199	\$ 165	\$ 132	\$ 495
Programming Minimum Commitments ^(b)	164	103	39	22	—	—	—
Other ^(c)	13,626	1,917	1,031	839	653	499	8,687
	<u>\$ 15,302</u>	<u>\$ 2,306</u>	<u>\$ 1,305</u>	<u>\$ 1,060</u>	<u>\$ 818</u>	<u>\$ 631</u>	<u>\$ 9,182</u>

^(a) The Company leases certain facilities and equipment under non-cancelable capital and operating leases. Capital lease obligations represented \$123 million of total capital and operating lease obligations as of December 31, 2017. Leases and rental costs charged to expense for the years ended December 31, 2017, 2016 and 2015 were \$321 million, \$215 million, \$49 million, respectively.

^(b) The Company pays programming fees under multi-year contracts ranging from three to ten years, typically based on a flat fee per customer, which may be fixed for the term, or may in some cases escalate over the term. Programming costs included in the statement of operations were \$10.6 billion, \$7.0 billion and \$2.7 billion for the years ended December 31, 2017, 2016 and 2015 respectively. Certain of the Company's programming agreements are based on a flat fee per month or have guaranteed minimum payments. The table sets forth the aggregate guaranteed minimum commitments under the Company's programming contracts.

^(c) "Other" represents other guaranteed minimum commitments, including rights negotiated directly with content owners for distribution on company-owned channels or networks, commitments related to our role as an advertising and distribution sales agent for third party-owned channels or networks, commitments to our customer premise equipment vendors and contractual obligations related to third-party network augmentation.

The following items are not included in the contractual obligation table due to various factors discussed below. However, the Company incurs these costs as part of its operations:

- The Company rents utility poles used in its operations. Generally, pole rentals are cancelable on short notice, but the Company anticipates that such rentals will recur. Rent expense incurred for pole rental attachments for the years ended December 31, 2017, 2016 and 2015 was \$167 million, \$115 million and \$53 million, respectively.
- The Company pays franchise fees under multi-year franchise agreements based on a percentage of revenues generated from video service per year. The Company also pays other franchise related costs, such as public education grants, under multi-year agreements. Franchise fees and other franchise-related costs included in the accompanying statement of operations were \$705 million, \$534 million and \$212 million for the years ended December 31, 2017, 2016 and 2015 respectively.
- The Company has \$291 million in letters of credit, of which \$137 million is secured under the Charter Operating credit facility, primarily to its various casualty carriers as collateral for reimbursement of workers' compensation, auto liability and general liability claims.
- Minimum pension funding requirements have not been presented in the table above as such amounts have not been determined beyond 2017. The Company made no cash contributions to the qualified pension plans in 2017; however, the Company is permitted to make discretionary cash contributions to the qualified pension plans in 2018. For the nonqualified pension plan, the Company contributed \$18 million during 2017 and will continue to make contributions in 2018 to the extent benefits are paid.

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Legal Proceedings

In August 2015, a purported stockholder of Charter, Matthew Sciabacucchi, filed a lawsuit in the Delaware Court of Chancery, on behalf of a putative class of Charter stockholders, challenging the transactions between Charter, TWC, A/N, and Liberty Broadband announced by Charter on May 26, 2015. The lawsuit names as defendants Liberty Broadband, Legacy Charter, the board of directors of Charter, and Charter. Plaintiff alleges that the Liberty Transactions improperly benefit Liberty Broadband at the expense of other Charter shareholders. Charter filed a motion to dismiss this litigation. The Court of Chancery has not yet made a final ruling on the motion to dismiss. Charter denies any liability, believes that it has substantial defenses, and intends to vigorously defend this suit. Although Charter is unable to predict the outcome of this lawsuit, it does not expect the outcome will have a material effect on its operations, financial condition or cash flows.

The California Attorney General and the Alameda County, California District Attorney are investigating whether certain of Legacy Charter's waste disposal policies, procedures and practices are in violation of the California Business and Professions Code and the California Health and Safety Code. That investigation was commenced in January 2014. A similar investigation involving Legacy TWC was initiated in February 2012. Charter is cooperating with these investigations. While the Company is unable to predict the outcome of these investigations, it does not expect that the outcome will have a material effect on its operations, financial condition, or cash flows.

On December 19, 2011, Sprint Communications Company L.P. ("Sprint") filed a complaint in the U.S. District Court for the District of Kansas alleging that Legacy TWC infringed certain U.S. patents purportedly relating to Voice over Internet Protocol ("VoIP") services. A trial began on February 13, 2017. On March 3, 2017 the jury returned a verdict of \$140 million against Legacy TWC and further concluded that Legacy TWC had willfully infringed Sprint's patents. The court subsequently declined to enhance the damage award as a result of the purported willful infringement and awarded Sprint an additional \$6 million, representing pre-judgment interest on the damages award. The Company has appealed the case to the United States Court of Appeals for the Federal Circuit. In addition to its appeal, the Company continues to pursue indemnity from one of its vendors. The impact of the verdict was reflected in the measurement period adjustments to net current liabilities as described in Note 3. The Company does not expect that the outcome of this litigation will have a material adverse effect on its operations or financial condition. The ultimate outcome of this litigation or the pursuit of indemnity against the Company's vendor cannot be predicted.

Subsequently, on December 2, 2017, Sprint filed suit against Charter in the United States District Court for the District of Delaware. The new suit alleges infringement of 15 patents related to the Company's provision of voice services (ten of which were already asserted against Legacy TWC in the matter described above). Charter is investigating the allegations and will vigorously defend this case. While the Company is unable to predict the outcome of its investigations, it does not expect that this litigation will have a material effect on its operations, financial condition, or cash flows.

On October 23, 2015, the New York Office of the Attorney General (the "NY AG") began an investigation of Legacy TWC's advertised Internet speeds and other Internet product advertising. On February 1, 2017, the NY AG filed suit in the Supreme Court for the State of New York alleging that Legacy TWC's advertising of Internet speeds was false and misleading. The suit seeks restitution and injunctive relief. The Company has moved to dismiss the NY AG's complaint and the Company intends to defend itself vigorously. Although no assurances can be made that such defenses would ultimately be successful, the Company does not expect that the outcome of this litigation will have a material adverse effect on its operations, financial condition or cash flows.

The Company and its parent companies are defendants or co-defendants in several additional lawsuits involving alleged infringement of various patents relating to various aspects of their businesses. Other industry participants are also defendants in certain of these cases. In the event that a court ultimately determines that the Company infringes on any intellectual property rights, the Company may be subject to substantial damages and/or an injunction that could require the Company or its vendors to modify certain products and services the Company offers to its subscribers, as well as negotiate royalty or license agreements with respect to the patents at issue. While the Company believes the lawsuits are without merit and intends to defend the actions vigorously, no assurance can be given that any adverse outcome would not be material to the Company's consolidated financial condition, results of operations, or liquidity. The Company cannot predict the outcome of any such claims nor can it reasonably estimate a range of possible loss.

The Company and its parent companies are party to lawsuits, claims and regulatory inquiries that arise in the ordinary course of conducting their business. The ultimate outcome of these other legal matters pending against the Company cannot be predicted,

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and although such lawsuits and claims are not expected individually to have a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity, such lawsuits could have, in the aggregate, a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity. Whether or not the Company ultimately prevails in any particular lawsuit or claim, litigation can be time consuming and costly and injure the Company's reputation.

19. Employee Benefit Plans

Pension Plans

The Company sponsors two qualified defined benefit pension plans, the TWC Pension Plan and the TWC Union Pension Plan, that provide pension benefits to a majority of Legacy TWC employees. The Company also provides a nonqualified defined benefit pension plan for certain employees under the TWC Excess Pension Plan.

Changes in the projected benefit obligation, fair value of plan assets and funded status of the pension plans from January 1 through December 31 are presented below:

	2017	2016
Projected benefit obligation at beginning of year	\$ 3,260	\$ —
Benefit obligation assumed in the TWC Transaction	—	4,009
Service cost	—	86
Interest cost	133	87
Curtailed amendment	—	(675)
Actuarial (gain) loss	406	(149)
Settlement	(185)	—
Benefits paid	(45)	(98)
Projected benefit obligation at end of year	<u>\$ 3,569</u>	<u>\$ 3,260</u>
Accumulated benefit obligation at end of year	<u>\$ 3,569</u>	<u>\$ 3,260</u>
Fair value of plan assets at beginning of year	\$ 2,946	\$ —
Fair value of plan assets acquired in the TWC Transaction	—	2,877
Actual return on plan assets	539	162
Employer contributions	18	5
Settlement	(185)	—
Benefits paid	(45)	(98)
Fair value of plan assets at end of year	<u>\$ 3,273</u>	<u>\$ 2,946</u>
Funded status	<u>\$ (296)</u>	<u>\$ (314)</u>

The projected benefit obligation, accumulated benefit obligation and fair value of plan assets for the qualified pension plans and the nonqualified pension plan as of December 31, 2017 and 2016 consisted of the following:

	Qualified Pension Plans		Nonqualified Pension Plan	
	December 31,		December 31,	
	2017	2016	2017	2016
Projected benefit obligation	\$ 3,528	\$ 3,204	\$ 41	\$ 56
Accumulated benefit obligation	\$ 3,528	\$ 3,204	\$ 41	\$ 56
Fair value of plan assets	\$ 3,273	\$ 2,946	\$ —	\$ —

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Pretax amounts recognized in the consolidated balance sheet as of December 31, 2017 and 2016 consisted of the following:

	December 31,	
	2017	2016
Noncurrent asset	\$ 1	\$ 1
Current liability	(5)	(6)
Long-term liability	(292)	(309)
Net amounts recognized in consolidated balance sheet	<u>\$ (296)</u>	<u>\$ (314)</u>

The components of net periodic benefit costs for the years ended December 31, 2017 and 2016 consisted of the following:

	Year Ended December 31,	
	2017	2016
Service cost	\$ —	\$ 86
Interest cost	133	87
Expected return on plan assets	(189)	(116)
Pension curtailment gain	—	(675)
Remeasurement (gain) loss	55	(195)
Net periodic pension (benefit) cost	<u>\$ (1)</u>	<u>\$ (813)</u>

During the year ended December 31, 2017, lump-sum distributions to qualified and nonqualified pension plan participants exceeded the estimated annual interest cost of the plans resulting in a settlement for accounting purposes. As a result, the pension liability and pension asset values were reassessed as of September 30, 2017 utilizing remeasurement date assumptions in accordance with the Company's mark-to-market pension accounting policy to record gains and losses in the period in which a remeasurement event occurs. The \$55 million remeasurement loss recorded during the year ended December 31, 2017 was primarily driven by the adoption of the revised lump sum conversion mortality tables published by the IRS effective January 1, 2018 and the effects of a decrease of the discount rate from 4.20% at December 31, 2016 to 3.68% at December 31, 2017, partially offset by an actuarial gain on pension asset actual returns. Approximately \$30 million of the remeasurement loss was recorded for the interim remeasurement event as of September 30, 2017 and \$25 million was recorded for the annual remeasurement as of December 31, 2017.

The \$195 million remeasurement gain recorded during the year ended December 31, 2016 was primarily driven by the effects of an increase of the discount rate from 3.99% at the closing date of the TWC Transaction to 4.20% at December 31, 2016 and a gain to record pension assets at December 31, 2016 fair values.

The discount rates used to determine benefit obligations as of December 31, 2017 and 2016 were 3.68% and 4.20%, respectively. The Company utilized the RP 2015/MP2015 mortality tables published by the Society of Actuaries to measure the benefit obligations as of December 31, 2017 and 2016.

Weighted average assumptions used to determine net periodic benefit costs for the years ended December 31, 2017 and 2016 consisted of the following:

	Year ended December 31,	
	2017	2016
Expected long-term rate of return on plan assets	6.50%	6.50%
Discount rate ^(a)	3.88%	3.72%
Rate of compensation increase ^(b)	—%	—%

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- (a) The discount rate used to determine net periodic pension benefit was 4.20% from January 1, 2017 through remeasurement date (September 30, 2017), and was 3.88% from remeasurement date through December 31, 2017. The discount rate used to determine net periodic pension benefit was 3.99% from the closing date of the TWC Transaction through remeasurement date (June 30, 2016), and was 3.72% from remeasurement date through December 31, 2016.
- (b) The rate of compensation increase used to determine net periodic pension benefit was 4.25% from the closing date of the TWC Transaction through remeasurement date (June 30, 2016), and 0% thereafter. See “Pension Plan Curtailment Amendment” below for further discussion.

In developing the expected long-term rate of return on plan assets, the Company considered the pension portfolio’s composition, past average rate of earnings and the Company’s future asset allocation targets. The weighted average expected long-term rate of return on plan assets and discount rate used to determine net periodic pension benefit for the year ended December 31, 2018 are expected to be 6.50% and 3.68%, respectively. The Company determined the discount rates used to determine benefit obligations and net periodic pension benefit based on the yield of a large population of high quality corporate bonds with cash flows sufficient in timing and amount to settle projected future defined benefit payments.

Pension Plan Curtailment Amendment

Following the closing of the TWC Transaction, Charter amended the pension plans to freeze future benefit accruals to current active plan participants as of August 31, 2016. Effective September 1, 2016, no future compensation increases or future service will be credited to participants of the pension plans and new hires are not eligible to participate in the plans. Upon announcement and approval of the plan amendment, the assumptions underlying the pension liability and pension asset values were reassessed utilizing remeasurement date assumptions in accordance with Charter’s mark-to-market pension accounting policy to record gains and losses in the period in which a remeasurement event occurs. The \$675 million curtailment gain recorded during the year ended December 31, 2016 was primarily driven by the reduction of the compensation rate assumption to 0% in accordance with the terms of the plan amendment, reflecting the pension liability at its accumulated benefit obligation instead of its projected benefit obligation at the remeasurement date.

Pension Plan Assets

The assets of the qualified pension plans are held in a master trust in which the qualified pension plans are the only participating plans (the “Master Trust”). The investment policy for the qualified pension plans is to manage the assets of the Master Trust with the objective to provide for pension liabilities to be met, maintaining retirement income security for the participants of the plans and their beneficiaries. The investment portfolio is a mix of pooled funds invested in fixed income and equity securities with the objective of matching plan liability performance, diversifying risk and achieving a target investment return. The pension plan’s Investment Committee establishes risk mitigation policies and regularly monitors investment performance, investment allocation policies, and the execution of these strategies. The Investment Committee engages a third-party investment firm with responsibility of executing the directives of the Investment Committee, monitoring the performance of individual investment managers of the Master Trust, and making adjustments and changes within defined parameters when necessary. On a periodic basis, the Investment Committee conducts a broad strategic review of its portfolio construction and investment allocation policies. Neither the Company, the Investment Committee, nor the third-party investment firm manages any assets internally or directly utilizes derivative instruments or hedging; however, the investment mandate of some investment managers allows the use of derivatives as components of their standard portfolio management strategies. Pension assets are managed in a balanced portfolio comprised of two major components: a return-seeking portion and a liability-matching portion. The expected role of return-seeking investments is to achieve a reasonable long-term growth of pension assets with a prudent level of risk using asset diversity in order to balance return and volatility, while the role of liability-matching investments is to provide a partial economic hedge against liability performance associated with changes in interest rates.

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The Company adopted an investment strategy referred to as a de-risking glide path to increase the fixed income allocation as the funded status of the qualified pension plans improves. As the qualified pension plans reach set funded status milestones, the assets will be rebalanced to shift more assets from equity to fixed income. Based on the progress with this strategy, the target investment allocation for pension fund assets is permitted to vary within specified ranges subject to Investment Committee approval for return-seeking securities and liability-matching securities. The target and actual investment allocation of the qualified pension plans by asset category as of December 31, 2017 and 2016 consisted of the following:

	Target Allocation	Actual Allocation	
		December 31, 2017	2016
Return-seeking securities	75.0%	73.1%	64.4%
Liability-matching securities	25.0%	26.7%	35.4%
Other investments	—%	0.2%	0.2%

The following table sets forth the investment assets of the qualified pension plans, which exclude accrued investment income and investments with a fair value measured at net asset value per share as a practical expedient, by level within the fair value hierarchy as of December 31, 2017:

	December 31, 2017			
	Fair Value	Level 1	Level 2	Level 3
Cash	\$ 3	\$ 3	\$ —	\$ —
Commingled equity funds ^(a)	2,368	—	2,368	—
Corporate debt securities ^(b)	1	—	1	—
Commingled bond funds ^(a)	795	—	795	—
Collective trust funds ^(c)	68	—	68	—
Total investment assets	3,235	\$ 3	\$ 3,232	\$ —
Accrued investment income and other receivables ^(d)	34			
Investments measured at net asset value ^(e)	4			
Fair value of plan assets	\$ 3,273			

^(a) Commingled funds primarily include global equity index, corporate bond, and U.S. treasury securities. The funds are valued using the net asset value provided by the administrator of the fund. The fair value of each fund is based on the fair value of securities in the portfolio, which represents the amount that the fund might reasonably expect to receive for the securities upon a sale, less liabilities, and then divided by the number of units outstanding. These funds are valued using observable inputs on either a daily or weekly basis and the resulting value serves as a basis for current transactions.

^(b) Corporate debt securities are valued based on observable prices from the new issue market, benchmark quotes, secondary trading and dealer quotes. An option adjusted spread model is incorporated to adjust spreads of issues that have early redemption features and final spreads are added to the U.S. Treasury curve.

^(c) Collective trust funds primarily consist of short-term investment strategies comprised of instruments issued or fully guaranteed by the U.S. government and/or its agencies and are valued using the net asset value provided by the administrator of the fund. The net asset value is based on the readily determinable value of the underlying assets owned by the fund, less liabilities, and then divided by the number of units outstanding.

^(d) Accrued investment income includes dividends and interest receivable.

^(e) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. These investments primarily consist of hedge funds, which includes hard to value or illiquid securities. The fair value of each fund is based on the fair value of assets in the portfolio, which represents the amount that the fund might reasonably expect to receive for the assets upon a sale, less liabilities, and then divided by the number of units outstanding. Certain hedge funds report net asset value per share on a quarter lag. Shares of the funds are not redeemable and the underlying assets are anticipated to be liquidated and distributed to investors in the near term. There are

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no material unfunded commitments with respect to these investments. The fair value amounts presented in this table are intended to permit the reconciliation of the fair value hierarchy to the total fair value of plan assets discussed throughout this footnote.

The following table sets forth the investment assets of the qualified pension plans, which exclude accrued investment income and other receivables, accrued liabilities, and investments with a fair value measured at net asset value per share as a practical expedient, by level within the fair value hierarchy as of December 31, 2016:

	December 31, 2016			
	Fair Value	Level 1	Level 2	Level 3
Cash	\$ 2	\$ 2	\$ —	\$ —
Common stocks:				—
Domestic ^(a)	1,065	1,065	—	—
International ^(a)	391	391	—	—
Commingled equity funds ^(b)	348	—	348	—
Other equity securities ^(c)	3	3	—	—
Corporate debt securities ^(d)	394	—	394	—
Commingled bond funds ^(b)	273	—	273	—
U.S. Treasury debt securities ^(a)	260	260	—	—
Collective trust funds ^(e)	75	—	75	—
U.S. government agency asset-backed debt securities ^(f)	53	—	53	—
Corporate asset-backed debt securities ^(g)	2	—	2	—
Other fixed-income securities ^(h)	89	—	89	—
Total investment assets	2,955	\$ 1,721	\$ 1,234	\$ —
Accrued investment income and other receivables ⁽ⁱ⁾	107			
Accrued liabilities ⁽ⁱ⁾	(120)			
Investments measured at net asset value ^(j)	4			
Fair value of plan assets	\$ 2,946			

^(a) Common stocks, mutual funds and U.S. Treasury debt securities are valued at the closing price reported on the active market on which the individual securities are traded. No single industry comprised a significant portion of common stock held by the qualified pension plan as of December 31, 2016.

^(b) Commingled equity funds and commingled bond funds are valued using the net asset value provided by the administrator of the fund. The fair value of each fund is based on the fair value of securities in the portfolio, which represents the amount that the fund might reasonably expect to receive for the securities upon a sale, less liabilities, and then divided by the number of units outstanding. These funds are valued using observable inputs on either a daily or weekly basis and the resulting value serves as a basis for current transactions.

^(c) Other equity securities consist of preferred stocks, which are valued at the closing price reported on the active market on which the individual securities are traded.

^(d) Corporate debt securities are valued based on observable prices from the new issue market, benchmark quotes, secondary trading and dealer quotes. An option adjusted spread model is incorporated to adjust spreads of issues that have early redemption features and final spreads are added to the U.S. Treasury curve.

^(e) Collective trust funds primarily consist of short-term investment strategies comprised of instruments issued or fully guaranteed by the U.S. government and/or its agencies and are valued using the net asset value provided by the administrator of the fund. The net asset value is based on the readily determinable value of the underlying assets owned by the fund, less liabilities, and then divided by the number of units outstanding.

^(f) U.S. government agency asset-backed debt securities consist of pass-through mortgage-backed securities issued by the Federal Home Loan Mortgage Corporation and the Federal National Mortgage Association valued using available trade information, dealer quotes, market indices and research reports, spreads, bids and offers.

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- (g) Corporate asset-backed debt securities primarily consist of pass-through mortgage-backed securities issued by U.S. and foreign corporations valued using available trade information, dealer quotes, market indices and research reports, spreads, bids and offers.
- (h) Other fixed-income securities consist of foreign government debt securities, municipal bonds and U.S. government agency debt securities, which are valued based on observable prices from the new issue market, benchmark quotes, secondary trading and dealer quotes. An option adjusted spread model is incorporated to adjust spreads of issues that have early redemption features and final spreads are added to the U.S. Treasury curve.
- (i) Accrued investment income and other receivables includes amounts receivable under foreign exchange contracts of \$70 million as of December 31, 2016. Accrued liabilities includes amounts accrued under foreign exchange contracts of \$71 million as of December 31, 2016. The fair value of the assets and liabilities associated with these foreign exchange contracts are presented on a gross basis and are valued using the exchange rates in effect for the applicable currencies as of the valuation date (a Level 1 fair value measurement).
- (j) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. These investments primarily consist of hedge funds valued utilizing net asset value provided by the administrator of the fund, which is based on the value of the underlying assets owned by the fund, less liabilities, and then divided by the number of units outstanding. Shares of the fund are not redeemable and the underlying assets are anticipated to be liquidated and distributed to investors in the near term. There are no material unfunded commitments with respect to these investments. The fair value amounts presented in this table are intended to permit the reconciliation of the fair value hierarchy to the total fair value of plan assets discussed throughout this footnote.

Pension Plan Contributions

The Company made no cash contributions to the qualified pension plans during the years ended December 31, 2017 and 2016; however, the Company may make discretionary cash contributions to the qualified pension plans in the future. Such contributions will be dependent on a variety of factors, including current and expected interest rates, asset performance, the funded status of the qualified pension plans and management's judgment. For the nonqualified unfunded pension plan, the Company will continue to make contributions during 2018 to the extent benefits are paid.

Benefit payments for the pension plans are expected to be \$186 million in 2018, \$188 million in 2019, \$191 million in 2020, \$192 million in 2021, \$193 million in 2022 and \$944 million in 2023 to 2027.

Multiemployer Plans

The Company contributes to a number of multiemployer plans under the terms of collective-bargaining agreements that cover its union-represented employees. Such multiemployer plans provide medical, pension and retirement savings benefits to active employees and retirees. The Company made contributions to multiemployer plans of \$18 million and \$31 million for the years ended December 31, 2017 and 2016, respectively.

The risks of participating in multiemployer pension plans are different from single-employer pension plans in the following aspects: (a) assets contributed to a multiemployer pension plan by one employer may be used to provide benefits to employees of other participating employers, (b) if a participating employer stops contributing to the multiemployer pension plan, the unfunded obligations of the plan may be borne by the remaining participating employers and (c) if the Company chooses to stop participating in any of the multiemployer pension plans, it may be required to pay those plans an amount based on the underfunded status of the plan, referred to as a withdrawal liability. The Company records withdrawal liabilities as other long-term liabilities in the consolidated balance sheets. As of December 31, 2017, other long-term liabilities includes approximately \$83 million related to the Company's withdrawal from a multiemployer pension plan.

The multiemployer pension plans to which the Company has contributed each received a Pension Protection Act "green" zone status in 2016. The zone status is based on the most recent information the Company received from the plan and is certified by the plan's actuary. Among other factors, plans in the green zone are at least 80% funded.

Defined Contribution Benefit Plans

The Company's employees may participate in the Charter Communications, Inc. 401(k) Plan (the "401(k) Plan"). Employees that qualify for participation can contribute up to 50% of their salary, on a pre-tax basis, subject to a maximum contribution limit as

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determined by the Internal Revenue Service. The Company's matching contribution is discretionary and is equal to 100% of the amount of the salary reduction the participant elects to defer (up to 6% of the participant's eligible compensation), excluding any catch-up contributions and is paid by the Company on a per pay period basis. The Company made contributions to the 401(k) plan totaling \$274 million, \$147 million and \$23 million for the years ended December 31, 2017, 2016 and 2015, respectively.

For employees who are not eligible to participate in the Company's long-term incentive plan and who are not covered by a collective bargaining agreement, the Company offers a contribution to the new Retirement Accumulation Plan ("RAP"), equal to 3% of eligible pay. The Company made contributions to the RAP totaling \$139 million and \$48 million for the years ended December 31, 2017 and 2016, respectively.

20. Recently Issued Accounting Standards

Accounting Standards Adopted January 1, 2017

In March 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting*, which includes multiple provisions intended to simplify various aspects of the accounting for share-based payments. The new standard (1) requires all excess tax benefits and deficiencies to be recognized as income tax expense or benefit in the income statement in the period in which they occur regardless of whether the benefit reduces taxes payable in the current period, (2) requires classification of excess tax benefits as an operating activity on the statements of cash flows, (3) allows an entity to make an entity-wide accounting policy election to either estimate the number of awards that are expected to vest or account for forfeitures when they occur and (4) causes the threshold under which employee share-based awards partially settled in cash can qualify for equity classification to increase to the maximum statutory tax rates in the applicable jurisdiction. The new standard generally requires a modified retrospective transition through a cumulative-effect adjustment as of the beginning of the period of adoption, with certain provisions requiring either a prospective or retrospective transition. The Company adopted ASU 2016-09 on January 1, 2017. Upon adoption of ASU 2016-09, the Company recognized excess tax benefits in deferred tax assets that were previously not recognized in a cumulative-effect adjustment to retained earnings. The Company will prospectively record a deferred tax benefit or expense associated with the difference between book and tax for stock compensation expense. On January 1, 2017, the Company also established an accounting policy election to assume zero forfeitures for stock award grants and account for forfeitures when they occur which prospectively impacts stock compensation expense.

In March 2017, the FASB issued ASU No. 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* ("ASU 2017-07"), which requires employers to report the service cost component of net periodic pension cost in the same line item as other compensation costs arising from services rendered during the period. The standard also requires the other components of net periodic cost be presented in the income statement separately from the service cost component and outside of a subtotal of income from operations. ASU 2017-07 will be effective for annual periods beginning after December 15, 2017, and early adoption is permitted. The new standard requires retrospective application and allows a practical expedient that permits an employer to use the amounts disclosed in its pension plan footnote for the prior comparative periods as the estimation basis for applying the retrospective presentation. The Company early adopted ASU 2017-07 on January 1, 2017 and utilized the practical expedient to estimate the impact on the prior comparative period information presented in interim and annual financial statements. The Company previously recorded service cost with other compensation costs in operating costs and expenses in the consolidated statements of operations, and recorded other pension costs (benefits), in other operating expenses, net. Adoption of the standard results in the reclassification of other pension costs (benefits) to other expenses, net (non-operating). Adopting the standard reduced 2016 income from operations presented for comparative purposes in the 2017 annual financial statements by \$899 million with a corresponding decrease to other expenses of \$899 million, with no impact to net income. ASU 2017-07 does not impact the consolidated balance sheets or statements of cash flows.

Accounting Standards Adopted January 1, 2018

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"), which is a comprehensive revenue recognition standard that will supersede nearly all existing revenue recognition guidance under U.S. GAAP. The new standard provides a single principles-based, five-step model to be applied to all contracts with customers, which steps are to (1) identify the contract(s) with the customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract and (5) recognize revenue when each performance obligation is satisfied. Charter adopted ASU 2014-09 as of the January 1, 2018 using the modified retrospective transition method with a cumulative-effect adjustment to equity as will be fully presented in the Company's Quarterly Report on

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Form 10-Q for the three months ended March 31, 2018. The adoption of the new standard did not have a material impact on the Company's financial position or results of operation. Previously reported results will not be restated under this transition method. The Company has implemented new processes and internal controls to enable the preparation of financial information on adoption. The adoption results in the deferral of residential installation revenues and enterprise commission expenses over a period of time instead of recognized immediately and the reclassification to operating costs and expenses the amortization of up-front fees paid to market and serve customers who reside in residential MDUs instead of amortized as an intangible to depreciation and amortization expense. The adoption of ASU 2014-09 will also result in additional disclosures around nature and timing of the Company's performance obligations, deferred revenue contract liabilities, deferred contract cost assets, as well as significant judgments and practical expedients used by the Company in applying the five-step revenue model.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"), which clarifies how entities should classify cash receipts and cash payments related to eight specific cash flow matters on the statement of cash flows, with the objective of reducing existing diversity in practice. The Company adopted ASU 2016-15 on January 1, 2018. The adoption of ASU 2016-15 did not have a material impact to the Company's consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* ("ASU 2016-18") which requires that amounts generally described as restricted cash to be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 does not provide a definition of restricted cash or restricted cash equivalents. The Company adopted ASU 2016-18 on January 1, 2018. The new guidance will only be applicable to amounts described by the Company as restricted cash. The adoption of ASU 2016-18 did not have a material impact to the Company's consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, *Scope of Modification Accounting* ("ASU 2017-09"), which amends the scope of modification accounting for share-based payment arrangements. The ASU provides guidance on the types of changes to the terms or conditions of share-based payment awards to which an entity would be required to apply modification accounting. ASU 2017-09 is applied prospectively to awards modified on or after the effective date. The Company adopted ASU 2017-09 on January 1, 2018. The adoption of ASU 2017-09 did not have a material impact to the Company's consolidated financial statements.

Accounting Standards Not Yet Adopted

In February 2016, the FASB issued ASU No. 2016-02, *Leases* ("ASU 2016-02"), which requires lessees to recognize almost all leases on their balance sheet as a right-of-use asset and a lease liability. Lessees are allowed to account for short-term leases (i.e., leases with a term of 12 months or less) off-balance sheet, consistent with current operating lease accounting. For income statement purposes, the FASB retained a dual model, requiring leases to be classified as either operating or finance. Classification will be based on criteria that are largely similar to those applied in current lease accounting, but without explicit bright lines. ASU 2016-02 will be effective for interim and annual periods beginning after December 15, 2018 (January 1, 2019 for the Company). The new standard currently requires a modified retrospective transition through a cumulative-effect adjustment as of the beginning of the earliest period presented in the financial statements, although an option for transition relief to not restate or make required disclosures under the new standard in comparative periods in the period of adoption was recently exposed by the FASB for public comment. The Company is currently in the process of evaluating the impact that the adoption of ASU 2016-02 will have on its consolidated financial statements including identifying the population of leases, evaluating technology solutions and collecting lease data. The Company expects its leases designated as operating leases in Note 20 will be reported on the consolidated balance sheets upon adoption. The Company is currently evaluating the impact to its consolidated financial statements as it relates to other embedded lease arrangements of the business.

In January 2017, the FASB issued ASU No. 2017-04, *Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"), which eliminates step two from the goodwill impairment test. Under the new standard, to the extent the carrying amount of a reporting unit exceeds the fair value, the Company will record an impairment charge equal to the difference. The impairment charge recognized should not exceed the total amount of goodwill allocated to the reporting unit. ASU 2017-04 will be effective for interim and annual periods beginning after December 15, 2019 (January 1, 2020 for the Company). Early adoption is permitted for interim or annual goodwill impairment tests performed after January 1, 2017. The Company is currently in the process of evaluating the impact that the adoption of ASU 2017-04 will have on its consolidated financial statements.

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21. Consolidating Schedules

Each of Charter Operating, TWC, LLC, TWCE, CCO Holdings and certain subsidiaries jointly, severally, fully and unconditionally guarantee the outstanding debt securities of the others (other than the CCO Holdings notes) on an unsecured senior basis and the condensed consolidating financial information has been prepared and presented pursuant to SEC Regulation S-X Rule 3-10, *Financial Statements of Guarantors and Issuers of Guaranteed Securities Registered or Being Registered*. Certain Charter Operating subsidiaries that are regulated telephone entities only become guarantor subsidiaries upon approval by regulators. This information is not intended to present the financial position, results of operations and cash flows of the individual companies or groups of companies in accordance with generally accepted accounting principles.

The “Charter Operating and Restricted Subsidiaries” column is presented to comply with the terms of the Credit Agreement.

The “Unrestricted Subsidiary” column included in the condensed consolidating financial statements for the year ended December 31, 2015 consists of CCO Safari which was a non-recourse subsidiary under the Credit Agreement and held the CCO Safari Term G Loans that were repaid in April 2015.

Condensed consolidating financial statements as of December 31, 2017 and 2016 and for the years ended December 31, 2017, 2016 and 2015 follow.

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CCO Holdings, LLC
Condensed Consolidating Balance Sheet
As of December 31, 2017

ASSETS	Guarantor Subsidiaries			CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Eliminations	
CURRENT ASSETS:				
Cash and cash equivalents	\$ —	\$ 330	\$ —	\$ 330
Accounts receivable, net	—	1,611	—	1,611
Receivables from related party	55	—	(55)	—
Prepaid expenses and other current assets	—	243	—	243
Total current assets	55	2,184	(55)	2,184
INVESTMENT IN CABLE PROPERTIES:				
Property, plant and equipment, net	—	33,552	—	33,552
Customer relationships, net	—	11,951	—	11,951
Franchises	—	67,319	—	67,319
Goodwill	—	29,554	—	29,554
Total investment in cable properties, net	—	142,376	—	142,376
INVESTMENT IN SUBSIDIARIES	81,980	—	(81,980)	—
LOANS RECEIVABLE – RELATED PARTY	511	—	(511)	—
OTHER NONCURRENT ASSETS	—	1,133	—	1,133
Total assets	\$ 82,546	\$ 145,693	\$ (82,546)	\$ 145,693
LIABILITIES AND MEMBER'S EQUITY				
CURRENT LIABILITIES:				
Accounts payable and accrued liabilities	\$ 280	\$ 7,861	\$ —	\$ 8,141
Payables to related party	—	690	(55)	635
Current portion of long-term debt	—	2,045	—	2,045
Total current liabilities	280	10,596	(55)	10,821
LONG-TERM DEBT	18,708	49,478	—	68,186
LOANS PAYABLE – RELATED PARTY	—	1,399	(511)	888
DEFERRED INCOME TAXES	—	32	—	32
OTHER LONG-TERM LIABILITIES	—	2,184	—	2,184
MEMBER'S EQUITY				
Controlling interest	63,558	81,980	(81,980)	63,558
Noncontrolling interests	—	24	—	24
Total member's equity	63,558	82,004	(81,980)	63,582
Total liabilities and member's equity	\$ 82,546	\$ 145,693	\$ (82,546)	\$ 145,693

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CCO Holdings, LLC
Condensed Consolidating Balance Sheet
As of December 31, 2016

ASSETS	Guarantor Subsidiaries			CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Eliminations	
CURRENT ASSETS:				
Cash and cash equivalents	\$ —	\$ 1,324	\$ —	\$ 1,324
Accounts receivable, net	—	1,387	—	1,387
Receivables from related party	62	—	(62)	—
Prepaid expenses and other current assets	—	300	—	300
Total current assets	62	3,011	(62)	3,011
INVESTMENT IN CABLE PROPERTIES:				
Property, plant and equipment, net	—	32,718	—	32,718
Customer relationships, net	—	14,608	—	14,608
Franchises	—	67,316	—	67,316
Goodwill	—	29,509	—	29,509
Total investment in cable properties, net	—	144,151	—	144,151
INVESTMENT IN SUBSIDIARIES	88,760	—	(88,760)	—
LOANS RECEIVABLE – RELATED PARTY	494	—	(494)	—
OTHER NONCURRENT ASSETS	—	1,157	—	1,157
Total assets	\$ 89,316	\$ 148,319	\$ (89,316)	\$ 148,319
LIABILITIES AND MEMBER'S EQUITY				
CURRENT LIABILITIES:				
Accounts payable and accrued liabilities	\$ 219	\$ 6,678	\$ —	\$ 6,897
Payables to related party	—	683	(62)	621
Current portion of long-term debt	—	2,028	—	2,028
Total current liabilities	219	9,389	(62)	9,546
LONG-TERM DEBT	13,259	46,460	—	59,719
LOANS PAYABLE – RELATED PARTY	—	1,134	(494)	640
DEFERRED INCOME TAXES	—	25	—	25
OTHER LONG-TERM LIABILITIES	—	2,526	—	2,526
MEMBER'S EQUITY				
Controlling interest	75,838	88,760	(88,760)	75,838
Noncontrolling interests	—	25	—	25
Total member's equity	75,838	88,785	(88,760)	75,863
Total liabilities and member's equity	\$ 89,316	\$ 148,319	\$ (89,316)	\$ 148,319

CCO HOLDINGS, LLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2017, 2016 AND 2015
(dollars in millions, except where indicated)

CCO Holdings, LLC
Condensed Consolidating Statement of Operations
For the year ended December 31, 2017

	Guarantor Subsidiaries			CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Eliminations	
REVENUES	\$ —	\$ 41,578	\$ —	\$ 41,578
COSTS AND EXPENSES:				
Operating costs and expenses (exclusive of items shown separately below)	—	26,560	—	26,560
Depreciation and amortization	—	10,579	—	10,579
Other operating expenses, net	—	444	—	444
	—	37,583	—	37,583
Income from operations	—	3,995	—	3,995
OTHER INCOME (EXPENSES):				
Interest expense, net	(883)	(2,232)	—	(3,115)
Loss on extinguishment of debt	(34)	(6)	—	(40)
Gain on financial instruments, net	—	69	—	69
Other pension benefits	—	1	—	1
Other expense, net	—	(4)	—	(4)
Equity in income of subsidiaries	1,799	—	(1,799)	—
	882	(2,172)	(1,799)	(3,089)
Income before income taxes	882	1,823	(1,799)	906
INCOME TAX EXPENSE	—	(23)	—	(23)
Consolidated net income	882	1,800	(1,799)	883
Less: Net income – noncontrolling interests	—	(1)	—	(1)
Net income	\$ 882	\$ 1,799	\$ (1,799)	\$ 882

CCO HOLDINGS, LLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2017, 2016 AND 2015
(dollars in millions, except where indicated)

CCO Holdings, LLC
Condensed Consolidating Statement of Operations
For the year ended December 31, 2016

	Guarantor Subsidiaries			CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Eliminations	
REVENUES	\$ —	\$ 29,003	\$ —	\$ 29,003
COSTS AND EXPENSES:				
Operating costs and expenses (exclusive of items shown separately below)	—	18,670	—	18,670
Depreciation and amortization	—	6,902	—	6,902
Other operating expenses, net	—	722	—	722
	—	26,294	—	26,294
Income from operations	—	2,709	—	2,709
OTHER INCOME (EXPENSES):				
Interest expense, net	(727)	(1,396)	—	(2,123)
Loss on extinguishment of debt	(110)	(1)	—	(111)
Gain on financial instruments, net	—	89	—	89
Other pension benefits	—	899	—	899
Other expense, net	—	(3)	—	(3)
Equity in income of subsidiaries	2,293	—	(2,293)	—
	1,456	(412)	(2,293)	(1,249)
Income before income taxes	1,456	2,297	(2,293)	1,460
INCOME TAX EXPENSE	—	(3)	—	(3)
Consolidated net income	1,456	2,294	(2,293)	1,457
Less: Net income – noncontrolling interest	—	(1)	—	(1)
Net income	\$ 1,456	\$ 2,293	\$ (2,293)	\$ 1,456

CCO HOLDINGS, LLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2017, 2016 AND 2015
(dollars in millions, except where indicated)

CCO Holdings, LLC
Condensed Consolidating Statement of Operations
For the year ended December 31, 2015

	Guarantor Subsidiaries				CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Unrestricted Subsidiary	Eliminations	
REVENUES	\$ —	\$ 9,754	\$ —	\$ —	\$ 9,754
COSTS AND EXPENSES:					
Operating costs and expenses (exclusive of items shown separately below)	—	6,426	—	—	6,426
Depreciation and amortization	—	2,125	—	—	2,125
Other operating expenses, net	—	89	—	—	89
	—	8,640	—	—	8,640
Income from operations	—	1,114	—	—	1,114
OTHER INCOME (EXPENSES):					
Interest expense, net	(642)	(151)	(47)	—	(840)
Loss on extinguishment of debt	(123)	—	(3)	—	(126)
Loss on financial instruments, net	—	(4)	—	—	(4)
Equity in income (loss) of subsidiaries	1,073	(50)	—	(1,023)	—
	308	(205)	(50)	(1,023)	(970)
Income (loss) before income taxes	308	909	(50)	(1,023)	144
INCOME TAX BENEFIT	—	210	—	—	210
Consolidated net income (loss)	308	1,119	(50)	(1,023)	354
Less: Net income – noncontrolling interest	—	(46)	—	—	(46)
Net income (loss)	\$ 308	\$ 1,073	\$ (50)	\$ (1,023)	\$ 308

CCO HOLDINGS, LLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2017, 2016 AND 2015
(dollars in millions, except where indicated)

CCO Holdings, LLC
Condensed Consolidating Statement of Comprehensive Income
For the year ended December 31, 2017

	Guarantor Subsidiaries			CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Eliminations	
Consolidated net income	\$ 882	\$ 1,800	\$ (1,799)	\$ 883
Net impact of interest rate derivative instruments	5	5	(5)	5
Foreign currency translation adjustment	1	1	(1)	1
Consolidated comprehensive income	888	1,806	(1,805)	889
Less: Comprehensive income attributable to noncontrolling interests	—	(1)	—	(1)
Comprehensive income	<u>\$ 888</u>	<u>\$ 1,805</u>	<u>\$ (1,805)</u>	<u>\$ 888</u>

CCO Holdings, LLC
Condensed Consolidating Statement of Comprehensive Income
For the year ended December 31, 2016

	Guarantor Subsidiaries			CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Eliminations	
Consolidated net income	\$ 1,456	\$ 2,294	\$ (2,293)	\$ 1,457
Net impact of interest rate derivative instruments	8	8	(8)	8
Foreign currency translation adjustment	(2)	(2)	2	(2)
Consolidated comprehensive income	1,462	2,300	(2,299)	1,463
Less: Comprehensive income attributable to noncontrolling interests	—	(1)	—	(1)
Comprehensive income	<u>\$ 1,462</u>	<u>\$ 2,299</u>	<u>\$ (2,299)</u>	<u>\$ 1,462</u>

CCO Holdings, LLC
Condensed Consolidating Statement of Comprehensive Income (Loss)
For the year ended December 31, 2015

	Guarantor Subsidiaries				CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Unrestricted Subsidiary	Eliminations	
Consolidated net income (loss)	\$ 308	\$ 1,119	\$ (50)	\$ (1,023)	\$ 354
Net impact of interest rate derivative instruments	9	9	—	(9)	9
Consolidated comprehensive income (loss)	317	1,128	(50)	(1,032)	363
Less: Comprehensive (income) loss attributable to noncontrolling interests	—	(46)	—	—	(46)
Comprehensive income (loss)	<u>\$ 317</u>	<u>\$ 1,082</u>	<u>\$ (50)</u>	<u>\$ (1,032)</u>	<u>\$ 317</u>

CCO HOLDINGS, LLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2017, 2016 AND 2015
(dollars in millions, except where indicated)

CCO Holdings, LLC
Condensed Consolidating Statement of Cash Flows
For the year ended December 31, 2017

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	Guarantor Subsidiaries			CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Eliminations	
NET CASH FLOWS FROM OPERATING ACTIVITIES	\$ (814)	\$ 12,422	\$ —	\$ 11,608
CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchases of property, plant and equipment	—	(8,681)	—	(8,681)
Change in accrued expenses related to capital expenditures	—	820	—	820
Purchases of cable systems, net	—	(9)	—	(9)
Contribution to subsidiaries	(693)	—	693	—
Distributions from subsidiaries	9,598	—	(9,598)	—
Other, net	—	(123)	—	(123)
Net cash flows from investing activities	8,905	(7,993)	(8,905)	(7,993)
CASH FLOWS FROM FINANCING ACTIVITIES:				
Borrowings of long-term debt	6,231	19,045	—	25,276
Repayments of long-term debt	(775)	(15,732)	—	(16,507)
Borrowings loans payable - related parties	—	234	—	234
Payment for debt issuance costs	(59)	(52)	—	(111)
Contributions from parent	—	693	(693)	—
Distributions to parent	(13,488)	(9,598)	9,598	(13,488)
Distributions to noncontrolling interest	—	(2)	—	(2)
Other, net	—	(11)	—	(11)
Net cash flows from financing activities	(8,091)	(5,423)	8,905	(4,609)
NET DECREASE IN CASH AND CASH EQUIVALENTS	—	(994)	—	(994)
CASH AND CASH EQUIVALENTS, beginning of period	—	1,324	—	1,324
CASH AND CASH EQUIVALENTS, end of period	\$ —	\$ 330	\$ —	\$ 330

CCO HOLDINGS, LLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2017, 2016 AND 2015
(dollars in millions, except where indicated)

CCO Holdings, LLC
Condensed Consolidating Statement of Cash Flows
For the year ended December 31, 2016

	Guarantor Subsidiaries			CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Eliminations	
NET CASH FLOWS FROM OPERATING ACTIVITIES	\$ (711)	\$ 9,476	\$ —	\$ 8,765
CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchases of property, plant and equipment	—	(5,325)	—	(5,325)
Change in accrued expenses related to capital expenditures	—	603	—	603
Purchases of cable systems, net	—	(7)	—	(7)
Contribution to subsidiaries	(437)	—	437	—
Distributions from subsidiaries	5,096	—	(5,096)	—
Other, net	—	(22)	—	(22)
Net cash flows from investing activities	4,659	(4,751)	(4,659)	(4,751)
CASH FLOWS FROM FINANCING ACTIVITIES:				
Borrowings of long-term debt	3,201	9,143	—	12,344
Repayments of long-term debt	(2,937)	(7,584)	—	(10,521)
Repayments loans payable - related parties	(71)	(182)	—	(253)
Payment for debt issuance costs	(73)	(211)	—	(284)
Contributions from parent	478	437	(437)	478
Distributions to parent	(4,546)	(5,096)	5,096	(4,546)
Proceeds from termination of interest rate derivatives	—	88	—	88
Other, net	—	(1)	—	(1)
Net cash flows from financing activities	(3,948)	(3,406)	4,659	(2,695)
NET INCREASE IN CASH AND CASH EQUIVALENTS	—	1,319	—	1,319
CASH AND CASH EQUIVALENTS, beginning of period	—	5	—	5
CASH AND CASH EQUIVALENTS, end of period	\$ —	\$ 1,324	\$ —	\$ 1,324

CCO HOLDINGS, LLC AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2017, 2016 AND 2015
(dollars in millions, except where indicated)

CCO Holdings, LLC
Condensed Consolidating Statement of Cash Flows
For the year ended December 31, 2015

	Guarantor Subsidiaries				CCO Holdings Consolidated
	CCO Holdings	Charter Operating and Restricted Subsidiaries	Unrestricted Subsidiary	Eliminations	
NET CASH FLOWS FROM OPERATING ACTIVITIES:	\$ (663)	\$ 3,275	\$ (55)	\$ —	\$ 2,557
CASH FLOWS FROM INVESTING ACTIVITIES:					
Purchases of property, plant and equipment	—	(1,840)	—	—	(1,840)
Change in accrued expenses related to capital expenditures	—	28	—	—	28
Contribution to subsidiaries	(46)	(24)	—	70	—
Distributions from subsidiaries	715	—	—	(715)	—
Change in restricted cash and cash equivalents	—	—	3,514	—	3,514
Other, net	—	(12)	—	—	(12)
Net cash flows from investing activities	669	(1,848)	3,514	(645)	1,690
CASH FLOWS FROM FINANCING ACTIVITIES:					
Borrowings of long-term debt	2,700	1,555	—	—	4,255
Repayments of long-term debt	(2,598)	(1,745)	(3,483)	—	(7,826)
Repayments loans payable - related parties	(18)	(563)	—	—	(581)
Payment for debt issuance costs	(24)	—	—	—	(24)
Contributions from parent	15	46	24	(70)	15
Distributions to parent	(82)	(715)	—	715	(82)
Other, net	1	—	—	—	1
Net cash flows from financing activities	(6)	(1,422)	(3,459)	645	(4,242)
NET INCREASE IN CASH AND CASH EQUIVALENTS	—	5	—	—	5
CASH AND CASH EQUIVALENTS, beginning of period	—	—	—	—	—
CASH AND CASH EQUIVALENTS, end of period	\$ —	\$ 5	\$ —	\$ —	\$ 5

CCO HOLDINGS, LLC AND SUBSIDIARIES
RATIO OF EARNINGS TO FIXED CHARGES CALCULATION
(In millions)

	Year Ended December 31,				
	2017	2016	2015	2014	2013
Earnings					
Income (loss) before Noncontrolling Interest and Income Taxes	\$ 906	\$ 1,460	\$ 144	\$ 75	\$ (57)
Fixed Charges	3,147	2,144	850	898	862
Total Earnings	<u>\$ 4,053</u>	<u>\$ 3,604</u>	<u>\$ 994</u>	<u>\$ 973</u>	<u>\$ 805</u>
Fixed Charges					
Interest Expense	\$ 3,071	\$ 2,092	\$ 822	\$ 868	\$ 834
Amortization of Debt Costs	44	31	18	21	20
Interest Element of Rentals	32	21	10	9	8
Total Fixed Charges	<u>\$ 3,147</u>	<u>\$ 2,144</u>	<u>\$ 850</u>	<u>\$ 898</u>	<u>\$ 862</u>
Ratio of Earnings to Fixed Charges ⁽¹⁾	<u>1.29</u>	<u>1.68</u>	<u>1.17</u>	<u>1.08</u>	<u>—</u>

⁽¹⁾ Earnings for the year ended December 31, 2013 were insufficient to cover fixed charges by \$57 million. As a result of such deficiency, the ratio is not presented above.

I, Thomas M. Rutledge, certify that:

1. I have reviewed this Annual Report on Form 10-K of CCO Holdings, LLC and CCO Holdings Capital Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 13, 2018

/s/ Thomas M. Rutledge

Thomas M. Rutledge
Chairman and Chief Executive Officer

I, Christopher L. Winfrey, certify that:

1. I have reviewed this Annual Report on Form 10-K of CCO Holdings, LLC and CCO Holdings Capital Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 13, 2018

/s/ Christopher L. Winfrey

Christopher L. Winfrey
Chief Financial Officer
(Principal Financial Officer)

**CERTIFICATION OF CHIEF EXECUTIVE
OFFICER REGARDING PERIODIC REPORT CONTAINING
FINANCIAL STATEMENTS**

I, Thomas M. Rutledge, the Chairman and Chief Executive Officer of CCO Holdings, LLC and CCO Holdings Capital Corp. (the "Company") in compliance with 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, hereby certify that, the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (the "Report") filed with the Securities and Exchange Commission:

- fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934; and
- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Thomas M. Rutledge

Thomas M. Rutledge
Chairman and Chief Executive Officer
February 13, 2018

**CERTIFICATION OF CHIEF FINANCIAL
OFFICER REGARDING PERIODIC REPORT CONTAINING
FINANCIAL STATEMENTS**

I, Christopher L. Winfrey, the Chief Financial Officer of CCO Holdings, LLC and CCO Holdings Capital Corp. (the "Company"), in compliance with 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, hereby certify that, the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (the "Report") filed with the Securities and Exchange Commission:

- fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934; and
- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Christopher L. Winfrey

Christopher L. Winfrey
Chief Financial Officer
(Principal Financial Officer)
February 13, 2018