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, 2019
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	Registrant; State of Incorporation; Address and Telephone Number	I.R.S. Employer Identification No.
001-32871	**COMCAST CORPORATION** **Pennsylvania** **One Comcast Center** **Philadelphia, PA 19103-2838** **(215) 286-1700**	27-0000798
001-36438	**NBCUNIVERSAL MEDIA, LLC** **Delaware** **30 Rockefeller Plaza** **New York, NY 10112-0015** **(212) 664-4444**	14-1682529

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Comcast Corporation –

Title of Each Class	Trading symbol(s)	Name of Each Exchange on Which Registered
Class A Common Stock, $0.01 par value	CMCSA	NASDAQ Global Select Market
2.0% Exchangeable Subordinated Debentures due 2029	CCZ	New York Stock Exchange
5.50% Notes due 2029	CCGBP29	New York Stock Exchange
9.455% Guaranteed Notes due 2022	CMCSA/22	New York Stock Exchange

NBCUniversal Media, LLC – NONE

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

Comcast Corporation – NONE
NBCUniversal Media, LLC – NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Comcast Corporation	Yes ☒	No ☐
NBCUniversal Media, LLC	Yes ☒	No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Comcast Corporation	Yes ☐	No ☒
NBCUniversal Media, LLC	Yes ☐	No ☒

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.

Comcast Corporation	Yes ☒	No ☐
NBCUniversal Media, LLC	Yes ☒	No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Comcast Corporation	Yes ☒	No ☐
NBCUniversal Media, LLC	Yes ☒	No ☐

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

Comcast Corporation	Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐	Smaller reporting company ☐	Emerging growth company ☐
NBCUniversal Media, LLC	Large accelerated filer ☐	Accelerated filer ☐	Non-accelerated filer ☒	Smaller reporting company ☐	Emerging growth company ☐

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.

Comcast Corporation	☐
NBCUniversal Media, LLC	☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Comcast Corporation	Yes ☐	No ☒
NBCUniversal Media, LLC	Yes ☐	No ☒

As of June 30, 2019, the aggregate market value of the Comcast Corporation common stock held by non-affiliates of the registrant was $190.526 billion.
Indicate the number of shares outstanding of each of the registrant's classes of stock, as of the latest practicable date:
As of December 31, 2019, there were 4,543,590,270 shares of Comcast Corporation Class A common stock and 9,444,375 shares of Class B common stock outstanding.
Not applicable for NBCUniversal Media, LLC.
NBCUniversal Media, LLC meets the conditions set forth in General Instruction I(1)(a), (b) and (d) of Form 10-K and is therefore filing this form with the reduced disclosure format.

DOCUMENTS INCORPORATED BY REFERENCE

Comcast Corporation – Part III – The registrant's definitive Proxy Statement for its annual meeting of shareholders presently scheduled to be held in June 2020.
NBCUniversal Media, LLC – NONE

Comcast Corporation
2019 Annual Report on Form 10-K

Table of Contents

Explanatory Note

This Annual Report on Form 10-K is a combined report being filed separately by Comcast Corporation (“Comcast”) and NBCUniversal Media, LLC (“NBCUniversal”). Comcast owns all of the common equity interests in NBCUniversal, and NBCUniversal meets the conditions set forth in General Instruction I(1)(a), (b) and (d) of Form 10-K and is therefore filing its information within this Form 10-K with the reduced disclosure format. Each of Comcast and NBCUniversal is filing on its own behalf the information contained in this report that relates to itself, and neither company makes any representation as to information relating to the other company. Where information or an explanation is provided that is substantially the same for each company, such information or explanation has been combined in this report. Where information or an explanation is not substantially the same for each company, separate information and explanation has been provided. In addition, separate consolidated financial statements for each company, along with notes to the consolidated financial statements, are included in this report.

Unless indicated otherwise, throughout this Annual Report on Form 10-K, we refer to Comcast and its consolidated subsidiaries, including NBCUniversal and its consolidated subsidiaries as “we,” “us” and “our;” Comcast Cable Communications, LLC and its consolidated subsidiaries as “Comcast Cable;” Comcast Holdings Corporation as “Comcast Holdings;” NBCUniversal, LLC as “NBCUniversal Holdings;” NBCUniversal Enterprise, Inc. as “NBCUniversal Enterprise;” and Sky Limited and its consolidated subsidiaries as “Sky.”

This Annual Report on Form 10-K is for the year ended December 31, 2019. This Annual Report on Form 10-K modifies and supersedes documents filed before it.

The Securities and Exchange Commission (“SEC”) allows us to “incorporate by reference” information that we file with it, 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 on Form 10-K. In addition, information that we file with the SEC in the future will automatically update and supersede information contained in this Annual Report on Form 10-K.

Our registered trademarks include Comcast, NBCUniversal and the Comcast and NBCUniversal logos. This Annual Report on Form 10-K also contains other trademarks, service marks and trade names owned by us, as well as those owned by others.

Part I

Item 1: Business

We are a global media and technology company with three primary businesses: Comcast Cable, NBCUniversal and Sky. We were incorporated under the laws of Pennsylvania in December 2001. Through our predecessors, we have developed, managed and operated cable systems since 1963. Through transactions in 2011 and 2013, we acquired NBCUniversal, and in the fourth quarter of 2018, we acquired Sky.

We present our operations for (1) Comcast Cable in one reportable business segment, referred to as Cable Communications; (2) NBCUniversal in four reportable business segments: Cable Networks, Broadcast Television, Filmed Entertainment and Theme Parks (collectively, the “NBCUniversal segments”); and (3) Sky in one reportable business segment.

- **Cable Communications:** Consists of the operations of Comcast Cable, which is a leading provider of high-speed internet, video, voice, wireless, and security and automation services to residential customers in the United States under the Xfinity brand; we also provide these and other services to business customers and sell advertising.
- **Cable Networks:** Consists primarily of our national cable networks that provide a variety of entertainment, news and information, and sports content; our regional sports and news networks; our international cable networks; our cable television studio production operations; and various digital properties.
- **Broadcast Television:** Consists primarily of the NBC and Telemundo broadcast networks, our NBC and Telemundo owned local broadcast television stations, the NBC Universo national cable network, our broadcast television studio production operations, and various digital properties.
- **Filmed Entertainment:** Consists primarily of the operations of Universal Pictures, which produces, acquires, markets and distributes filmed entertainment worldwide; our films are also produced under the Illumination, DreamWorks Animation and Focus Features names.
- **Theme Parks:** Consists primarily of our Universal theme parks in Orlando, Florida; Hollywood, California; and Osaka, Japan. In addition, we are developing a theme park in Beijing, China along with a consortium of Chinese state-owned companies, and an additional theme park in Orlando, Florida.
- **Sky:** Consists of the operations of Sky, one of Europe’s leading entertainment companies, which primarily includes a direct-to-consumer business, providing video, high-speed internet, voice and wireless phone services, and a content business, operating entertainment networks, the Sky News broadcast network and Sky Sports networks.

Our other business interests consist primarily of the operations of Comcast Spectacor, which owns the Philadelphia Flyers and the Wells Fargo Center arena in Philadelphia, Pennsylvania, and other business initiatives, such as the development of Peacock, our direct-to-consumer streaming service that will feature NBCUniversal content.

For financial and other information about our reportable business segments, refer to Item 7: Management’s Discussion and Analysis of Financial Condition and Results of Operations and Note 2 to each of Comcast’s and NBCUniversal’s consolidated financial statements included in this Annual Report on Form 10-K.

Available Information and Websites

Comcast’s phone number is (215) 286-1700, and its principal executive offices are located at One Comcast Center, Philadelphia, PA 19103-2838. NBCUniversal’s phone number is (212) 664-4444, and its principal executive offices are located at 30 Rockefeller Plaza, New York, NY 10112-0015. Comcast and NBCUniversal’s Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to such reports filed with or furnished to the SEC under Sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), are available free of charge on the SEC’s website at www.sec.gov and on Comcast’s website at www.comcastcorporation.com as soon as reasonably practicable after such reports are electronically filed with the SEC. The information posted on our websites is not incorporated into our SEC filings.

Table of Contents

Description of Our Businesses

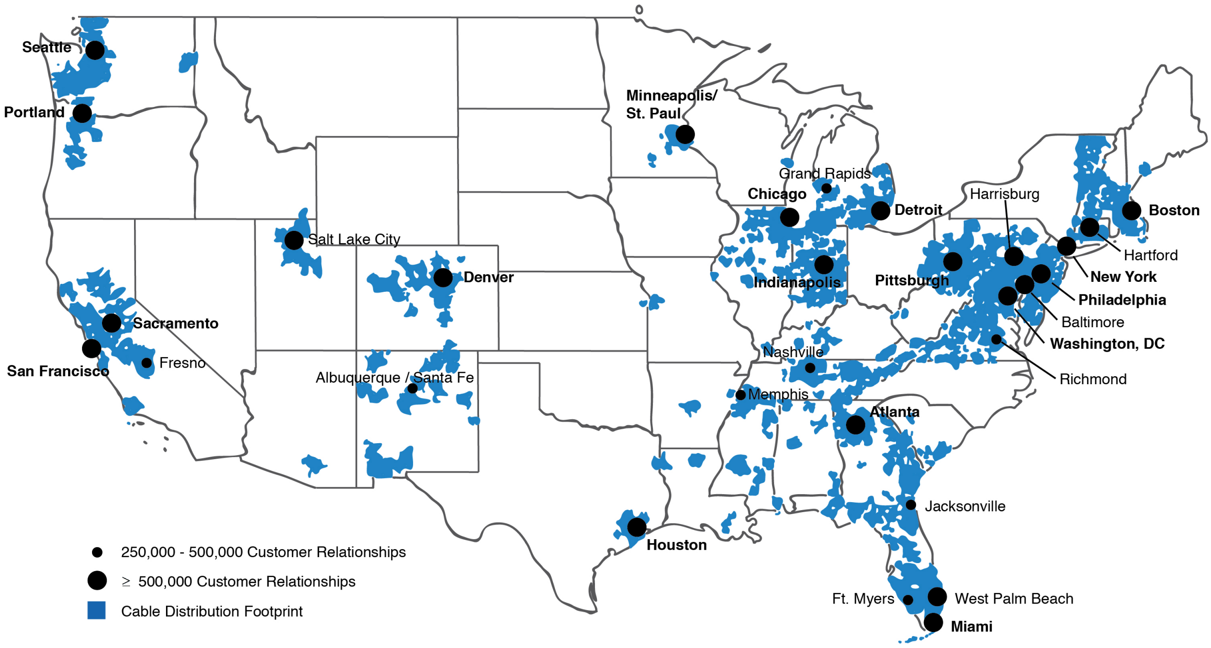
Cable Communications Segment

Cable Communications offers high-speed internet, video, voice, wireless, and security and automation services in the United States individually and as bundled services at a discounted rate over its cable distribution system to residential and business customers. Revenue is generated primarily from residential and business customers that subscribe to our services, which are marketed individually and as bundled services, and from the sale of advertising. Bundled service offerings aim to meet the needs of various segments of our customer base, ranging from high-speed internet services packaged with video or streaming services that include a limited number of channels, to a five-product bundle, consisting of high-speed internet, video, voice, wireless, and security and automation services. Subscription rates and related charges vary according to the services and features customers receive and the types of equipment they use, and customers are typically billed in advance on a monthly basis. A portion of our residential customers are subject to minimum-term contracts for their cable services, which are typically 1 to 2 years in length. Substantially all business customers are initially under minimum-term contracts, which typically range from 2 to 5 years. Customers with minimum-term contracts may only discontinue service in accordance with the terms of their contracts.

As of December 31, 2019, Cable Communications had 31.5 million total customer relationships, including 29.1 million residential customer relationships and 2.4 million business customer relationships, and passed more than 58 million homes and businesses. Homes and businesses are considered passed if we can connect them to our cable distribution system without further extending the transmission lines and are estimated based on the best available information. As of December 31, 2019, total customer relationships penetration of homes and businesses passed was 54%.

The Areas We Serve

The map below highlights Cable Communications' cable distribution footprint as of December 31, 2019 and the designated market areas ("DMAs") where we have 250,000 or more customer relationships, with the locations that are bolded representing one of the top 25 U.S. television DMAs as of December 31, 2019.



High-Speed Internet

Cable Communications offers high-speed internet services with downstream speeds that range up to 1 gigabit per second (“Gbps”) and fiber-based speeds that range up to 2 Gbps. These services include access to an online portal and mobile apps, which provide users with the ability to manage their home Wi-Fi network, email, an address book, calendars and online security features.

Throughout its footprint, Cable Communications deploys wireless gateways to customers that combine an internet and voice modem with a Wi-Fi router to deliver reliable internet speeds and enhanced coverage through an in-and-out-of-home Wi-Fi network. Customers with wireless gateways may also personalize and manage their Wi-Fi network remotely with the xFi branded whole-home application and online portal, which includes viewing and changing their Wi-Fi password, identifying which devices are connected to their in-home network, setting parental controls and schedules, advanced security, and other features. Cable Communications continues to expand its network of residential, outdoor and business Wi-Fi hotspots. Certain high-speed internet customers who do not subscribe to our video services also receive Flex, a streaming device with access to various programming and other third-party internet apps on their television.

As of December 31, 2019, 26.4 million residential customers subscribed to our high-speed internet services.

Video

Cable Communications offers a broad variety of video services, primarily through our X1 platform, an Internet Protocol (“IP”) and cloud-enabled video platform. Video customers have access to hundreds of channels depending on the level of service, which typically range from limited basic service with access to between 20 and 60 channels to full service with access to more than 300 channels. Video services generally include programming provided by national broadcast networks, local broadcast stations, and national and regional cable networks, as well as government and public access programming. Our video services also include access to video on demand services (“On Demand”) and an interactive, on-screen program guide. Our On Demand service provides video customers with access to hundreds of thousands of programming choices included in our library. Other content, primarily movies and special-events programming, such as sporting events and concerts, can be rented or in some cases purchased to own digitally. Customers also receive high-definition (“HD”) video service that provides high-resolution picture quality, improved audio quality and a wide-screen format through an HD set-top box, and a broad selection of HD programming choices. Customers also have the option to subscribe to additional services, including a digital video recorder (“DVR”) service that allows customers to record and store programs and play them at their convenience, including online and through our mobile app, and to pause and rewind live television. Additionally, customers may subscribe to premium networks that generally provide, without commercial interruption, movies, original programming, live and pre-recorded sporting events and concerts, and other features. We also offer video service packages that include extensive amounts of foreign-language programming and other specialty tiers of programming. We tailor our video services for particular programming preferences, demographics and geographic areas in accordance with applicable local and federal regulatory requirements.

Through the X1 platform, customers have integrated search functionality, including the use of a voice-activated remote control, personalized recommendations and access to, and integration of, certain third-party internet apps, such as Netflix, Amazon Prime Video and YouTube. Additionally, a variety of music apps such as Pandora are offered through X1.

Customers have access to their video services through the Stream mobile app and an online portal that allow them to view certain live programming and On Demand content and to browse program listings. Additionally, Cable Communications offers a streaming video service throughout our footprint that allows high-speed internet customers to purchase video services and stream live programming to a computer, tablet, smartphone or other device for a monthly fee.

As of December 31, 2019, 20.3 million residential customers subscribed to our video services.

Voice

Cable Communications offers voice services using interconnected Voice over Internet Protocol (“VoIP”) technology. The services provide either unlimited or usage-based local and domestic long-distance calling and include options for international calling plans, voicemail, voicemail transcriptions, text messaging and various call features such as caller ID and call waiting. For customers with high-speed internet services, voice services also include the ability to access and manage voicemail, text messaging and other account features through an online portal or mobile apps.

As of December 31, 2019, 9.9 million residential customers subscribed to our voice services.

Wireless

Cable Communications offers wireless phone services using mobile virtual network operator ("MVNO") rights to provide the services over Verizon's wireless network and our existing network of in-home and outdoor Wi-Fi hotspots. The services are currently offered only as part of our bundled service offerings to residential customers that subscribe to high-speed internet service within our cable distribution footprint and may in the future also be offered to small business customers on similar terms. Customers may choose to pay for services on an unlimited data plan or per gigabyte of data used. Customers have the ability to bring their own device or purchase handsets with the option to pay upfront or finance the purchase interest-free over 24 months.

As of December 31, 2019, there were 2.1 million activated wireless lines that were subscribed to our wireless services. Individual customer relationships may have multiple lines.

Business Services

Cable Communications offers a variety of products and services to businesses. High-speed internet services provide downstream speeds that range up to 1 Gbps and fiber-based speeds that range up to 10 Gbps. Our service offerings for small business locations primarily include high-speed internet services, as well as voice and video services, that are similar to those provided to residential customers, as well as cloud-based cybersecurity services, wireless backup connectivity, advanced Wi-Fi solutions, video monitoring services and cloud-based services that provide file sharing, online backup and web conferencing, among other features. We also offer Ethernet network services that connect multiple locations and provide higher downstream and upstream speed options to medium-sized customers and larger enterprises, as well as advanced voice services, along with video solutions that serve hotels and other large venues. In addition, we provide cellular backhaul services to mobile network operators to help them manage their network bandwidth.

Cable Communications has expanded its service offerings to include a software-defined networking product for medium-sized and enterprise customers. Larger enterprises may also receive support services related to Wi-Fi networks, router management, network security, business continuity risks and other services. These service offerings are primarily provided to Fortune 1000 companies and other large enterprises with multiple locations both within and outside of Cable Communications' cable distribution footprint, where we have agreements with other companies to use their networks to provide coverage outside of our service areas.

Advertising

As part of Cable Communications' distribution agreements with cable networks, we generally receive an allocation of scheduled advertising time that is sold through our advertising business to local, regional and national advertisers. In most cases, the available advertising units are sold by our sales force. In some cases, we work with representation firms as an extension of our sales force to sell a portion of the advertising units allocated to us. Cable Communications also represents the advertising sales efforts of other multichannel video providers in some markets. In addition, we generate revenue from the sale of advertising on our digital platforms. We also provide technology, tools, data-driven services and marketplace solutions to customers in the media industry, which allow advertisers to more effectively engage with their target audiences.

Other

Cable Communications offers security and automation services that provide home monitoring services and the ability to manage other functions within the home, such as lighting and room temperature, through our online portal, mobile apps or the X1 platform. We also license our technology platforms to other multichannel video providers.

As of December 31, 2019, 1.4 million residential customers subscribed to our security and automation services.

Technology

Cable Communications' cable distribution system uses a hybrid fiber-optic and coaxial cable network that we believe is sufficiently flexible and scalable to support our future technology requirements. This network provides the two-way transmissions that are essential to providing high-speed internet services, interactive video services such as On Demand, voice services, and security and automation services.

Cable Communications continues to focus on technology initiatives to design, develop and deploy next-generation media and content delivery platforms, such as the X1 platform and related cloud DVR technology, and Flex, which use IP technology and our own cloud network servers to deliver video and advanced search capabilities, including through a voice-activated remote control, and that provide access to certain third-party internet apps.

Cable Communications continues to deploy 1 Gbps high-speed internet services that leverage DOCSIS 3.1 technology across its footprint and will continue to expand the capacity of its DOCSIS 3.1 infrastructure, including the implementation of DOCSIS FDX that will enable multi-gigabit services to be launched through our hybrid fiber-optic and coaxial cable network.

Sources of Supply

Cable Communications licenses software products for our high-speed internet services, such as email and security software, and content, such as news feeds for its online portal, from a variety of suppliers. Under these contracts with these suppliers, we generally pay on a fixed-fee basis, on a per subscriber basis in the case of software product licenses or on a video advertising revenue share basis in the case of content licenses.

To offer video services, Cable Communications licenses a substantial portion of programming from cable and broadcast networks, as well as from local broadcast television stations. We attempt to secure long-term programming distribution agreements with these programming providers. The fees associated with these programming distribution agreements are generally based on the number of subscribers who are able to watch the programming and the platforms on which the content is provided. We seek to include in distribution agreements the rights to offer such programming through multiple delivery platforms, such as through our On Demand service, online portal, mobile apps and streaming services.

For voice services, software products such as voicemail and text messaging are licensed from a variety of suppliers under multiyear contracts. The fees paid are generally based on the consumption of the related services.

For wireless services, we have an MVNO agreement that allows us to offer services using Verizon’s wireless network.

Cable Communications purchases from a limited number of suppliers a significant number of set-top boxes and certain other customer premise equipment, network equipment and services to provide services to residential and business customers.

Cable Communications uses two primary vendors to provide customer billing for our residential and business customers.

Customer and Technical Services

Cable Communications’ customer service call centers provide 24/7 call-answering capability, telemarketing and other services. Our technical services group performs various tasks, including installations, plant maintenance and upgrades to its cable distribution system.

Sales and Marketing

Cable Communications offers services directly to residential and business customers through its customer service call centers, retail stores, customer service centers, websites, door-to-door selling, telemarketing, and third-party outlets, as well as through advertising via direct mail, television and the internet.

NBCUniversal Segments

NBCUniversal is one of the world's leading media and entertainment companies that develops, produces and distributes entertainment, news and information, sports, and other content for global audiences, and owns and operates theme parks worldwide.

Cable Networks

Cable Networks consists of a diversified portfolio of national cable networks that provide a variety of entertainment, news and information, and sports content; regional sports and news networks; international cable networks and cable television studio production operations. It also owns various digital properties, which include brand-aligned websites.

The table below presents a summary of NBCUniversal's national cable networks and their advertising reach to U.S. households.

Cable Network	Approximate U.S. Households as of December 31, 2019 (in millions)(a)	Description of Programming
USA Network	**87**	General entertainment
E!	**84**	Entertainment and pop culture
Syfy	**84**	Imagination-based entertainment
Bravo	**84**	Entertainment, culture and arts
MSNBC	**83**	News, political commentary and information
CNBC	**82**	Business and financial news
NBC Sports Network	**80**	Sports
Oxygen	**70**	Crime, mystery and suspense for women
Golf Channel	**68**	Golf competition and golf entertainment
Universal Kids	**54**	Children's entertainment
The Olympic Channel	**34**	Olympic sports events and Olympic-themed original content
CNBC World	**28**	Global financial reviews

(a) Household data is based on The Nielsen Company's December 2019 Household Universe Estimate report, except for the Olympic Channel, which is derived from information provided by SNL Kagan. The Nielsen report includes estimates based on subscribers to both traditional and certain virtual multichannel video providers. The Nielsen report is not based on information provided by us and is included solely to permit comparisons between our cable networks and those operated by our peers.

Our regional sports and news networks together serve more than 26 million households across the United States, including in markets such as Baltimore/Washington, Boston, Chicago, Philadelphia, Portland, Sacramento and San Francisco.

Revenue is generated primarily from the distribution and licensing of programming and from the sale of advertising on our networks and digital properties. We market and distribute cable network programming in the United States and internationally to multichannel video providers, including both traditional providers of linear programming and virtual providers who provide streaming services for linear programming. We also market and distribute cable network programming to subscription video on demand services, such as those offered by Amazon, Hulu and Netflix. These distributors may provide the content on television, including via video on demand services, online and through mobile apps.

Cable Networks produces owned programs or acquires the rights to programming from third parties, including sports programming rights that are discussed below under the heading "Broadcast Television." NBCUniversal's cable television studio production operations identify, develop and produce original content for our own cable networks and third parties. We license owned content to cable and broadcast networks and subscription video on demand services. We also sell owned content on standard-definition DVDs and Blu-ray discs (together, "DVDs") and through digital distribution services such as iTunes. We anticipate that our cable television studio production operations will also produce content for and license content to Peacock.

Broadcast Television

Broadcast Television operates the NBC and Telemundo broadcast networks, which together reach viewers and advertisers in all 50 states, as well as our owned NBC and Telemundo local broadcast television stations, the NBC Universo national cable network, broadcast television studio production operations, and various digital properties, which primarily include brand-aligned websites. Revenue is generated primarily from the sale of advertising on our networks and digital properties, from the licensing of programming, and from the fees received under retransmission consent agreements and associated fees received from NBC-affiliated and Telemundo-affiliated local broadcast television stations.

NBC Network

The NBC network distributes entertainment, news and sports programming that reaches viewers in virtually all U.S. television households through more than 200 affiliated stations across the United States, including NBCUniversal's 11 owned NBC-affiliated local broadcast television stations. The NBC network's programming library consists of rights of varying nature to more than 100,000 episodes of popular television content, including current and classic titles, unscripted programming, sports, news, long-form and short-form programming, and locally produced programming from around the world.

The NBC network produces owned programs or acquires the rights to programming from third parties. NBCUniversal has various contractual commitments for the licensing of rights to multiyear programming, primarily sports programming. The most significant sports programming commitments include the U.S. broadcast rights for the summer and winter Olympic Games through 2032 and agreements with the NFL to produce and broadcast a specified number of regular season and playoff games, including *Sunday Night Football* through the 2022-23 season and the Super Bowl in 2022. We also have U.S. broadcast rights to a specified number of NHL games through the 2020-21 season, English Premier League soccer through the 2021-22 season, certain NASCAR events through 2024 and certain PGA TOUR and other golf events through 2030. NBCUniversal's sports programming agreements also include the rights to distribute content on our national cable networks, including the NBC Sports Network and Golf Channel, and regional sports networks, and online, including through mobile apps.

The broadcast television studio production operations develop and produce original content, including scripted and unscripted programming series and talk shows. This original content is licensed to broadcast networks, cable networks and local broadcast television stations owned by NBCUniversal and third parties, as well as to subscription video on demand services, and it is sold on DVDs and through digital distribution services both in the United States and internationally. The broadcast television studio production operations also produce first-run syndicated shows for local markets that are broadcast on local broadcast television stations in the United States on a market-by-market basis. We currently distribute some of our television programs after their initial broadcast, as well as older television programs from the library, to local broadcast television stations and cable networks in the off-network syndication market. We anticipate that our broadcast television studio production operations will also produce content for and license content to Peacock.

NBC Local Broadcast Television Stations

As of December 31, 2019, NBCUniversal owned and operated 11 NBC-affiliated local broadcast television stations, including stations in 8 of the top 10 general markets, that collectively reached approximately 31 million U.S. television households and represent approximately 29% of U.S. television households. In addition to broadcasting the NBC network's national programming, our local broadcast television stations produce news, sports, public affairs and other programming that addresses local needs and acquire syndicated programming from other sources.

Telemundo

Telemundo is a leading Hispanic media company that produces, acquires and distributes Spanish-language content in the United States and internationally. Telemundo's operations include the Telemundo network, 30 owned local broadcast television stations and the NBC Universo national cable network.

The Telemundo network is a leading Spanish-language broadcast network featuring original telenovelas, movies, news, specials and sporting events. Telemundo develops original programming primarily through its production studio and also acquires the rights to programming from third parties. We hold the Spanish-language U.S. broadcast rights to FIFA World Cup soccer through 2026.

Telemundo Local Broadcast Television Stations

As of December 31, 2019, Telemundo owned 30 local broadcast television stations affiliated with the Telemundo network, including an independent television station in Puerto Rico and stations in 19 of the top 20 U.S. Hispanic markets, which collectively reached approximately 72% of U.S. Hispanic television households as of December 31, 2019.

Filmed Entertainment

Filmed Entertainment primarily produces, acquires, markets and distributes filmed entertainment worldwide. It also includes Fandango, a movie ticketing and entertainment business, our consumer products business and our live stage production business. We also distribute filmed entertainment produced by third parties.

Filmed Entertainment produces content both alone and jointly with other studios or production companies, as well as with other entities. NBCUniversal's films are produced primarily under the Universal Pictures, Illumination, DreamWorks Animation and Focus Features names. Films are marketed and distributed worldwide primarily through NBCUniversal's own marketing and distribution operations. Filmed Entertainment also acquires distribution rights to films produced by others, which may be limited to particular geographic regions, specific forms of media or certain periods of time. Filmed Entertainment's content includes theatrical films, direct-to-video movies and a film library, which is comprised of more than 5,000 movies in a variety of genres.

Filmed Entertainment has entered into, and may continue to enter into, film cofinancing arrangements with third parties, including both studio and nonstudio entities, to jointly finance or distribute certain of our film productions. These arrangements can take various forms, but in most cases involve the grant of an economic interest in a film to an investor. Investors generally assume the full risks and rewards of ownership proportionate to their ownership in the film.

The majority of our produced and acquired films are initially distributed for exhibition in movie theaters. After their release in movie theaters, we sell and license films through various methods. We distribute films globally by selling them on DVDs to retail stores and rental kiosks, and through digital distribution services and video on demand services provided by multichannel video providers, including the Cable Communications and Sky segments. We also license films, including selections from the film library, to cable, broadcast and premium networks, to subscription video on demand services, and to video on demand and pay-per-view services. The number of films licensed through subscription video on demand services is increasing as consumers continue to seek additional ways to view the Filmed Entertainment's content. We anticipate that our film studios will also produce content for and license content to Peacock.

Theme Parks

Theme Parks consists primarily of Universal theme parks in Orlando, Florida; Hollywood, California; and Osaka, Japan. Universal Orlando includes two theme parks, Universal Studios Florida and Universal's Islands of Adventure, and our water park, Volcano Bay, and we are building an additional theme park named Universal's Epic Universe. Universal Orlando also includes Universal CityWalk Orlando, a dining, retail and entertainment complex, and features on-site themed hotels in which we own a noncontrolling interest. The Universal theme park in Hollywood, California consists primarily of Universal Studios Hollywood, as well as Universal CityWalk Hollywood. The Universal theme park in Osaka, Japan consists primarily of Universal Studios Japan. NBCUniversal is also developing a theme park in Beijing, China along with a consortium of Chinese state-owned companies. In addition, Theme Parks licenses the right to use the Universal Studios brand name and other intellectual property, and also provides other services, to third parties that own and operate the Universal Studios Singapore theme park on Sentosa Island, Singapore.

Revenue is generated primarily from guest spending at Universal theme parks in Orlando, Florida; Hollywood, California; and Osaka, Japan. Theme Parks licenses the right to use a substantial amount of intellectual property from third parties for its themed elements in rides, attractions and merchandising.

Sky Segment

Sky is one of Europe's leading entertainment companies operating in seven territories, including three of the four largest pay television markets in Western Europe: the United Kingdom ("U.K."), Italy and Germany. The majority of revenue is derived from Sky's direct-to-consumer business, which has 24.0 million retail customers, and primarily involves the distribution of a wide array of video channels to both residential and business customers. Sky owns a diverse portfolio of pay television channels that offer entertainment, news, sports and movies, which are included in Sky's subscription video services and are also licensed through various distribution partnerships to third-party video providers that reach an additional 3.9 million households. Sky also provides high-speed internet, voice and wireless phone services in select countries. Sky's video, high-speed internet, voice and wireless phone services may be purchased individually or in bundles.

Video

Sky's video services include a direct-to-home ("DTH") video service delivered through a combination of both satellite transmission and broadband connection and marketed under the Sky brand in the U.K., Ireland, Italy, Germany and Austria. Sky also offers an over the top ("OTT") video service providing video content over the internet which is marketed as a distinct brand in these countries, as well as in Spain and Switzerland.

Sky's DTH video service is sold directly to customers in packages that include a diverse selection of Sky's owned entertainment and sports channels, channels owned by third parties and local free-to-air public broadcasting channels. In addition to live-linear content, Sky's platform also provides access to On Demand and current and prior season libraries for certain television shows. Sky's service offerings are tailored by country, with separate packages offered in each market. Basic packages include up to approximately 98 pay television channels in the U.K. and Ireland, approximately 72 channels in Italy, and approximately 28 channels in Germany and Austria. Specialty tiers for children's, sports, movie and HD programming are available for additional fees. Sky's services also have pay-per-view programming for certain live sporting events and allow customers, as well as those without a subscription, to buy or rent programming for a fee.

Sky's DTH video service is primarily distributed to customers through a set-top box video platform, including through Sky Q, which is Sky's next-generation video platform. Customers have the ability to record several shows at once, to download content and recordings to watch offline on compatible devices, and for Sky Q households, to pause programming in one room and continue watching in another. Sky Q customers are offered personalized content recommendations and the use of a voice activated remote control, as well as integrated access to content from other providers such as Netflix, Spotify, Vevo and YouTube.

Sky's OTT video service offers packages for purchase ranging from daily, weekly or monthly access to entertainment, sports, movies and children's programming. The entertainment package includes Sky's owned entertainment channels and a broad range of On Demand programming series. The sports package provides access to Sky's owned sports channels and the movie package includes access to a library of films, including 40 or more new films per month. The children's package includes thousands of hours of child-friendly on demand programming.

Other than those who subscribe to Sky's OTT video service, customers generally are required to subscribe for an initial contractual term of at least 1 year and may only discontinue service in accordance with the terms of their contracts. Subscription rates and related charges vary according to the services and features customers receive and the types of equipment they use, and customers are typically billed in advance on a monthly basis.

Television Channels

Sky's owned entertainment channels include Sky One, Sky Arts and Sky Atlantic in the U.K. and Ireland; Sky Atlantic, Sky Uno and Sky Arte in Italy; and Sky Atlantic and Sky 1 in Germany and Austria. Sky also owns premium sports channels under the Sky Sports brand and premium movie channels under the Sky Cinema brand, including family and children's movie channels. Sky also broadcasts several Sky branded free-to-air channels, including Sky News in the U.K. and Ireland, Sky TG24 in Italy and Sky Sport News in Germany.

Sky acquires the rights to programming for owned channels from third parties, in some cases on an exclusive basis. Sky has various contractual commitments for the licensing of rights to multiyear programming, primarily sports programming and exclusive entertainment programming. Our most significant sports programming commitments include the U.K. broadcast rights for English Premier League soccer games through 2022; German broadcast rights to Bundesliga and Union des Associations Européennes de Football Champions League ("UCL") through 2021; and Italian broadcast rights to UCL and Lega Nazionale Professionisti Serie A through 2021. Our most significant entertainment programming commitments include exclusive rights with HBO, Showtime, Warner Bros., NBCUniversal and The Walt Disney Company ("Disney"). Sky is also increasingly creating and investing in original scripted content that is broadcast across all of its territories and sold to other markets and we anticipate that our Sky studio production operations will also produce content for and license content to Peacock.

In addition to including owned channels as part of its video services, Sky distributes some of its owned channels on third-party platforms through both wholesale arrangements and arrangements with partners who distribute Sky's owned channels as agents to their respective customer bases. Additionally, Sky licenses owned and acquired programming to third-party video providers.

Advertising

Sky sells advertising and sponsorships across its owned television channels and where it represents the sales efforts of third-party channels. Sky also sells targeted advertising and generates revenue from online and mobile advertising and advertising across its On Demand services.

Other Services

Sky offers high-speed internet and voice services in the U.K. and Ireland. Sky offers fiber-to-the-cabinet, standard copper digital subscriber line ("DSL") broadband and fiber-to-the-home ("FTTH") services, with download speeds up to 150 megabits per second in the U.K. and up to 1 Gbps in Ireland. In the U.K., Sky uses a combination of its own core fiber network and wholesaling arrangements over third-party telecommunication providers' networks as the core network and also accesses the "last mile" network from third-party network operators for a fee to provide its services to customers. In Italy, Sky offers video service with high-speed internet and phone services through co-marketing agreements with several Italian broadband and telecommunications providers, and plans to launch FTTH services using Open Fiber to provide high-speed internet access and voice services in 2020. Sky offers wireless phone services to customers in the U.K. using a combination of its own core fiber network and an arrangement to access network assets from Telefónica.

Technology and Sources of Supply

For a majority of customers, Sky's DTH video platform is delivered via one-way digital satellite transmission for the distribution of linear television channels, augmented by a set-top box with local DVR storage and high speed two-way broadband connectivity to provide access to a broad range of On Demand and other services. The Sky platform also incorporates Wi-Fi connectivity for in-home distribution enabling wireless multi-room consumption, and Sky has also developed a range of back-end and client software applications that provide customers with access to its content across multiple third-party devices and On Demand in and out of the home. Sky's OTT video service is delivered via the internet.

Sky relies on various telecommunications providers to deliver video, high-speed internet, voice and wireless phone services to its customers. For example, Sky relies on satellites leased from third parties to provide most of its video services. In addition, pursuant to the current regulatory regime in the U.K. and Italy, Sky is able to access networks owned by third-party telecommunication providers for a fee to provide its high-speed internet and voice services in most cases, on regulated terms.

To offer video services, in addition to its owned channels, Sky licenses programming from third-party programming providers that operate television channels. Sky attempts to secure long-term programming distribution agreements with these programming providers. The fees associated with these programming distribution agreements are generally based on the number of customers who are able to watch the programming and the platforms on which Sky provides the content. Sky seeks to include in distribution agreements the rights to offer such programming through multiple delivery platforms, such as through On Demand services, mobile apps and streaming services.

Customer and Home Services

Sky's customer service operations are increasingly a digital first offering. The home service group performs various tasks, including installing, servicing and performing upgrades of customer premise equipment.

Sales and Marketing

Sky offers direct-to-consumer services to retail customers through customer service call centers, websites, telemarketing, a limited number of retail outlets, as well as through advertising via direct mail, television and the internet.

Corporate and Other

Our other business interests consist primarily of the operations of Comcast Spectacor, which owns the Philadelphia Flyers and the Wells Fargo Center arena in Philadelphia, Pennsylvania, and other business initiatives, such as the development of Peacock.

Competition

All of our businesses operate in intensely competitive, consumer-driven and rapidly changing environments and compete with a growing number of companies that provide a broad range of communications products and services, and entertainment, news and information content to consumers. Technological changes are further intensifying and complicating the competitive landscape and challenging existing business models. In particular, consumers are increasingly turning to online sources for viewing and purchasing content, which has and likely will continue to reduce the number of our video customers and subscribers to our cable networks even as it makes high-speed internet services more important to consumers. In addition, the increasing number of entertainment choices available to consumers has intensified audience fragmentation and disaggregated the way that content traditionally has been viewed by consumers. This increase has caused and likely will continue to cause audience ratings declines at our programming channels.

Cable Communications Segment

Competition for Cable Communications' services consists primarily of phone companies with fiber-based networks and direct broadcast satellite ("DBS") providers that typically offer features, pricing and packaging for services comparable to ours.

High-Speed Internet

Cable Communications competes with a number of companies offering internet services, including:

- wireline phone companies and other providers of wireline internet service
- wireless phone companies and other providers of wireless internet service
- municipal broadband networks and power companies
- satellite broadband providers

Phone companies such as AT&T, CenturyLink, Frontier and Verizon have built and are continuing to build fiber-based network infrastructure farther into their networks, which allows them to provide data transmission speeds that exceed those that can be provided with traditional DSL technology, and are offering these higher-speed services in many of our service areas. Certain companies that offer DSL service have increased data transmission speeds, lowered prices or created bundled services to compete with our high-speed internet services.

Certain other companies have launched FTTH networks that provide high-speed internet services in a limited number of areas in which we operate, and certain municipalities in our service areas are also building fiber-based networks.

Various wireless companies are offering internet services using a variety of network types, including 3G and 4G, and recently 5G which is currently available in limited locations, wireless broadband services and Wi-Fi networks. These networks work with devices such as smartphones, laptops, tablets and mobile and fixed wireless routers, as well as wireless data cards. A growing number of commercial venues, such as retail malls, restaurants and airports, also offer Wi-Fi service. Numerous local governments are also considering or actively pursuing publicly subsidized Wi-Fi and other internet access networks. The availability of these wireless offerings could negatively impact the demand for our high-speed internet services.

Video

Cable Communications competes with a number of different sources in the United States that provide news, sports, information and entertainment programming to consumers, including:

- DBS providers, including AT&T's DIRECTV and DISH Network, that transmit satellite signals to substantially all U.S. households to provide video programming and other information similar to our video services
- phone companies, including AT&T and Verizon, that have built and continue to build fiber-based networks that provide services similar to ours, which overlap a substantial portion of our service areas, and that in some cases provide bundled offerings that include wireless phone services
- OTT service providers including:
  - virtual multichannel video providers who offer streaming services for linear programming that generally involve smaller packages of programming networks at prices lower than our traditional video service package offerings
  - subscription video on demand services, such as those offered by Amazon, Apple, Disney, Hulu and Netflix, that offer online services and devices that enable internet streaming and downloading of movies, television shows and other video programming
  - traditional television and film programmers, networks and media companies that provide content directly to consumers
- other providers that build and operate wireline communications systems in the same communities that we serve, including those operating as franchised cable operators
- satellite master antenna television systems that offer to their subscribers both improved reception of local broadcast television stations and much of the programming offered by our cable systems and generally serve multiple dwelling units ("MDUs"), office complexes and residential developments
- other companies, such as local broadcast television stations, that provide multiple channels of free over-the-air programming, as well as video rental services and home entertainment and gaming products

Many of these competitors also have significant financial resources and have further intensified competition through mergers and acquisitions.

Voice

Cable Communications competes with wireline and wireless phone companies, including incumbent local exchange carriers ("ILECs") and competitive local exchange carriers ("CLECs"), and other internet-based and VoIP service providers. Certain phone companies, such as the ILECs AT&T and Verizon, have longstanding customer relationships, and extensive existing facilities and network rights-of-way. A few CLECs also have existing local networks and significant financial resources. In addition, we are increasingly competing with other phone service providers as customers replace traditional wireline phone services with wireless and internet-based phone services, such as Skype.

Wireless

Cable Communications competes with national wireless phone service providers in the United States, including AT&T and Verizon, which offer wireless service on both a standalone basis or along with other services as bundled offerings, as well as regional providers of wireless communications services.

Business Services

Cable Communications primarily competes with a variety of phone companies, including ILECs and CLECs and wide area network managed service providers. These companies either operate their own network infrastructure or use all or part of another carrier's network. We also compete with satellite operators who offer video services to businesses and VoIP companies that target businesses of all sizes. Our video monitoring services compete with companies that provide video surveillance services that use both traditional and cloud-based/digital solutions.

NBCUniversal Segments

Cable Networks and Broadcast Television

NBCUniversal's cable networks, broadcast networks and owned local broadcast television stations compete for viewers' attention and audience share with all forms of programming provided to viewers, including cable, broadcast and premium networks; OTT service providers; local broadcast television stations; home entertainment products; pay-per-view and video on demand services; online activities, such as social networking and viewing user-generated content; gaming products; and other forms of entertainment, news and information.

NBCUniversal's cable networks, broadcast networks and owned local broadcast television stations compete for the acquisition of programming and for on-air and creative talent with other cable and broadcast networks, OTT service providers, and local television stations. The market for programming is very competitive, particularly for sports programming, where the cost for such programming is significant.

NBCUniversal's cable networks compete with other cable networks and programming providers for carriage of their programming by multichannel video providers and OTT service providers. Our broadcast networks compete with the other broadcast networks in markets across the United States to secure affiliations with independently owned television stations, which are necessary to ensure the effective distribution of broadcast network programming to a nationwide audience.

In addition, NBCUniversal's cable television and broadcast television studio production operations compete with other production companies and creators of content for the acquisition of story properties, for creative, performing and technical personnel, and for distribution of, and consumer interest in, their content.

Filmed Entertainment

Filmed Entertainment competes for audiences for films and other entertainment content with other major studios and independent film producers, as well as with alternative forms of entertainment. The competitive position of Filmed Entertainment primarily depends on the number of films produced, their distribution and marketing success, and consumer response. Filmed Entertainment also competes to obtain creative, performing and technical talent, including writers, actors, directors and producers, as well as scripts for films. We also compete with the other major studios and other producers of entertainment content for the exhibition of films in theaters and the distribution of films on premium networks, and with OTT service providers.

Theme Parks

Theme Parks competes with other multi-park entertainment companies as well as other providers of entertainment, lodging, tourism and recreational activities. To help maintain the competitiveness of our theme parks, we have invested and continue to invest significant amounts in existing and new theme park attractions, hotels and infrastructure, including the new theme parks in Beijing, China and Orlando, Florida.

Sky Segment

Sky competes with a broad range of companies engaged in media, entertainment and communications services in Europe, including cable operators, providers of both paid-for and free-to-air programming, service providers making use of new fiber optic networks, other satellite television providers, digital terrestrial television providers, telecommunications providers, other internet service providers, content aggregators, home entertainment products companies, companies developing new technologies and devices, and other suppliers and providers of news, information, sports and entertainment that deliver streaming, downloading and other online video services. Sky's competitive position may be negatively impacted by an increase in the capacity of, or developments in, the means of delivery competitors use to provide their services as well as lowered prices, product innovations, new technologies or different value creation approaches. Sky also competes with organizations that are publicly funded, in whole or in part, to fulfill a public service broadcasting mandate.

Sky's owned channels compete for the acquisition of programming content with a wide range of providers, particularly for sports programming, where the cost for such programming is significant.

Advertising

Cable Communications, Cable Networks, Broadcast Television and Sky compete for the sale of advertising with other television networks and stations, as well as with all other advertising platforms, such as digital, radio and print media. The willingness of advertisers to purchase advertising from us may be adversely affected by lower audience ratings at the related networks, stations or channels. Declines in audience ratings can be caused by increased competition for the leisure time of viewers and by audience fragmentation resulting from the increasing number of entertainment choices available, including content from OTT service providers, online media and other digital sources. In addition, advertising revenue is adversely affected by the growing use of technologies, such as DVRs and video on demand services, which give consumers greater flexibility to watch programming on a time-delayed or on-demand basis or to fast-forward or skip advertisements within programming.

Seasonality and Cyclicality

Each of our businesses is subject to seasonal and cyclical variations. Cable Communications' results are impacted by the seasonal nature of residential customers receiving our services in college and vacation markets. This generally results in fewer net customer relationship additions in the second quarter of each year.

Revenue and operating costs and expenses (comprised of total costs and expenses, excluding depreciation and amortization expense and other operating gains) are cyclical as a result of our periodic broadcasts of major sporting events, such as the Olympic Games, which affect Cable Networks and Broadcast Television, and the Super Bowl, which affects Broadcast Television. In particular, advertising revenue increases due to increased demand for advertising time for these events and distribution revenue increases in the period of broadcasts of the Olympic Games. Operating costs and expenses also increase as a result of our production costs for these broadcasts and the amortization of the related rights fees.

Revenue in Cable Communications, Cable Networks, Broadcast Television and Sky is also subject to cyclical advertising patterns and changes in viewership levels. Advertising revenue in the U.S. is generally higher in the second and fourth quarters of each year and in even-numbered years due to increases in consumer advertising in the spring and in the period leading up to and including the holiday season and advertising related to candidates running for political office and issue-oriented advertising, respectively. Revenue in Cable Networks and Broadcast Television fluctuates depending on the timing of when our programming is aired, which typically results in higher advertising revenue in the second and fourth quarters of each year. Revenue at Sky has seasonally higher audience levels in winter months and increased competition during major sporting events where public service broadcasters lease the rights, such as the Olympic Games and the FIFA World Cup™.

Revenue in Filmed Entertainment fluctuates due to the timing, nature and number of films released in movie theaters, on DVDs, and through various other distribution platforms. Release dates are determined by several factors, including competition and the timing of vacation and holiday periods. As a result, revenue tends to be seasonal, with increases experienced each year during the summer months and around the holiday season. Content licensing revenue in Cable Networks, Broadcast Television and Filmed Entertainment also fluctuates due to the timing of when our content is made available to licensees.

Revenue in Theme Parks fluctuates with changes in theme park attendance that result from the seasonal nature of vacation travel and weather variations, local entertainment offerings and the opening of new attractions, as well as with changes in currency exchange rates. Theme Parks generally experiences peak attendance during the spring holiday period, the summer months when schools are closed and the Christmas holiday season.

Sky results are impacted by the seasonal nature of residential customers receiving our DTH and OTT video services, including the start of the new soccer seasons and the Christmas holiday. This generally results in greater net customer relationship additions and higher subscriber acquisition costs in the second half of each year due to higher marketing expenses.

Exclusive sports rights, such as local European and UCL soccer, Formula 1, and English cricket, play a key role within Sky's wider content strategy. In Europe, broadcasting rights for major sports are usually tendered through a competitive auction process, with the winning bidder or bidders acquiring rights over a three to five-year period. This creates some level of cyclicality for Sky, although the staggered timing of major sports rights auctions usually gives Sky time to react to any material changes in the competitive dynamics of the prevailing market. Certain of Sky's significant sports rights agreements require payments at the start of each season, resulting in increases in sports rights payments in the third and fourth quarter of each year.

Legislation and Regulation

The Communications Act of 1934, as amended (the “Communications Act”), and Federal Communications Commission (“FCC”) regulations and policies affect significant aspects of our businesses that operate in the United States. These businesses are also subject to other regulation by federal, state and local authorities and to agreements we enter into with local cable franchising authorities. In addition, our international businesses are subject to the laws and the jurisdiction of the foreign regulatory authorities where they operate.

Legislators and regulators at all levels of government frequently consider changing, and sometimes do change, existing statutes, rules or regulations, or interpretations of existing statutes, rules or regulations, or prescribe new ones, any of which may significantly affect our businesses. These legislators and regulators have been active in considering rulemakings and legislation, at times looking to adopt regulatory approaches from different countries that may be more burdensome, and they, along with some state attorneys general and foreign governmental authorities, have also been active in conducting inquiries and reviews, regarding our services. In addition, regulators and the courts could adopt new interpretations of existing competition laws as new competition law theories emerge. Any future legislative, judicial, regulatory or administrative actions may increase our costs or impose additional restrictions on our businesses, some of which may be significant. The U.S. Congress may consider proposals to address communications issues, including whether it should rewrite the entire Communications Act to account for changes in the communications marketplace, whether it should enact new, permanent open internet requirements, and whether it should fund new broadband infrastructure. We are unable to predict the outcome or effects of any of these potential actions or any other legislative or regulatory proposals on our businesses.

The following paragraphs summarize the significant legal and regulatory requirements affecting our businesses, although reference should be made to the Communications Act, FCC regulations and other legislation and regulations for further information.

Cable Communications Segment

High-Speed Internet

We provide high-speed internet services to our customers. Many of these services are subject to a number of regulatory obligations or commitments described below. As an internet service provider (“ISP”), we are also subject to a requirement to implement certain network capabilities to assist law enforcement in conducting surveillance of persons suspected of criminal activity. From time to time, the FCC considers imposing new regulatory obligations on ISPs. In addition, states and localities may consider new broadband-related regulations, including those regarding government-owned broadband networks. New broadband regulations, if adopted, may have adverse effects on our businesses.

Open Internet Regulations

In 2017, the FCC reversed its prior classification of broadband internet access service as a Title II telecommunications service under the Communications Act and classified it as an “information service” under Title I. In addition, it eliminated its prior rules prohibiting ISPs from blocking access to lawful content; impairing or degrading lawful internet traffic on the basis of content, applications or services (“throttling”); prioritizing certain internet traffic in exchange for consideration (“paid prioritization”); and generally prohibiting ISPs from unreasonably interfering with or unreasonably disadvantaging consumers’ ability to access and use the lawful internet content, applications, services or devices of their choosing or unreasonably interfering with or disadvantaging edge providers’ ability to make lawful content, applications, services or devices available to consumers (“general conduct”). The FCC stated that jurisdiction to regulate ISP conduct would rest at the Federal Trade Commission (“FTC”). In addition, the FCC revised the transparency rule to add a requirement that ISPs disclose any blocking and throttling practices, and any paid or affiliated prioritization practices associated with their broadband offerings. We have disclosed that we do not block, throttle, or engage in affiliated or paid prioritization, and have committed not to block, throttle, or discriminate against lawful content. The FTC has authority to enforce these public commitments, and the FCC has authority to enforce compliance with its transparency rule.

The FCC’s 2017 decision was challenged, and in 2019, the U.S. Court of Appeals for the District of Columbia largely upheld the FCC’s decision, including the classification of broadband as a Title I information service and repeal of its prior rules. However, it vacated the FCC’s express preemption of all state Open Internet laws, but noted that state laws may nevertheless be preempted on a case-by-case basis if those regulations conflict with federal law or policy. Parties have sought further review of the court’s opinion.

Several states have passed or introduced legislation, or have adopted executive orders, that impose Open Internet requirements in a variety of ways, and new state legislation may be introduced and adopted in the future. Certain of these state initiatives have been challenged in court, and additional challenges may be filed. Such attempts by the states to regulate have the potential to create a patchwork of differing and/or conflicting state regulations. Congress may also consider legislation addressing these regulations and the regulatory framework for broadband internet access services. We cannot predict whether or how the rules might be changed, the impact of potential new legislation or the outcome of any litigation.

Broadband Deployment/Infrastructure Initiatives

In 2018, the FCC adopted rules aimed at removing barriers to the deployment of broadband infrastructure, including the preemption of certain state and local laws or regulations that may unreasonably impede the deployment of wireless broadband networks. These orders are being challenged in federal court, and we cannot predict the outcome of the litigation. If the orders are upheld, some of these reforms may create regulatory imbalances that favor wireless services over wireline broadband services like our own. The FCC is currently considering additional measures that could result in further preemption of state and local laws or regulations as part of its broader efforts to accelerate wireless broadband infrastructure deployment. We cannot predict whether or how any FCC rules might be changed, how state or local laws or regulations may be impacted, or how such changes may affect our business.

Video

Program Carriage

FCC regulations prohibit us from unreasonably restraining the ability of an unaffiliated video programming network to compete fairly by discriminating against the network on the basis of its non-affiliation in the selection, terms or conditions for its carriage. In addition, cable operators and other multichannel video programming distributors ("MVPDs") in the United States are prohibited from requiring as a condition of carriage a financial interest in, or exclusive distribution rights for, a video programming network. We have been involved in program carriage disputes at the FCC, and increasingly in the courts, and may be subject to new complaints in the future.

Must-Carry/Retransmission Consent

Cable operators are required to carry, without compensation, programming transmitted by most local commercial and noncommercial broadcast television stations. As an alternative to this "must-carry" requirement, local broadcast television stations may choose to negotiate with the cable operator for "retransmission consent," under which the station gives up its must-carry rights and instead seeks to negotiate a carriage agreement with the cable operator, which frequently will involve payments to the station. We currently pay certain local broadcast television stations in exchange for their required consent for the retransmission of the stations' broadcast programming to our video services customers and expect to continue to be subject to demands for increased payments and other concessions from local broadcast television stations. Failure to reach a retransmission consent agreement with a broadcaster could result in the loss of popular programming on our video services. For information on must-carry and retransmission consent issues relating to our broadcast television business, see "NBCUniversal Segments - Broadcast Television" below and refer to the "Must-Carry/Retransmission Consent" discussion within that section.

Pricing and Packaging

While the vast majority of our video services, including equipment and installation fees, are no longer subject to rate regulation by the FCC, certain state entities monitor and challenge the marketing and advertising of our services, and some have attempted to regulate the service packages we offer. We cannot predict the outcome of any current litigation with state entities or whether other states may pursue similar actions.

Franchising

Cable operators generally operate their cable systems under nonexclusive franchises granted by local or state franchising authorities. While the terms and conditions of franchises vary materially from jurisdiction to jurisdiction, franchises typically last for a fixed term, obligate the franchisee to pay franchise fees and meet service quality, customer service and other requirements, and are terminable if the franchisee fails to comply with material provisions. Franchising authorities also may require adequate channel capacity, facilities and financial support for public, educational and governmental access programming, and other in-kind contributions. The Communications Act also contains provisions governing the franchising process, including renewal procedures designed to protect incumbent franchisees against arbitrary denials of renewal, including unreasonable renewal conditions. We believe that our franchise renewal prospects are generally favorable but cannot guarantee the future renewal of any individual franchise. The FCC adopted an order in 2019 that prohibits state and local authorities from imposing duplicative franchise and/or fee requirements on the provision of broadband and other non-cable services over franchised cable systems, and ruling that in-kind contributions are treated as franchise fees subject to the statutory cap on franchise fees of 5% of cable service revenue unless those contributions are expressly excluded by statute. The order has been appealed, and we cannot predict the outcome of this litigation.

Voice

We provide voice services using VoIP technology. The FCC has adopted a number of regulations for providers of nontraditional voice services such as ours, including regulations relating to privacy of customer proprietary network information, local number portability duties and benefits, disability access, E911, law enforcement assistance, outage reporting, Universal Service Fund contribution obligations, rural call completion, customer equipment back-up power, service discontinuance and certain regulatory filing requirements. The FCC has not yet ruled on whether VoIP services such as ours should be classified as an "information service" or a "telecommunications service" under the Communications Act. The classification determination is important because telecommunications services are regulated more extensively than information services. One federal court of appeals has held that VoIP is an information service and preempted state regulation of VoIP, but that ruling is limited to the seven states located in that circuit. State regulatory commissions and legislatures in other jurisdictions may continue to consider imposing regulatory requirements on our voice services as long as the regulatory classification of VoIP remains unsettled at the federal level.

Wireless

In 2017, we began offering a wireless voice and data service. We offer this service using our MVNO rights to provide the service over Verizon's wireless network. MVNOs are subject to many of the same FCC regulations as facilities-based wireless carriers (e.g., E911 services, local number portability, etc.), as well as certain state or local regulations. The FCC or other regulatory authorities may adopt new or different regulations for MVNOs and/or mobile broadband providers in the future, which could adversely affect our wireless phone service offering or our business generally.

NBCUniversal Segments

Cable Networks

Program Access

The Communications Act and FCC regulations generally prevent cable networks affiliated with cable operators from favoring cable operators over competing MVPDs. The FCC and Congress have considered proposals that would require companies that own multiple cable networks to make each of their networks available individually when negotiating distribution agreements with MVPDs and potentially with online video distributors; Maine has enacted a law mandating retail a la carte distribution by cable operators that, if upheld by the courts, may have similar effects. We currently offer our cable networks both on a bundled basis and, when requested, individually. We have been involved in program access disputes at the FCC and may be subject to new complaints in the future.

Children's Programming

Under federal regulations, the amount of commercial content that may be shown on cable networks, broadcast networks and broadcast television stations during programming originally produced and broadcast primarily for an audience of children 12 years of age and under is limited, and certain television station programming must serve the educational and informational needs of children 16 years of age and under.

Broadcast Television

Licensing

Local broadcast television stations may be operated only in accordance with a license issued by the FCC upon a finding that the grant of the license will serve the public interest, convenience and necessity. The FCC grants broadcast television station licenses for specific periods of time, which may be renewed with or without conditions. The FCC renewed all of our broadcast television station licenses without conditions during the last license renewal cycle; the next television license renewal cycle begins in 2020. Although our licenses have been renewed, there can be no assurance that we will always obtain renewal grants.

Ownership Restrictions

The Communications Act and FCC regulations impose certain limitations on local and national television ownership, as well as limits on foreign ownership in a broadcast television station. In addition, each of the four major broadcast television networks - ABC, CBS, Fox and NBC - is prohibited from being under common ownership or control with another of the four.

Must Carry/Retransmission Consent

Every three years, each commercial television station must elect for each cable system in its DMA either must carry or retransmission consent. A similar regulatory scheme applies to satellite providers. For the current three-year period, which commenced on January 1, 2018, all of our owned NBC broadcast television stations and our owned Telemundo broadcast television stations elected retransmission consent. The next three-year period will commence on January 1, 2021, with elections to be made by October 1, 2020.

Filmed Entertainment

Our filmed entertainment business is subject to "trade practice laws" in effect in 25 states and Puerto Rico relating to theatrical distribution of motion pictures. In countries outside the United States, a variety of existing or contemplated laws and regulations may affect our ability to distribute and license motion picture and television products, as well as consumer merchandise products. The ability of countries to deny market access or refuse national treatment to products originating outside their territories is regulated under various international agreements.

Theme Parks

Our theme parks are subject to various regulations in the United States and internationally, including laws and regulations regarding environmental protection, privacy and data protection, consumer product safety and theme park operations, such as health, sanitation, safety and fire standards, as well as liquor licenses.

Sky Segment

Sky is subject to regulation primarily under Austrian, German, Irish, Italian, U.K. and European Union ("EU") law, including telecommunications and media-specific regulation described below, as well as regulation under generally applicable laws, such as competition, consumer protection, data protection and taxation. Sky is currently, and may be in the future, subject to proceedings or investigations from regulatory and antitrust authorities in the jurisdictions in which it operates. In addition, in connection with our acquisition of Sky, we have made certain legally binding commitments with respect to Sky's operations, including for example, to maintain annual funding for Sky News in an amount no lower than Sky News' 2017 fiscal year expenditures, as adjusted by inflation, until 2029.

Platform Services

In the U.K., Sky is required to ensure that agreements to provide its electronic program guide ("EPG") and conditional access ("CA") services to other programming providers are on fair, reasonable, and non-discriminatory terms, among other things, so that those providers' content is available on Sky's satellite platform via the EPG on Sky's set-top boxes. Sky also has voluntarily committed to the U.K.'s communications regulator, the Office of Communications, or Ofcom, to provide access control services to third parties that enable them to provide interactive services. Sky is subject to similar EPG and CA obligations in Germany.

Television Channels

Sky holds a number of licenses and authorizations for its portfolio of pay TV channels. In the U.K., Sky is subject to various codes issued by Ofcom affecting the content and delivery of these channels. Sky also holds various nationwide broadcast licenses in Germany, Italy and Austria, and must comply with rules and regulations covering issues such as the acquisition and exploitation of sports rights, media concentration and plurality, television advertising, the protection of children, accessibility, airtime for commercials and teleshopping, sponsorship, and ensuring clear distinctions between program content and advertising.

High-Speed Internet and Voice

Sky provides broadband and voice services in the U.K. and Ireland pursuant to wholesale distribution agreements that third-party broadband and telecommunications companies either make available commercially or are required to make available under applicable laws in those jurisdictions. Material changes to these regulations could affect Sky's business. Sky is also subject to EU open internet regulations, which prohibit the blocking, throttling, or discrimination of online content, applications, and services and require ISPs to disclose their traffic management, throughput limitations and other practices impacting quality of service in customer contracts.

Other Areas of Regulation

Intellectual Property

Copyright, trademark, unfair competition, patent, trade secret and other proprietary-rights laws of the United States and other countries help protect our intellectual property rights. In particular, unauthorized copying, distribution, and piracy of programming and films over the internet, through devices, software and websites, and through counterfeit DVDs, and other platforms, interfere with the market for copyrighted works and present challenges for NBCUniversal's and Sky's content businesses. We have actively engaged in the enforcement of our intellectual property rights and likely will continue to expend substantial resources to protect our content. Although many legal protections exist to combat such practices, the extent of copyright protection is ambiguous and the use of technological protections are controversial. Modifications to existing laws, a weakening of these protections or their enforcement, or a failure of existing laws, in the United States or internationally, to adapt to new technologies could have an adverse effect on our ability to license and sell our programming.

U.S. copyright laws also require that our video distribution business contribute a percentage of revenue to a federal copyright royalty pool in exchange for retransmitting copyrighted material in broadcast signals under a cable compulsory license and that we pay standard industry licensing fees for the public performance of music in the programs we create or distribute. The compulsory copyright license and the royalties we pay are subject to audits and possible regulatory and legislative changes that could impact the royalty fees we pay and our ability to retransmit broadcast signals over cable systems. In addition, the landscape for music licensing is constantly changing, and music fees we pay are subject to new fee demands and negotiations. We cannot predict how changes to the compulsory copyright license and music licensing will impact the fees that we pay.

Privacy and Data Security Regulation

Our businesses are subject to federal, state and other foreign laws and regulations that impose various restrictions and obligations related to privacy and the handling of consumers' personal information. In the U.S., the Communications Act generally restricts cable operators' nonconsensual collection and disclosure to third parties of cable customers' personally identifiable information, except for rendering service, conducting legitimate business activities related to the service, and responding to legal requests. We are also subject to various state and federal regulations that provide privacy protections for customer proprietary network information related to our voice services.

The FTC generally exercises oversight of consumer privacy protections using its enforcement authority over unfair and deceptive acts or practices. We are also subject to stringent data security and data retention requirements that apply to website operators and online services directed to children 12 years of age and under, or that knowingly collect or post personal information from children 12 years of age and under.

In addition, certain states have enacted detailed laws establishing consumer privacy protections and data security requirements in their respective states. For example, the California Consumer Privacy Act ("CCPA") gives California residents new rights to receive certain disclosures regarding the collection, use, and sharing of "Personal Information," as well as rights to access, delete, and restrict the sale of certain personal information collected about them. The CCPA went into effect on January 1, 2020, and compliance with that law will increase the cost of providing our services in California. More generally, the FTC and state attorneys general regularly initiate efforts to update or enforce transparency requirements about the collection and use of consumer information, which may require ongoing review of new and rapidly evolving technologies and methods for delivering content and advertising to ensure that appropriate notice is given to consumers and consent is obtained where required. Additionally, all 50 states have security breach notification laws that generally require a business to give notice to consumers and government agencies when certain information has been disclosed to an unauthorized party due to a security breach.

Certain of our businesses are subject to the EU's General Data Protection Regulation ("GDPR"), which broadly regulates the processing of personal data collected from individuals in the EU. GDPR, and the Member States' legislation implementing the GDPR affect our ability to process certain personal data.

Privacy and data security legislation remained a priority issue in 2019. Attempts by state and local governments to regulate consumer privacy have the potential to create a patchwork of differing and/or conflicting state regulations. Additionally, there are pending federal legislative proposals that, if enacted, could create new consumer privacy protections or impose new requirements on entities that collect and use consumer personal information, including us. We cannot predict whether such legislation will be enacted at the federal or state level and, if so, the impact of any such laws on our business.

FCC 5G Spectrum Proceedings and Other Wireless Laws and Regulations

In multiple regulatory proceedings, the FCC has established or is in the process of evaluating and potentially modifying its rules to make available additional spectrum that will likely be used for new 5G services. Cable Communications and NBCUniversal use some of this spectrum to provide our services and there is a risk that certain proposed rule changes could affect our ability to use such spectrum and could disrupt certain operations. We cannot predict what rules or legislation, if any, will ultimately be adopted or how any such changes would affect our businesses.

State and Local Taxes

Some states and localities have imposed or are considering imposing, through both legislative and administrative channels, new or additional taxes or fees on, or limiting or eliminating incentives or credits earned or monetized by, the businesses operated by our Cable Communications and NBCUniversal segments, or imposing adverse methodologies by which taxes, fees, incentives or credits are computed, earned or monetized. These include combined reporting or other changes to general business taxes, central assessments for property tax and taxes and fees on the businesses operated or services provided by our Cable Communications and NBCUniversal segments. In some situations, DBS providers and other competitors that deliver their services over a high-speed internet connection do not face the same state tax and fee burdens. Congress has also considered, and may consider again, proposals to bar or limit states from imposing taxes on these DBS providers or other competitors that are equivalent to the taxes or fees that we pay. The Internet Tax Freedom Act ("ITFA"), which prohibits most states and localities from imposing sales and other taxes on our internet access charges, was made permanent by 2016 legislation; however, some jurisdictions may challenge the ITFA or the application of the ITFA to our business, or may assert that certain taxes akin to right-of-way fees are not preempted by the ITFA.

U.K. Exit from the European Union

The telecommunications and media regulatory framework applicable to Sky and NBCUniversal's businesses in the U.K. and the EU may be subject to greater uncertainty upon the U.K.'s withdrawal from the EU. We cannot predict the extent of any potential changes to the regulatory framework involving U.K. and EU regulation of telecommunications and media, or changes to certain mutual recognition arrangements for media and broadcasting.

Other Regulations

U.S. states and localities, and various regulatory authorities actively regulate other aspects of our businesses, including accessibility to our video and voice services and broadcast television programming for people with disabilities, customer service standards, inside wiring, cable equipment, pole attachments, universal service fees, public safety, telemarketing, leased access, indecency, loudness of commercial advertisements, advertising, political broadcasting, Emergency Alert System, equal employment opportunity and other employment-related laws, environmental-related matters, regulatory fees and technical standards relating to the operation of cable systems and television stations. In addition, our international businesses are subject to various international regulations, including those that cover television broadcasting, programming and advertising. We are occasionally subject to enforcement actions and investigations at the FCC and other federal, state and local agencies, as well as foreign governments and regulatory authorities, which can result in us having to pay fines or being subject to other sanctions.

Employees

As of December 31, 2019, we had approximately 190,000 full-time and part-time employees calculated on a full-time equivalent basis. Of these employees, approximately 88,000, 66,000 and 34,000 were associated with Cable Communications, NBCUniversal and Sky, respectively. We also use freelance and temporary employees in the normal course of our business.

Caution Concerning Forward-Looking Statements

The SEC encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. In this Annual Report on Form 10-K, we state our beliefs of future events and of our future financial performance. In some cases, you can identify these so-called "forward-looking statements" by words such as "may," "will," "should," "expects," "believes," "estimates," "potential," or "continue," or the negative of these words, and other comparable words. You should be aware that these statements are only our predictions. In evaluating these statements, you should consider various factors, including the risks and uncertainties listed in "Risk Factors" and in other reports we file with the SEC.

Additionally, we operate in a highly competitive, consumer-driven and rapidly changing environment. This environment is affected by government regulation; economic, strategic, political and social conditions; consumer response to new and existing products and services; technological developments; and, particularly in view of new technologies, the ability to develop and protect intellectual property rights. Our actual results could differ materially from our forward-looking statements as a result of any of such factors, which could adversely affect our businesses, results of operations or financial condition. We undertake no obligation to update any forward-looking statements.

Item 1A: Risk Factors

Our businesses operate in highly competitive and dynamic industries, and our businesses and results of operations could be adversely affected if we do not compete effectively.

All of our businesses operate in intensely competitive, consumer-driven and rapidly changing environments and compete with a growing number of companies that provide a broad range of communications products and services and entertainment, news and information content to consumers. OTT service providers continue to proliferate, complicating the competitive landscape by influencing consumer behavior and challenging existing business models, which is discussed in more detail in the risk factor immediately below.

For example:

- Competition for Cable Communications' video, high-speed internet and voice services consists primarily of phone companies with fiber-based networks and DBS providers that typically offer features, pricing and packaging for services comparable to ours. Sky faces competition for its video, high-speed internet and voice services from cable and telecommunications providers in its European markets, many of which offer customers bundled services, which has increased competition. Increasingly, additional companies, some with significant financial resources or fewer regulatory burdens, have entered, or are seeking to enter, the video distribution market by offering OTT streaming services or selling devices that aggregate viewing of various OTT services. Many OTT service providers offer smaller packages of channels or subscriptions to access programming at price points lower than our standard packages or for free, which adversely affects demand for Cable Communications' and Sky's traditional DTH video services, including for expanded video packages, premium networks, and DVR and On Demand services.
- Cable Communications' and Sky's high-speed internet services compete primarily against phone companies with fiber-based networks offering speeds and pricing comparable to ours. Wireless internet services, such as 4G and 5G wireless broadband services, satellite-delivered internet services and Wi-Fi networks, and devices such as smartphones, tablets, wireless data cards, and mobile and fixed wireless routers that connect to such services, also may compete with our high-speed internet services, particularly as wireless technology evolves. Some municipalities in the United States own and operate their own broadband networks and additional municipalities may do so in the future.
- NBCUniversal and Sky face substantial and increasing competition from providers of similar types of content, as well as from other forms of entertainment and recreational activities.
- NBCUniversal and Sky must compete to obtain talent, content and other resources required to operate their businesses. This competition has intensified as OTT service providers seek to develop high-quality programming to attract viewers.

For a more detailed description of the competition facing our businesses, see Item 1: Business and refer to the "Competition" discussion within that section.

Consolidation of, or cooperation between, our competitors, including suppliers and distributors of content, may increase competition in all of these areas. For example, consolidation or cooperation between phone companies (which are also wireless distributors) and content providers may allow competitors to offer free or lower cost streaming services, potentially on an exclusive basis, through unlimited data-usage plans for internet or wireless phone services.

The ability of our businesses to compete effectively also depends on our perceived image and reputation among our various constituencies, including our customers, consumers, advertisers, employees, investors and government authorities. Our ability to compete will be negatively affected if we do not provide our customers with a satisfactory customer experience.

While we continue to seek ways to enhance the value of our businesses, such as by growing high-speed internet services and business services and by investing in new theme parks and Peacock, there can be no assurance that we can execute on these and other initiatives in a manner sufficient to grow or maintain our revenue or operating margins or to compete successfully in the future. There can be no assurance that we will be able to compete effectively against existing or new competitors or that competition will not have an adverse effect on our businesses.

Changes in consumer behavior driven by online video distribution platforms for viewing content continue to adversely affect our businesses and challenge existing business models.

Distribution platforms for viewing and purchasing content over the internet have been, and will likely continue to be, developed that further increase the number of competitors that all our businesses face and challenge existing business models. These distribution platforms have driven, and will continue to drive, changes in consumer behavior as consumers seek more control over when, where and how they consume content and access communications services, and how much they pay for such content.

Consumers are increasingly turning to online sources for viewing and purchasing content, which is reducing the number of Cable Communications' video customers and subscribers to NBCUniversal's cable networks even as it makes Cable Communications' high-speed internet services more important to consumers. These changing consumer behaviors also are occurring in Europe, as more of Sky's new video customers have recently subscribed, and may continue to subscribe, to Sky's OTT video service instead of its traditional DTH video service. Although we have attempted to adapt our video service offerings and enhance our high-speed internet services for changing consumer behaviors, for example, by deploying the X1 and Sky Q platforms and Flex, which can more easily aggregate linear and OTT programming choices for our customers, the continuing trend of OTT service providers delivering their content directly to consumers over the internet rather than through, or in addition to, traditional video distribution services continues to disrupt traditional video distribution business models.

The increase in OTT service providers also has significantly increased the number of entertainment choices available to consumers, which has intensified audience fragmentation and disaggregated the way that content traditionally has been distributed and viewed by consumers. Time-shifting technologies, such as DVR and on demand services, also reduce the viewing of content through traditional and virtual multichannel video providers, which has caused and likely will continue to cause audience ratings declines for our programming channels. Reduced ratings may adversely affect the price and amount of advertising that advertisers are willing to purchase from us and the amount that we receive for distribution of our content. In addition, as more programming providers offer their content directly to consumers, they may reduce the quantity and quality of the programming they license to NBCUniversal or Sky's programming channels.

Our failure to effectively anticipate or adapt to emerging competitors or changes in consumer behavior, including among younger consumers, and shifting business models could have an adverse effect on our competitive position, businesses and results of operations.

A decline in advertisers' expenditures or changes in advertising markets could negatively impact our businesses.

Cable Communications, NBCUniversal and Sky compete for the sale of advertising time with other television networks and stations, as well as with all other advertising platforms, such as digital media, radio and print. We derive substantial revenue from the sale of advertising, and a decline in expenditures by advertisers, including through traditional linear television distribution models, could negatively impact our results of operations. Declines can be caused by the economic prospects of specific advertisers or industries, increased competition for the leisure time of viewers, such as from social media and video games, audience fragmentation, increased viewing of content through OTT service providers, regulatory intervention regarding where and when advertising may be placed, or economic conditions generally. In addition, advertisers have increasingly shifted their expenditures to digital media and their willingness to purchase advertising from us may be adversely affected by lower audience ratings, which many of NBCUniversal's networks and some of Sky's television channels have experienced and likely will continue to experience. Advertising sales and rates also are dependent on the methodology used for audience measurement and could be negatively affected if methodologies do not accurately reflect actual viewership levels. For example, certain methods of viewing content, such as through OTT services or delayed viewing through DVR or on demand services, might not be counted in audience measurements or may generate less, if any, revenue than traditional linear television distribution methods, which could have an adverse effect on our advertising revenue.

Our businesses depend on keeping pace with technological developments.

Our success is, to a large extent, dependent on our ability to acquire, develop, adopt and leverage new and existing technologies, and our competitors' use of certain types of technology and equipment may provide them with a competitive advantage. For example, current and new wireless internet technologies such as 4G and 5G wireless broadband services continue to evolve rapidly to allow for greater speed and reliability, and some companies and municipalities are building advanced fiber-based networks that provide very fast internet access speeds. We expect other advances in communications technology to occur in the future. If we choose technology or equipment that is not as effective or attractive to consumers as that employed by our competitors, if we fail to employ technologies desired by consumers before our competitors do so, or if we fail to execute effectively on our technology initiatives, our businesses and results of operations could be adversely affected. We also will continue to incur additional costs as we execute our technology initiatives, such as the deployment of Flex and Sky Q set-top boxes and wireless gateways. There can be no assurance that we can execute on these and other initiatives in a manner sufficient to grow or maintain our revenue or to compete successfully in the future. We also may generate less revenue or incur increased costs if changes in our competitors' product offerings require that we offer certain services or enhancements at a lower or no cost to our customers or that we increase our research and development expenditures.

We are subject to regulation by federal, state, local and foreign authorities, which impose additional costs and restrictions on our businesses.

In the United States, federal, state and local governments extensively regulate the high-speed internet, video and voice services industries. Our broadcast television business is also highly regulated by U.S. laws and regulations. NBCUniversal's other businesses are also subject to various other laws and regulations at the international, federal, state and local levels. Sky's business is subject to various telecommunications and media-specific regulations where it operates. The FCC, FTC and certain state attorneys general and foreign governmental authorities also have been active in conducting inquiries and reviews regarding our services, and this trend likely will continue. In addition, regulators and the courts could adopt new interpretations of existing competition laws as new competition law theories emerge. Failure to comply with the laws and regulations applicable to our businesses could result in administrative enforcement actions, fines, and civil and criminal liability.

Legislators and regulators at all levels of government, including foreign authorities, frequently consider changing, and sometimes do change, existing statutes, rules or regulations, or interpretations of existing statues, rules or regulations, or prescribe new ones, any of which may address communications and other issues that could significantly affect our businesses. These legislators and regulators have been active in considering legislation and rulemakings regarding our services, at times looking to adopt regulatory approaches from different countries that may be more burdensome. For example, some states have passed or introduced legislation or executive orders that impose various open internet and data privacy requirements. Such attempts by the states to regulate portions of our businesses have the potential to create a patchwork of differing and/or conflicting state regulations. These requirements and any future legislative, judicial, regulatory or administrative actions may increase our costs or impose additional restrictions on our businesses, some of which may be significant. We are unable to predict the outcome or effects of any of these potential actions or any other legislative or regulatory proposals on our businesses. Any changes to the legal and regulatory framework applicable to any of our services or businesses could have an adverse impact on our businesses and results of operations. For a more extensive discussion of the significant risks associated with the regulation of our businesses, see Item 1: Business and refer to the "Legislation and Regulation" discussion within that section.

Programming expenses for our video services are increasing, which could adversely affect Cable Communications' and Sky's video businesses.

We expect programming expenses for our video services to continue to be the largest single expense item for our Cable Communications and Sky segments and to increase for the foreseeable future. Our programming expenses may also increase as we add programming to our video services or distribute existing programming to more of our customers or through additional delivery platforms, such as on demand or streaming services. Additionally, Cable Communications pays certain local broadcast television stations in exchange for their required consent for the retransmission of broadcast network programming to video services customers; we expect to continue to be subject to increasing demands for payment and other concessions from local broadcast television stations. These market factors may be exacerbated by increased consolidation in the media industry, which may further increase our programming expenses. If we are unable to raise our customers' rates or offset programming cost increases through the sale of additional services or cost management initiatives, the increasing cost of programming could have an adverse effect on our Cable Communications and Sky segments' results of operations.

Moreover, as our contracts with content providers expire, there can be no assurance that they will be renewed on acceptable terms, if renewed at all, in which case we may be unable to provide such content as part of Cable Communications' or Sky's video services, and our businesses and results of operations could be adversely affected.

NBCUniversal's and Sky's success depends on consumer acceptance of their content, and their businesses may be adversely affected if their content fails to achieve sufficient consumer acceptance or the costs to create or acquire content increase.

NBCUniversal and Sky create and acquire media and entertainment content, the success of which depends substantially on consumer tastes and preferences that change in often unpredictable ways. The success of these businesses depends on our ability to consistently create, acquire, market and distribute television programming, filmed entertainment, theme park attractions and other content that meet the changing preferences of the broad domestic and international consumer markets. We have invested, and will continue to invest, substantial amounts in our content, including in the production of original content at NBCUniversal and Sky, in our films and for new theme parks and theme park attractions, before learning the extent to which they will earn consumer acceptance. We also are incurring significant costs to develop Peacock, and there can be no assurance that consumers and advertisers will embrace this offering.

NBCUniversal and Sky also obtain a significant portion of their content from third parties, such as movie studios, television production companies, sports organizations and other suppliers, sometimes on an exclusive basis. Competition for popular content, particularly for sports programming, is intense, and we may have to increase the price we are willing to pay or be outbid by our competitors for popular content. We also may be unable to license popular third-party content for NBCUniversal's and Sky's programming channels if media companies launch successful OTT services for their owned content such that they forgo license fees from us and only provide their content directly to consumers.

Entering into or renewing contracts for such programming rights or acquiring additional rights may result in significantly increased costs. Particularly with respect to long-term contracts for sports programming rights for NBCUniversal and Sky, our results of operations and cash flows over the term of a contract depend on a number of factors, including the strength of the advertising market, audience size, the timing and amount of rights payments, and the ability of NBCUniversal to secure distribution from, impose surcharges on, or obtain carriage on multichannel video providers. There can be no assurance that revenue from these contracts will exceed our costs for the rights, as well as the other costs of producing and distributing the programming. If our content does not achieve sufficient consumer acceptance, or if we cannot obtain or retain rights to popular content on acceptable terms, or at all, NBCUniversal's and Sky's businesses may be adversely affected.

The loss of programming distribution and licensing agreements, or the renewal of these agreements on less favorable terms, could adversely affect our businesses.

NBCUniversal's cable networks depend on their ability to secure and maintain distribution agreements with traditional and virtual multichannel video providers. The number of subscribers to NBCUniversal's cable networks has been, and likely will continue to be, reduced as a result of fewer subscribers to multichannel video providers. Sky also depends on its ability to secure and maintain wholesale distribution agreements for its television channels with multichannel video providers.

Increasingly, NBCUniversal and Sky are entering into agreements to license their prior season and library content on other distribution platforms, including OTT services. If this programming does not attract sufficient viewers, traditional and virtual multichannel video providers may not distribute NBCUniversal's or Sky's programming, and OTT services may not license programming NBCUniversal or Sky creates. In addition, we expect not to license certain popular content, and we may decide not to license additional popular content that we own, to third parties so we may offer it exclusively through Peacock, which would result in foregone licensing revenue.

NBCUniversal's broadcast television networks depend on their ability to secure and maintain network affiliation agreements with third-party local broadcast television stations in the markets where it does not own the affiliated local broadcast television station. In addition, every three years, each of its owned local broadcast television stations must elect, with respect to its retransmission by multichannel video providers within its DMA, either "must-carry" status, in which the distributor's carriage of the station is mandatory and does not generate any compensation for the local station, or "retransmission consent," in which the station gives up its right to mandatory carriage and instead seeks to negotiate the terms and conditions of carriage with the distributor, including the amount of compensation, if any, paid to the station by such distributor. For the current three-year period, which commenced on January 1, 2018, all of our owned NBC broadcast television stations and our owned Telemundo broadcast television stations elected retransmission consent. However, certain illegal online entities may stream our broadcast television content online without our consent and without paying any compensation to us.

There can be no assurance that any of these agreements will be entered into or renewed in the future on acceptable terms. The inability to enter into or renew these agreements could reduce our revenues and the reach of our programming, which could adversely affect NBCUniversal's and Sky's businesses.

Less favorable telecommunications access regulations, the loss of Sky's transmission agreements with satellite or telecommunications providers or the renewal of these agreements on less favorable terms could adversely affect Sky's businesses.

Sky relies on various third-party telecommunications providers to deliver its video, high-speed internet, voice and wireless phone services to its customers. For example, Sky relies on satellites leased from third parties to provide most of its video services. In addition, pursuant to the current regulatory regimes in the U.K. and Italy, Sky is able to access networks owned by third-party telecommunications providers to offer its high-speed internet and phone services, in most cases, on regulated terms, including price. If there is a change in regulation in the U.K, Italy or other markets where Sky accesses networks owned by third-party telecommunications providers, the regulated terms could become less favorable. Moreover, while Sky is able to receive wholesale fiber access on fair, reasonable and non-discriminatory terms, pricing terms are not regulated. As a result, if Sky is unable to enter into or renew its transmission agreements with satellite or telecommunications operators on commercially reasonable terms or if these operators were to terminate their agreements, Sky may be unable to deliver some of its services to customers in one or more of the countries in which it operates, which would adversely affect Sky's businesses and results of operations.

We rely on network and information systems and other technologies, as well as key properties, and a disruption, cyber attack, failure or destruction of such networks, systems, technologies or properties may disrupt our businesses.

Network and information systems and other technologies, including those related to our network management, customer service operations, and programming delivery, and technology embedded in our products and services, are critical to our business activities.

Cyber threats and attacks are directed at both known and newly discovered software and hardware vulnerabilities and are constantly evolving, which increases the difficulty of detecting and successfully defending against them. Cyber threats and attacks can have cascading impacts that unfold with increasing speed across networks, information systems and other technologies. Network, information systems and technology-related events, including those caused by us, such as process breakdowns, security architecture or design vulnerabilities, or by third parties, such as computer hackings, cyber attacks, computer viruses, worms or other destructive or disruptive software, denial of service attacks, malicious social engineering or other malicious activities, or power outages, natural disasters, infectious disease outbreaks, terrorist attacks or other similar events, could result in a degradation or disruption of our products and services, excessive call volume to call centers, theft or misuse of our intellectual property or other assets, a reduction in demand for our theme parks, disruption of the security of our internal systems and products and services or satellite transmission signals, the compromise of confidential or technical business information or damage to our equipment, data, properties and reputation. In addition, severe weather events such as hurricanes and wild fires have impacted our services, products and properties from time to time in the past and will in the future. The occurrence of these events may result in large expenditures to repair or replace the damaged properties, products, services, networks or information systems to protect them from similar events in the future, and any such events could lead to litigation or otherwise have an adverse effect on our results of operations.

In addition, we obtain certain confidential, proprietary and personal information about our customers, personnel and vendors, and in some cases provide this information to third parties, in connection with our business. While we generally obtain assurances that these third parties will protect this information, there is a risk that this information may be compromised. Any security breaches, such as misappropriation, misuse, leakage, falsification or accidental release or loss of information maintained in our third-party's information technology systems, including customer, personnel and vendor data, could damage our reputation and require us to expend significant capital and other resources to remedy any such security breach, could lead to litigation or could cause regulators to impose fines or other remedies for failure to comply with relevant customer privacy rules.

The risk of systems-related events and security breaches occurring continues to intensify in many of our businesses, and our businesses may be at a disproportionately heightened risk of these events occurring, due to the nature of our businesses and because we maintain certain information necessary to conduct our business in digital form. In the ordinary course of our business, there are frequent attempts by third parties to cause such systems-related events and security breaches and to identify our security architecture or system design vulnerabilities. While we develop and maintain systems, and operate an extensive security program, seeking to prevent systems-related events and security breaches from occurring, the development, maintenance and operation of these systems and programs is costly and requires ongoing monitoring and updating as technologies change and efforts to overcome security measures become more sophisticated and evolve rapidly. Despite our efforts to prevent these events and security breaches, we have experienced systems-related events and breaches in the past, and there can be no assurance that they will not occur in the future or will not have an adverse effect on our businesses. Moreover, the amount and scope of insurance we maintain against losses resulting from any such events or security breaches likely would not be sufficient to cover our losses or otherwise adequately compensate us for any disruptions to our business that may result, and the occurrence of any such events or security breaches could have an adverse effect on our business.

Our businesses depend on using and protecting certain intellectual property rights and on not infringing the intellectual property rights of others.

We rely on our intellectual property, such as patents, copyrights, trademarks and trade secrets, as well as licenses and other agreements with our vendors and other third parties, to use various technologies, conduct our operations and sell our products and services. Legal challenges to our intellectual property rights and claims of intellectual property infringement by third parties could require that we 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, from importing into the United States or other jurisdictions in which we operate hardware that uses such intellectual property or from the continuation of our businesses as currently conducted. We may need to change our business practices if any of these events occur, which may limit our ability to compete effectively and could have an adverse effect on our results of operations. Even if we believe any such challenges or claims are without merit, they can be time-consuming and costly to defend and divert management's attention and resources away from our businesses. Moreover, if we are unable to obtain or continue to obtain licenses from our vendors and other third parties on reasonable terms, our businesses could be adversely affected.

In addition, intellectual property constitutes a significant part of the value of NBCUniversal's and Sky's businesses, and their success is highly dependent on protecting the intellectual property rights of the content they create or acquire against third-party misappropriation, reproduction or infringement. The unauthorized reproduction, distribution or display of copyrighted material negatively affects our ability to generate revenue from the legitimate sale of our content, as well as from the sale of advertising in connection with our content, and increases our costs due to our active enforcement of our intellectual property rights.

Piracy and other unauthorized uses of content are made easier, and the enforcement of intellectual property rights more challenging, by technological advances that allow the conversion of programming, films and other content into digital formats, which facilitates the creation, transmission and sharing of high-quality unauthorized copies. In particular, piracy of programming and films through unauthorized distribution platforms continues to present challenges for NBCUniversal's cable networks, broadcast television and filmed entertainment businesses. It also presents similar challenges for Sky's businesses, including as a result of illegal retransmission of sports events. While piracy is a challenge in the United States, it is particularly prevalent in many parts of the world that lack developed copyright laws, effective enforcement of copyright laws and technical protective measures like those in effect in the United States. If any U.S. or international laws intended to combat piracy and protect intellectual property rights are repealed or weakened or are not adequately enforced, or if the legal system fails to adapt to new technologies that facilitate piracy, we may be unable to effectively protect our rights, the value of our intellectual property may be negatively impacted and our costs of enforcing our rights may increase.

We may be unable to obtain necessary hardware, software and operational support.

We depend on third-party vendors to supply us with a significant amount of the hardware, software and operational support necessary to provide certain of our products and services. Some of these vendors represent our primary source of supply or grant us the right to incorporate their intellectual property into some of our hardware and software products. While we actively monitor the operations and financial condition of key vendors in an attempt to detect any potential difficulties, there can be no assurance that we would timely identify any operating or financial difficulties associated with these vendors or that we could effectively mitigate our risks with respect to any such difficulties. If any of these vendors experience operating or financial difficulties, if our demand exceeds their capacity or if they breach or terminate their agreements with us or are otherwise unable to meet our specifications or provide the equipment, products or services we need in a timely manner (or at all), or at reasonable prices, our ability to provide some products or services may be adversely affected and we may incur additional costs.

Weak economic conditions may have a negative impact on our businesses.

A substantial portion of our revenue comes from customers whose spending patterns may be affected by prevailing economic conditions. Weak economic conditions in the United States or globally could adversely affect demand for any of our products and services and have a negative impact on our results of operations. For example, customers may reduce the level of services to which they subscribe, or may discontinue subscribing to one or more of Cable Communications' or Sky's services. This risk may be increased by the expanded availability of free or lower cost competitive services, such as OTT video services, or substitute services for high-speed internet and voice services, such as mobile phones and Wi-Fi networks. Weak economic conditions also negatively impact our advertising revenue, the performance of our films and home entertainment releases, and attendance and spending in our theme parks.

Weak economic conditions and disruption in the global financial markets may also have an impact on the ability of third parties to satisfy their obligations to us or increase our exposure to currency fluctuations in countries where we operate. In addition, in connection with our acquisition of Sky, we incurred and assumed a significant amount of additional debt. If our businesses are negatively impacted by weak economic conditions, we may not be able to reduce the amount of our debt outstanding as quickly as expected. Further, a significant increase in interest rates or disruption in the global financial markets may affect our ability to obtain financing or to refinance existing debt on acceptable terms, if at all, and could increase the cost of our borrowings.

Acquisitions and other strategic initiatives present many risks, and we may not realize the financial and strategic goals that we had contemplated.

From time to time, we make acquisitions and investments and may pursue other strategic initiatives, including our 2018 acquisition of Sky and the development of Peacock and new theme parks. In connection with such acquisitions and strategic initiatives, we may incur significant or unanticipated expenses, fail to realize anticipated benefits and synergies, have difficulty incorporating an acquired or new line of business, disrupt relationships with current and new employees, customers and vendors, incur significant debt, or have to delay or not proceed with announced transactions or initiatives. Additionally, federal regulatory agencies such as the FCC or DOJ or international regulators may impose restrictions on the operation of our businesses as a result of our seeking regulatory approvals for any significant acquisitions and strategic initiatives or may dissuade us from pursing certain transactions. The occurrence of any of these events could have an adverse effect on our business and results of operations.

We face risks relating to doing business internationally that could adversely affect our businesses.

We operate our businesses worldwide. There are risks inherent in doing business internationally, including global financial market turmoil; economic volatility and global economic slowdown; currency exchange rate fluctuations and inflationary pressures; the requirements of local laws and customs relating to the publication and distribution of content and the display and sale of advertising; import or export restrictions, tariffs and trade regulations; difficulties in developing, staffing and managing foreign operations; issues related to occupational safety and adherence to diverse local labor laws and regulations; and potentially adverse tax developments. Although we employ foreign currency derivative instruments to hedge certain exposure to foreign currency exchange rate risks, including the British pound and Euro, the use of such derivative instruments may not be sufficient to mitigate exchange rate fluctuations. Sky's businesses in particular are also subject to risks relating to uncertainties and effects of the U.K.'s withdrawal from the EU (referred to as "Brexit"), including financial, legal, tax and trade implications. In addition, doing business internationally subjects us to risks relating to political or social unrest, as well as corruption and government regulation, including U.S. laws such as the Foreign Corrupt Practices Act and the U.K. Bribery Act, that impose stringent requirements on how we conduct our foreign operations. If any of these events occur or our conduct does not comply with such laws and regulations, our businesses may be adversely affected.

Unfavorable litigation or governmental investigation results could require us to pay significant amounts or lead to onerous operating procedures.

We are subject from time to time to a number of lawsuits both in the United States and in foreign countries, including claims relating to competition, intellectual property rights (including patents), employment and labor matters, personal injury and property damage, customer privacy, regulatory requirements, advertising, marketing and selling practices, and credit and collection issues. Greater constraints on the use of arbitration to resolve certain of these disputes could adversely affect our business. We also spend substantial resources complying with various regulatory and government standards, including any related investigations and litigation. We may incur significant expenses defending any such suit or government charge and may be required to pay amounts or otherwise change our operations in ways that could adversely impact our businesses, results of operations or financial condition.

Labor disputes, whether involving employees or sports organizations, may disrupt our operations and adversely affect our businesses.

Many of NBCUniversal's employees, including writers, directors, actors, technical and production personnel and others, as well as some of our on-air and creative talent employees, are covered by collective bargaining agreements or works councils. Most of NBCUniversal's collective bargaining agreements are industry-wide agreements, and we may lack practical control over the negotiations and terms of the agreements. If we are unable to reach agreement with a labor union before the expiration of a collective bargaining agreement, our employees who were covered by that agreement may have a right to strike or take other actions that could adversely affect us, which could disrupt our operations and reduce our revenue, and the resolution of any disputes may increase our costs. There can be no assurance that we will renew our collective bargaining agreements as they expire or that we can renew them on favorable terms or without any work stoppages.

In addition, our cable networks and broadcast television networks have programming rights agreements of varying scope and duration with various sports organizations to broadcast and produce sporting events, including certain NFL, NHL, NBA and MLB games. Labor disputes in these and other sports organizations could have an adverse effect on our businesses.

The loss of key management personnel or popular on-air and creative talent could have an adverse effect on our businesses.

We rely on certain key management personnel in the operation of our businesses. While we maintain long-term and emergency transition plans for key management personnel and believe we could either identify internal candidates or attract outside candidates to fill any vacancy created by the loss of any key management personnel, the loss of one or more of our key management personnel could have a negative impact on our businesses.

In addition, NBCUniversal and Sky depend on the abilities and expertise of on-air and creative talent. If we fail to attract or retain on-air or creative talent, if the costs to attract or retain such talent increase materially, if we need to make significant termination payments, or if these individuals cause negative publicity or lose their current appeal, our businesses could be adversely affected.

Our Class B common stock has substantial voting rights and separate approval rights over several potentially material transactions, and our Chairman and CEO has considerable influence over our company through his beneficial ownership of our Class B common stock.

Our Class B common stock has a non-dilutable $33\,^{1}/_{3}$% of the combined voting power of our Class A and Class B common stock. This non-dilutable voting power is subject to proportional decrease to the extent the number of shares of Class B common stock is reduced below 9,444,375, which was the number of shares of Class B common stock outstanding on the date of our 2002 acquisition of AT&T Corp.'s cable business, subject to adjustment in specified situations. Stock dividends payable on the Class B common stock in the form of Class B or Class A common stock do not decrease the non-dilutable voting power of the Class B common stock. The Class B common stock also has separate approval rights over several potentially material transactions, even if they are approved by our Board of Directors or by our other shareholders and even if they might be in the best interests of our other shareholders. These potentially material transactions include mergers or consolidations involving us, transactions (such as a sale of all or substantially all of our assets) or issuances of securities that require shareholder approval, transactions that result in any person or group owning shares representing more than 10% of the combined voting power of the resulting or surviving corporation, issuances of Class B common stock or securities exercisable or convertible into Class B common stock, and amendments to our articles of incorporation or by-laws that would limit the rights of holders of our Class B common stock. Brian L. Roberts, our chairman and CEO, beneficially owns all of the outstanding shares of our Class B common stock and, accordingly, has considerable influence over our company and the potential ability to transfer effective control by selling the Class B common stock, which could be at a premium.

Item 1B: Unresolved Staff Comments

None.

Item 2: Properties

We believe that substantially all of our physical assets were in good operating condition as of December 31, 2019. Our corporate headquarters and Cable Communications segment headquarters are located in Philadelphia, Pennsylvania at One Comcast Center. We own 80% interests in entities whose primary assets are the Comcast Center and the Comcast Technology Center, which is adjacent to the Comcast Center and is a center for Cable Communications' technology and engineering workforce, as well as the home of our NBCUniversal and Telemundo owned local broadcast stations in Philadelphia, Pennsylvania. Construction of the Comcast Technology Center was completed in 2019. We also have leases for numerous business offices, warehouses and properties throughout the United States that house divisional information technology operations.

Cable Communications Segment

Our principal physical assets consist of operating plant and equipment, including cable system signal receiving, encoding and decoding devices, headends and distribution networks. Our distribution network consists primarily of headends, content distribution servers, coaxial and fiber-optic cables, lasers, routers, switches and related electronic equipment. Our cable plant and related equipment generally are connected to utility poles under pole rental agreements with local public utilities, although in some areas the distribution cable is buried in underground ducts or trenches. The physical components of cable systems require periodic maintenance and replacement.

Our cable system signal reception sites, which consist primarily of antenna towers and headends, and our microwave facilities are located on owned and leased parcels of land, and we own or lease space on the towers on which certain of our equipment is located. We own most of our service vehicles.

Our high-speed internet network consists of fiber-optic cables owned or leased by us and related equipment. We also operate national and regional data centers with equipment that is used to provide services, such as email and web services, to our high-speed internet and voice customers, as well as cloud services to our video customers. In addition, we maintain network operations centers with equipment necessary to monitor and manage the status of our services and network.

We own or lease buildings throughout the U.S. that contain customer service call centers, retail stores and customer service centers, warehouses and administrative space. We also own a building that houses our digital media center. The digital media center contains equipment that we own or lease, including equipment related to network origination, video transmission via satellite and terrestrial fiber-optics, broadcast studios, post-production services and interactive television services.

NBCUniversal Segments

NBCUniversal's corporate headquarters are located in New York, New York at 30 Rockefeller Plaza and include offices and studios, which are used by Headquarters and Other and the Cable Networks and Broadcast Television segments. NBCUniversal owns substantially all of the space it occupies at 30 Rockefeller Plaza. NBCUniversal also leases space in 10 Rockefeller Plaza which includes *The Today Show* studio, production facilities and offices used by the Broadcast Television segment. Telemundo's leased headquarters and production facilities are located in Miami, Florida and are used by the Broadcast Television segment and Headquarters and Other. The Universal City owned location in California includes offices, studios, and theme park and retail operations which are owned by NBCUniversal and used by all NBCUniversal segments. Our owned CNBC headquarters and production facilities and disaster recovery center are located in Englewood Cliffs, New Jersey and are used by the Cable Networks and Broadcast Televisions segments and Headquarters and Other. We also own or lease offices, studios, production facilities, screening rooms, retail operations, warehouse space, satellite transmission receiving facilities and data centers in numerous locations in the United States and around the world, including property for our owned local broadcast television stations. In addition, we own theme parks and own or lease related facilities in Orlando, Florida; Hollywood, California; and Osaka, Japan, which are used in the Theme Parks segment, and are currently constructing new theme parks in Beijing, China and Orlando, Florida.

Sky Segment

Sky's principal physical assets consist of operating plant and equipment, including leased satellite system signal receiving, encoding and decoding devices, and owned and leased headends and distribution networks, including coaxial, fiber-optic cables and other related equipment. In the U.K., Sky uses a combination of its own core fiber network and wholesaling arrangements over third-party telecommunication providers' networks as the core network and also accesses the "last mile" network from third-party network operators for a fee to provide its services to customers. The physical components of cable systems require periodic maintenance and replacement.

Sky's corporate headquarters are located in Middlesex, U.K. Sky owns the space it occupies at Middlesex. Sky leases the Sky Deutschland headquarters located in Unterföhring, Germany and the Sky Italia headquarters located in Milan, Italy.

Additionally, Sky owns and leases offices, production facilities and studios, broadcasting facilities, and customer support centers throughout Europe, including in the U.K., Ireland, Germany, Italy and Austria.

Other

The Wells Fargo Center, a large, multipurpose arena in Philadelphia, Pennsylvania that we own was the principal physical operating asset of our other businesses as of December 31, 2019.

Item 3: Legal Proceedings

Refer to Note 17 to Comcast's consolidated financial statements included in this Annual Report on Form 10-K for a discussion of recent developments related to our legal proceedings.

NBCUniversal is subject to legal proceedings and claims that arise in the ordinary course of its business and it does not expect the final disposition of these matters to have a material adverse effect on its results of operations, cash flows or financial condition, although any such matters could be time-consuming and costly and could injure its reputation.

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

Comcast’s Class A common stock is listed on the NASDAQ Global Select Market under the symbol CMCSA. There is no established public trading market for Comcast’s Class B common stock. The Class B common stock can be converted, on a share for share basis, into Class A common stock.

Dividends Declared

2019			2018		
Month Declared:	**Dividend Per Share**		Month Declared:	Dividend Per Share	
January	**$**	**0.21**	January	$	0.19
May	**$**	**0.21**	May	$	0.19
July	**$**	**0.21**	July	$	0.19
October (paid in January 2020)	**$**	**0.21**	October (paid in January 2019)	$	0.19
Total	**$**	**0.84**	Total	$	0.76

We expect to continue to pay quarterly dividends, although each dividend is subject to approval by our Board of Directors. In January 2020, our Board of Directors approved a 10% increase in our dividend to $0.92 per share on an annualized basis.

Holders of Class A common stock in the aggregate hold $66^{2}/_{3}$% of the voting power of our common stock. The number of votes that each share of Class A common stock has at any given time depends on the number of shares of Class A common stock and Class B common stock then outstanding, with each share of Class B common stock having 15 votes per share. The Class B common stock represents $33^{1}/_{3}$% of the combined voting power of our common stock, which percentage is generally non-dilutable under the terms of our articles of incorporation. Mr. Brian L. Roberts beneficially owns all outstanding shares of Class B common stock. Generally, including as to the election of directors, holders of Class A common stock and Class B common stock vote as one class except where class voting is required by law.

Record holders as of December 31, 2019 are presented in the table below.

Stock Class	Record Holders
Class A Common Stock	388,600
Class B Common Stock	3

There were no common stock repurchases during 2019. Effective January 1, 2017, our Board of Directors increased our share repurchase program authorization to $12 billion, which does not have an expiration date. As of December 31, 2019, $2 billion remained under our share repurchase program authorization. Common stock repurchases referenced above exclude shares withheld upon the vesting or exercise of employee share-based awards to settle tax withholding obligations.

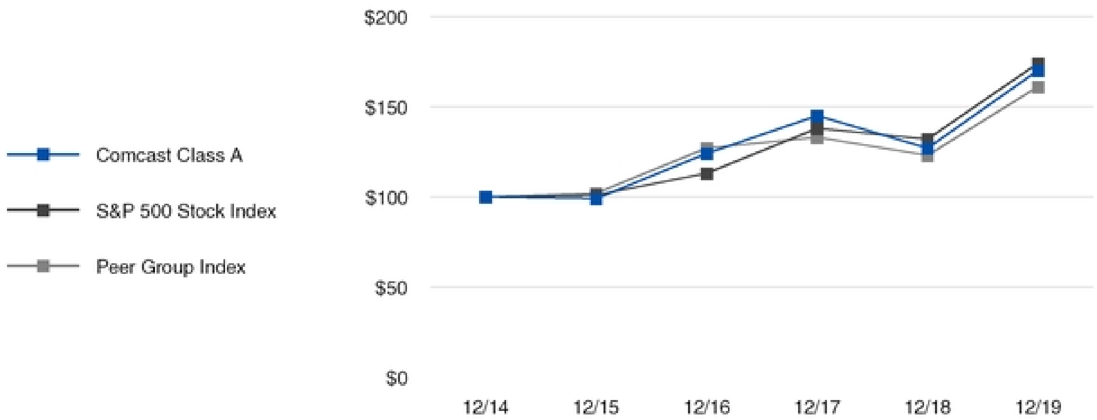
Stock Performance Graph

Comcast

The following graph compares the annual percentage change in the cumulative total shareholder return on Comcast's Class A common stock during the five years ended December 31, 2019 with the cumulative total returns on the Standard & Poor's 500 Stock Index and a select peer group consisting of us and other companies engaged in the cable, communications and media industries. This peer group consists of our Class A common stock and the common stock of DISH Network Corporation (Class A), Charter Communications, Inc., AT&T Inc., Verizon Communications Inc., CenturyLink, Inc., T-Mobile US, Inc., and Sprint Corporation (the "transmission and distribution subgroup"); and The Walt Disney Company, ViacomCBS Inc. (Class B) (formerly CBS Corporation (Class B)), Viacom Inc. (Class B) (which is included through December 4, 2019 when it merged with CBS Corporation to form ViacomCBS Inc.), Twenty-First Century Fox, Inc. (Class A) (which is included through March 21, 2019 when it merged with the Walt Disney Company) and Discovery, Inc. (Class A) (the "media subgroup").

The peer group is constructed as a composite peer group in which the transmission and distribution subgroup is weighted 66% and the media subgroup is weighted 34% based on the respective revenue of our transmission and distribution and media businesses. The comparison assumes $100 was invested on December 31, 2014 in our Class A common stock and in each of the following indices and assumes the reinvestment of dividends.

Comparison of 5 Year Cumulative Total Return



	2015	2016	2017	2018	2019
Comcast Class A	$ 99	$ 124	$ 145	$ 127	$ 170
S&P 500 Stock Index	$ 101	$ 113	$ 138	$ 132	$ 174
Peer Group Index	$ 102	$ 127	$ 133	$ 123	$ 161

NBCUniversal

NBCUniversal is a wholly owned subsidiary of NBCUniversal Holdings and there is no market for its equity securities.

Item 6: Selected Financial Data

Comcast

Year ended December 31 (in millions, except per share data)	2019[c]	2018[c]	2017[d]	2016	2015
Statement of Income Data					
Revenue	**$ 108,942**	$ 94,507	$ 85,029	$ 80,736	$ 74,510
Operating income	**21,125**	19,009	18,018	16,831	15,998
Net income attributable to Comcast Corporation[a]	**13,057**	11,731	22,735	8,678	8,163
Basic earnings per common share attributable to Comcast Corporation shareholders	**2.87**	2.56	4.83	1.80	1.64
Diluted earnings per common share attributable to Comcast Corporation shareholders	**2.83**	2.53	4.75	1.78	1.62
Dividends declared per common share	**0.84**	0.76	0.63	0.55	0.50
Balance Sheet Data (at year end)					
Total assets	**$ 263,414**	$ 251,684	$ 187,462	$ 181,017	$ 166,574
Long-term debt[b]	**102,217**	111,743	64,556	61,046	52,621
Comcast Corporation shareholders' equity	**82,726**	71,613	68,616	53,932	52,269
Statement of Cash Flows Data					
Net cash provided by (used in):					
Operating activities	**$ 25,697**	$ 24,297	$ 21,261	$ 19,691	$ 19,485
Investing activities	**(14,841)**	(50,854)	(13,533)	(18,265)	(11,964)
Financing activities	**(9,181)**	27,140	(7,572)	(434)	(9,136)

(a) For 2019 and 2018, refer to Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Annual Report on Form 10-K for a discussion of the effects of items impacting net income attributable to Comcast Corporation. In 2019, 2018, 2017, 2016 and 2015, net income attributable to Comcast Corporation is stated after deducting net income attributable to noncontrolling interests of $266 million, $131 million, $187 million, $350 million and $250 million, respectively.

(b) Includes long-term debt and the current portion of long-term debt as presented in the consolidated balance sheet. Refer to footnotes to Comcast's consolidated financial statements for discussion of our accounting policies related to debt obligations.

(c) 2019 and 2018 amounts include the results of operations of Sky from date of acquisition on October 9, 2018. Refer to Note 8 to Comcast's consolidated financial statements for further discussion.

(d) 2017 net income attributable to Comcast Corporation and earnings per common share attributable to Comcast Corporation shareholders included a $12.7 billion net income tax benefit as a result of the impacts of the 2017 tax reform legislation. Refer to Note 5 to Comcast's consolidated financial statements for further discussion.

NBCUniversal

Omitted pursuant to General Instruction I(2)(a) to Form 10-K.

Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations

Introduction

Management's discussion and analysis of financial condition and results of operations is provided as a supplement to, and should be read in conjunction with, the consolidated financial statements and related notes to enhance the understanding of our operations and our present business environment. Components of management's discussion and analysis of financial condition and results of operations include:

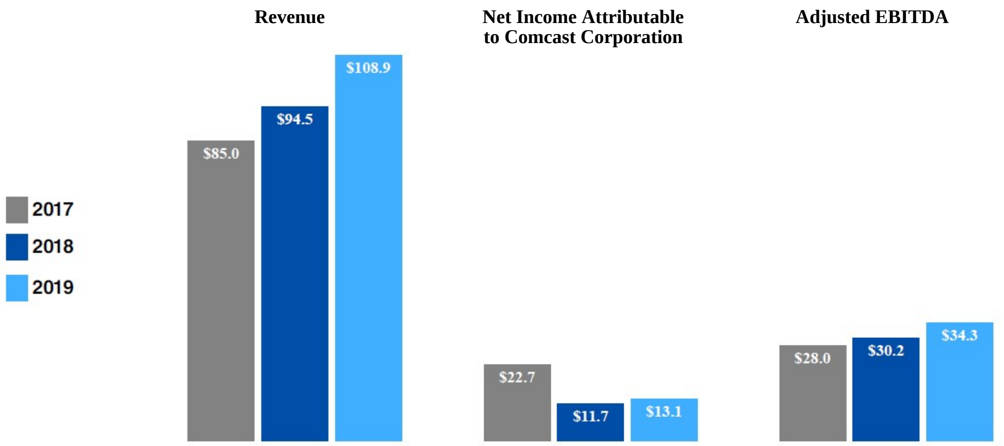
- Overview
- Results of Operations
- Non-GAAP Financial Measures
- Liquidity and Capital Resources
- Contractual Obligations
- Off-Balance Sheet Arrangements
- Recent Accounting Pronouncements
- Critical Accounting Judgments and Estimates

Overview

We are a global media and technology company with three primary businesses: Comcast Cable, NBCUniversal and Sky. We present our operations for (1) Comcast Cable in one reportable business segment, referred to as Cable Communications; (2) NBCUniversal in four reportable business segments: Cable Networks, Broadcast Television, Filmed Entertainment and Theme Parks (collectively, the "NBCUniversal segments"); and (3) Sky in one reportable business segment. Following October 9, 2018, Sky's results of operations are included in our consolidated results of operations. For more information about our company's operations, see Item 1: Business. Additionally, refer to Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2018 Annual Report on Form 10-K for management's discussion and analysis of financial condition and results of operations for the fiscal year 2018 compared to fiscal year 2017.

Consolidated Revenue, Net Income Attributable to Comcast Corporation and Adjusted EBITDA(a)

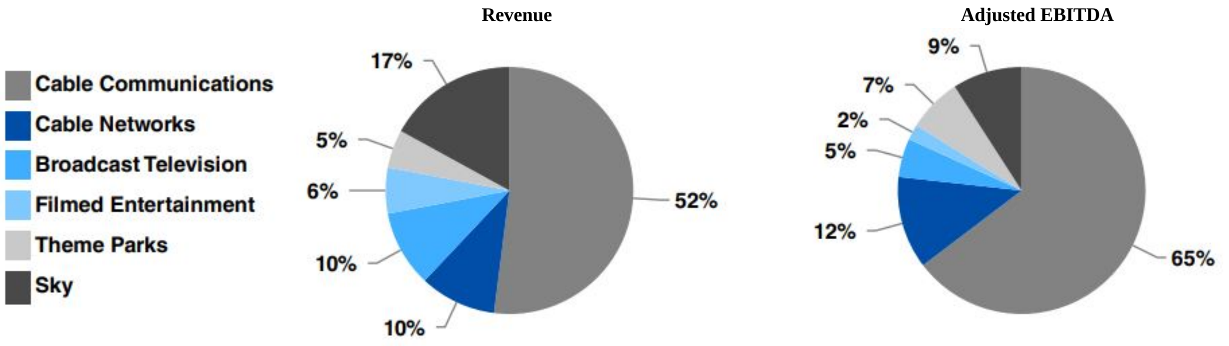
(in billions)



(a) Adjusted EBITDA is a financial measure that is not defined by generally accepted accounting principles in the United States ("GAAP"). Refer to the "Non-GAAP Financial Measure" section on page 51 for additional information, including our definition and our use of Adjusted EBITDA, and for a reconciliation from net income attributable to Comcast Corporation to Adjusted EBITDA.

[Table of Contents](#)

2019 Consolidated Operating Results by Segment[a]



(a) Charts exclude the results of NBCUniversal Headquarters and Other, Corporate and Other, and eliminations.

2019 Developments

The following are the more significant developments in our businesses during 2019:

Cable Communications Segment

- Revenue increased 3.7% to $58.1 billion, reflecting increases in high-speed internet, business services and wireless revenue, partially offset by declines in advertising, video and voice revenue
- Adjusted EBITDA increased 7.3% to $23.3 billion
- Operating margin increased from 38.7% to 40.1%, reflecting increases in revenue from high-speed internet and business services and decreases in losses in our wireless business, partially offset by higher technical and product support expenses
- Capital expenditures decreased 10.5% to $6.9 billion, reflecting lower spending on scalable infrastructure and customer premise equipment, partially offset by an increase in support capital

NBCUniversal Segments

- Total NBCUniversal revenue decreased 5.0% to $34.0 billion and total NBCUniversal Adjusted EBITDA increased 2.0% to $8.8 billion
- Broadcast Television and Cable Networks segments revenue decreased 10.3% to $10.3 billion and 2.2% to $11.5 billion, respectively, reflecting the impact of our broadcasts of the 2018 PyeongChang Olympics and 2018 Super Bowl; excluding revenue associated with the 2018 PyeongChang Olympics and 2018 Super Bowl, Cable Networks and Broadcast Television segments revenue increased 1.0% and 0.1%, respectively, with the increase in Cable Networks primarily due to increases in distribution revenue, partially offset by decreases in content licensing revenue
- Filmed Entertainment segment revenue decreased 9.2% to $6.5 billion, reflecting lower theatrical, home entertainment and other revenue, partially offset by an increase in content licensing
- Theme Parks segment revenue increased 4.4% to $5.9 billion, reflecting increased guest spending and higher attendance in 2019 due, in part, to natural disasters that negatively impacted attendance in Japan in 2018
- Announced that Universal Orlando Resort is building an additional theme park named Universal's Epic Universe

Sky Segment

- Sky's results of operations for the full year 2019 are included in our consolidated results, with revenue of $19.2 billion and Adjusted EBITDA of $3.1 billion
- On a pro forma basis, Sky revenue decreased 3.0% to $19.2 billion. Excluding the impact of foreign currency, pro forma Sky revenue increased 1.7% primarily due to increases in content and direct-to-consumer revenues, partially offset by a decrease in advertising revenue
- On a pro forma basis, Sky Adjusted EBITDA increased 7.1% to $3.1 billion. Excluding the impact of foreign currency, pro forma Sky Adjusted EBITDA increased 12.2% primarily due to contract termination costs and costs related to a settlement in the prior year period.

Other

- Corporate and Other revenue decreased 35.0% to $333 million primarily due to the sale of a controlling interest in our arena management-related businesses in the second quarter of 2018
- Corporate and Other Adjusted EBITDA losses increased 12.9% to $880 million primarily due to costs associated with the development of Peacock
- Announced Peacock, our direct-to-consumer streaming service that will feature NBCUniversal content, which is expected to be launched in 2020
- Entered into a series of agreements in May 2019 with Disney, whereby Disney assumed full operational control of Hulu, LLC (“Hulu”) in exchange for certain put and call provisions regarding our ownership interest, and in August 2019, we received proceeds of $5.2 billion from a collateralized obligation secured by the proceeds guaranteed under the put and call provisions
- Repaid $15.6 billion of debt, including senior notes and term loans, and net repayments of commercial paper, which were funded with cash on hand, proceeds from the collateralized obligation related to Hulu and proceeds from the $4.8 billion issuance of senior notes in November 2019

Competition

The results of operations of our reportable business segments are affected by competition, as all of our businesses operate in intensely competitive, consumer-driven and rapidly changing environments and compete with a growing number of companies that provide a broad range of communications products and services, and entertainment, news and information content to consumers. Technological changes are further intensifying and complicating the competitive landscape and challenging existing business models. In particular, consumers are increasingly turning to online sources for viewing and purchasing content, which has and likely will continue to reduce the number of our video customers and subscribers to our cable networks even as it makes high-speed internet services more important to consumers. In addition, the increasing number of entertainment choices available to consumers has intensified audience fragmentation and disaggregated the way that content traditionally has been viewed by consumers. This increase has caused and likely will continue to cause audience ratings declines at our programming channels.

For additional information on the competition our businesses face, see Item 1: Business and Item 1A: Risk Factors. Within the Business section, refer to the “Competition” discussion, and within the Risk Factors section, refer to the risk factors entitled “Our businesses operate in highly competitive and dynamic industries, and our businesses and results of operations could be adversely affected if we do not compete effectively.” and “Changes in consumer behavior driven by online video distribution platforms for viewing content continue to adversely affect our businesses and challenge existing business models.”

Seasonality and Cyclicality

Each of our businesses is subject to seasonal and cyclical variations. See Item 1: Business and refer to the “Seasonality and Cyclicality” discussion within that section for additional information.

Consolidated Operating Results

Year ended December 31 (in millions, except per share data)	2019	2018	2017	% Change 2018 to 2019	% Change 2017 to 2018
Revenue	**$ 108,942**	$ 94,507	$ 85,029	**15.3%**	11.1 %
Costs and Expenses:					
Programming and production	**34,440**	29,692	25,355	**16.0**	17.1
Other operating and administrative	**32,807**	28,094	25,449	**16.8**	10.4
Advertising, marketing and promotion	**7,617**	7,036	6,519	**8.2**	7.9
Depreciation	**8,663**	8,281	7,914	**4.6**	4.6
Amortization	**4,290**	2,736	2,216	**56.8**	23.5
Other operating gains	**—**	(341)	(442)	**NM**	NM
Total costs and expenses	**87,817**	75,498	67,011	**16.3**	12.7
Operating income	**21,125**	19,009	18,018	**11.1**	5.5
Interest expense	**(4,567)**	(3,542)	(3,086)	**28.9**	14.8
Investment and other income (loss), net	**438**	(225)	421	**294.6**	(153.4)
Income before income taxes	**16,996**	15,242	15,353	**11.5**	(0.7)
Income tax (expense) benefit	**(3,673)**	(3,380)	7,569	**8.7**	(144.7)
Net income	**13,323**	11,862	22,922	**12.3**	(48.2)
Less: Net income attributable to noncontrolling interests and redeemable subsidiary preferred stock	**266**	131	187	**102.7**	(29.8)
Net income attributable to Comcast Corporation	**$ 13,057**	$ 11,731	$ 22,735	**11.3%**	(48.4)%
Basic earnings per common share attributable to Comcast Corporation shareholders	**$ 2.87**	$ 2.56	$ 4.83	**12.1%**	(47.0)%
Diluted earnings per common share attributable to Comcast Corporation shareholders	**$ 2.83**	$ 2.53	$ 4.75	**11.9%**	(46.7)%
Adjusted EBITDA[(a)]	**$ 34,258**	$ 30,165	$ 27,956	**13.6%**	7.9 %

All percentages are calculated based on actual amounts. Minor differences may exist due to rounding.

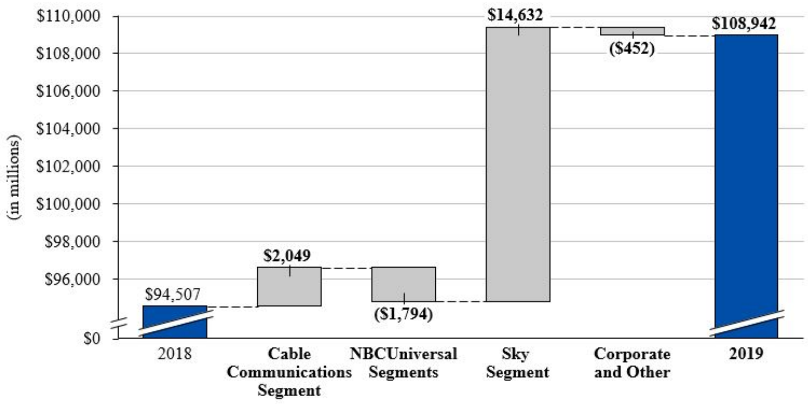
Percentage changes that are considered not meaningful are denoted with NM.

(a) Adjusted EBITDA is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measure" section on page 51 for additional information, including our definition and our use of Adjusted EBITDA, and for a reconciliation from net income attributable to Comcast Corporation to Adjusted EBITDA.

The comparability of our consolidated results of operations was impacted by the Sky transaction in the fourth quarter of 2018. Sky's results of operations are included in our consolidated financial statements following the October 9, 2018 acquisition date.

Consolidated Revenue

The following graph illustrates the contributions to the increases in consolidated revenue made by our Cable Communications, NBCUniversal and Sky segments, as well as by Corporate and Other activities including eliminations.



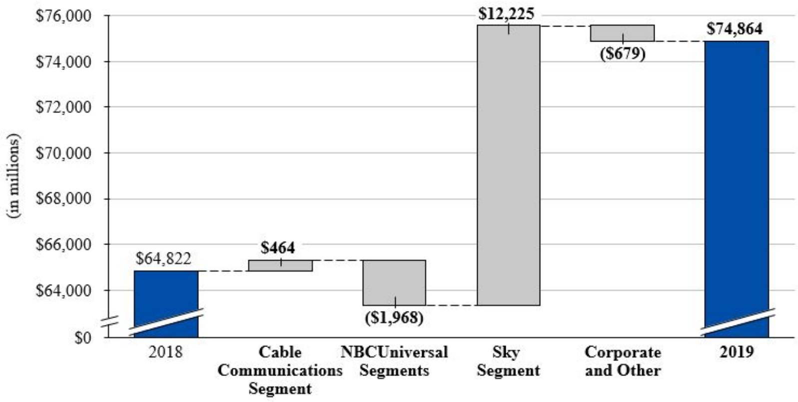
The primary drivers of the change in revenue from 2018 to 2019 were as follows:

- Our acquisition of Sky in the fourth quarter of 2018, resulting in the inclusion of a full year of results for 2019
- Growth in our Cable Communications segment driven by increased revenue from residential high-speed internet, business services and wireless, partially offset by decreased revenue from advertising, video and voice
- A decrease in NBCUniversal revenue primarily due to the absence of revenue associated with our broadcasts of the 2018 PyeongChang Olympics and the 2018 Super Bowl

Revenue for our segments and other businesses are discussed separately below under the heading "Segment Operating Results."

Consolidated Costs and Expenses

The following graph illustrates the contributions to the increases in consolidated operating costs and expenses, representing total costs and expenses excluding depreciation and amortization expense and other operating gains, made by our Cable Communications, NBCUniversal and Sky segments, as well as by Corporate and Other activities, including eliminations.



The primary drivers of the change in operating costs and expenses from 2018 to 2019 were as follows:

- Our acquisition of Sky in the fourth quarter of 2018, resulting in the inclusion of a full year of results for 2019
- A decrease in NBCUniversal programming and production expenses primarily due to the absence of expenses associated with our broadcasts of the 2018 PyeongChang Olympics and the 2018 Super Bowl
- An increase in technical and product support costs in our Cable Communications segment

Operating costs and expenses for our segments and our corporate operations, business development initiatives and other businesses are discussed separately below under the heading "Segment Operating Results."

Consolidated Depreciation and Amortization Expense

Year ended December 31 (in millions)	2019	2018	2017	% Change 2018 to 2019	% Change 2017 to 2018
Cable Communications	$ 7,994	$ 8,262	$ 8,019	(3.2)%	3.0%
NBCUniversal	2,129	2,108	2,041	0.9	3.3
Sky	2,699	539	—	NM	NM
Corporate and Other	131	108	70	21.4	56.3
Comcast Consolidated	$ 12,953	$ 11,017	$ 10,130	17.6 %	8.8%

Percentage changes that are considered not meaningful are denoted with NM.

Consolidated depreciation and amortization expense increased in 2019 primarily due to the acquisition of Sky in the fourth quarter of 2018, with a full year of expense included in our results of operations for 2019. Additionally, during the first quarter of 2019, we recorded adjustments to the purchase price allocation of Sky, primarily related to intangible assets and property and equipment. This change resulted in an adjustment recorded in the first quarter of 2019 related to the fourth quarter of 2018 that increased depreciation and amortization expense by $53 million.

Cable Communications depreciation and amortization expense decreased due to lower spending on scalable infrastructure and customer premise equipment, partially offset by an increase in support capital. NBCUniversal depreciation and amortization expense was flat in 2019.

Amortization expense from acquisition-related intangible assets, such as customer relationships, totaled $2.0 billion, $1.1 billion and $824 million for 2019, 2018 and 2017, respectively. Amounts primarily relate to customer relationship intangible assets recorded in connection with the Sky transaction in the fourth quarter of 2018 (see Note 8 to Comcast's consolidated financial statements) and the NBCUniversal transaction in 2011.

Consolidated Other Operating Gains

Consolidated other operating gains for 2018 included $200 million related to the sale of a controlling interest in our arena management-related businesses in Corporate and other (see Note 10 to Comcast's consolidated financial statements) and $141 million related to the sale of a business in our Filmed Entertainment segment.

Consolidated Interest Expense

Interest expense increased in 2019 compared to 2018 primarily due to increases in our debt outstanding associated with the financing of and debt assumed in connection with the Sky transaction in the fourth quarter of 2018, as well as a $56 million charge related to the early redemption of debt that was recorded in the third quarter of 2019.

Consolidated Investment and Other Income (Loss), Net

Year ended December 31 (in millions)	**2019**	2018	2017
Equity in net income (losses) of investees, net	**$ (505)**	$ (364)	$ 107
Realized and unrealized gains (losses) on equity securities, net	**656**	(187)	(17)
Other income (loss), net	**287**	326	331
Total investment and other income (loss), net	**$ 438**	$ (225)	$ 421

Equity in Net Income (Losses) of Investees, Net

The change in equity in net income (losses) of investees, net in 2019 compared to 2018 was primarily due to our equity method investments in Hulu and Atairos Group, Inc. ("Atairos"). The losses at Hulu were primarily due to programming, advertising and marketing costs, and higher other administrative expenses. Atairos follows investment company accounting and records its investments at their fair values each reporting period with the net gains or losses reflected in its statement of income. We recognize our share of these gains and losses in equity in net income (losses) of investees, net. The income (losses) at Atairos were driven by fair value adjustments on its underlying investments. The table below summarizes the equity in net income (losses) of Hulu and Atairos in 2019, 2018 and 2017.

Year ended December 31 (in millions)	**2019**	2018	2017
Hulu	**$ (473)**	$ (454)	$ (276)
Atairos	**$ (64)**	$ (31)	$ 281

Realized and Unrealized Gains (Losses) on Equity Securities, Net

The change in realized and unrealized gains (losses) on equity securities, net in 2019 compared to 2018 was primarily due to gains of $293 million related to our interest in Snap, which was sold in 2019, compared to losses of $268 million in 2018, and unrealized gains of $184 million related to our investment in Peloton Interactive, Inc. ("Peloton").

Other Income (Loss), Net

The change in other income (loss), net in 2019 compared to 2018 was primarily due to the recognition of $219 million of gains related to the dilution of our Hulu ownership and $90 million of losses due to the impairment of an equity method investment. See Note 10 to Comcast's consolidated financial statements and Note 9 to NBCUniversal's consolidated financial statements for further information.

Consolidated Income Tax (Expense) Benefit

Income tax (expense) benefit reflects an effective income tax rate that differs from the federal statutory rate primarily due to state and foreign income taxes and adjustments associated with uncertain tax positions. Our effective income tax rate in 2019 and 2018 was 21.6% and 22.2%, respectively.

In 2019, the effective income tax rate included $125 million of benefits related to state income tax adjustments recognized in the third quarter of 2019.

In 2018, the effective income tax rate included the effects of an income tax benefit of $244 million recognized during the fourth quarter of 2018 related to a reduction of our net deferred tax liability as a result of the acquisition of Sky and $128 million recognized during the first quarter of 2018 related to the enactment of additional federal tax legislation in 2018, partially offset by $148 million of income tax expense due to state and federal tax law changes that were enacted in the third quarter of 2018.

Consolidated Net Income Attributable to Noncontrolling Interests and Redeemable Subsidiary Preferred Stock

The increase in net income attributable to noncontrolling interests and redeemable subsidiary preferred stock in 2019 compared to 2018 was primarily due to an increase in the redemption value of one of our noncontrolling interests.

Segment Operating Results

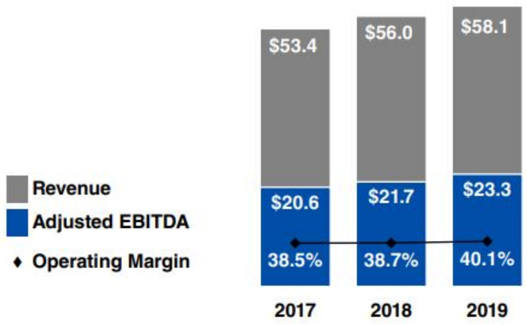
Our segment operating results are presented based on how we assess operating performance and internally report financial information. We use Adjusted EBITDA as the measure of profit or loss for our operating segments. Adjusted EBITDA is defined as net income attributable to Comcast Corporation before net income (loss) attributable to noncontrolling interests and redeemable subsidiary preferred stock, income tax expense, investment and other income (loss), net, interest expense, depreciation and amortization expense, and other operating gains and losses (such as impairment charges related to fixed and intangible assets and gains or losses on the sale of long-lived assets), if any. From time to time we may exclude from Adjusted EBITDA the impact of certain events, gains, losses or other charges (such as significant legal settlements) that affect the period-to-period comparability of our operating performance. Adjusted EBITDA for our segments is not a non-GAAP financial measure. We reconcile the aggregate amount of Adjusted EBITDA for our reportable business segments to consolidated income before income taxes in the notes to our consolidated financial statements (see Note 2 to Comcast's consolidated financial statements and NBCUniversal's consolidated financial statements).

Beginning in the first quarter of 2019, Comcast Cable's wireless phone service and certain other Cable-related business development initiatives are presented in the Cable Communications segment. Results were previously presented in Corporate and Other. Prior periods have been adjusted to reflect this presentation.

Cable Communications Segment Results of Operations

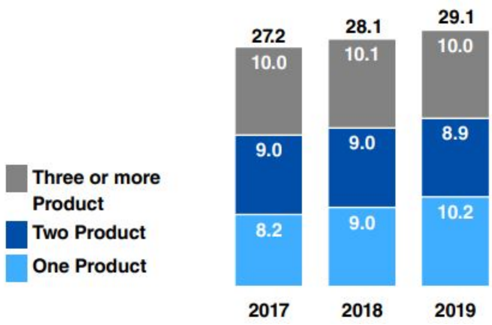
Revenue and Adjusted EBITDA

(in billions)



Residential Customer Relationships

(in millions)



Year ended December 31 (in millions)	2019	2018	2017	% Change 2018 to 2019	% Change 2017 to 2018
Revenue					
Residential:					
High-speed internet	$ **18,752**	$ 17,144	$ 15,681	**9.4 %**	9.3 %
Video	**22,270**	22,455	22,874	**(0.8)**	(1.8)
Voice	**3,879**	3,960	4,090	**(2.1)**	(3.2)
Wireless	**1,167**	890	329	**31.2**	170.3
Business services	**7,795**	7,129	6,437	**9.3**	10.7
Advertising	**2,465**	2,795	2,450	**(11.8)**	14.1
Other	**1,754**	1,660	1,538	**5.7**	7.9
Total revenue	**58,082**	56,033	53,399	**3.7**	4.9
Operating costs and expenses					
Programming	**13,389**	13,249	12,907	**1.1**	2.7
Technical and product support	**7,973**	7,569	6,846	**5.3**	10.6
Customer service	**2,494**	2,536	2,509	**(1.6)**	1.1
Advertising, marketing and promotion	**4,014**	4,002	3,866	**0.3**	3.5
Franchise and other regulatory fees	**1,582**	1,578	1,590	**0.2**	(0.8)
Other	**5,364**	5,418	5,126	**(1.0)**	5.7
Total operating costs and expenses	**34,816**	34,352	32,844	**1.4**	4.6
Adjusted EBITDA	$ **23,266**	$ 21,681	$ 20,555	**7.3 %**	5.5 %

Customer Metrics

(in thousands)	2019	2018	2017	Net Additions 2019	Net Additions 2018	Net Additions 2017
Customer relationships						
Residential customer relationships	**29,149**	28,109	27,185	**1,040**	925	651
Business services customer relationships	**2,396**	2,303	2,179	**94**	123	135
Total customer relationships	**31,545**	30,412	29,364	**1,134**	1,048	787
Residential customer relationships mix						
One product customers	**10,247**	9,015	8,174	**1,232**	840	418
Two product customers	**8,923**	8,992	9,018	**(69)**	(25)	221
Three or more product customers	**9,979**	10,102	9,993	**(123)**	110	13
High-speed internet						
Residential customers	**26,414**	25,097	23,863	**1,317**	1,234	1,036
Business services customers	**2,215**	2,125	2,006	**89**	120	132
Total high-speed internet customers	**28,629**	27,222	25,869	**1,406**	1,353	1,168
Video						
Residential customers	**20,288**	20,959	21,303	**(671)**	(344)	(186)
Business services customers	**966**	1,027	1,054	**(61)**	(27)	35
Total video customers	**21,254**	21,986	22,357	**(733)**	(370)	(151)
Voice						
Residential customers	**9,934**	10,153	10,316	**(218)**	(163)	(231)
Business services customers	**1,342**	1,297	1,236	**46**	60	96
Total voice customers	**11,276**	11,449	11,552	**(173)**	(103)	(135)
Security and automation						
Security and automation customers	**1,375**	1,317	1,131	**59**	186	239
Wireless						
Wireless lines	**2,052**	1,236	381	**816**	854	381

Customer metrics are presented based on actual amounts. Minor differences may exist due to rounding. Customer relationships represent the number of residential and business customers that subscribe to at least one of our services. One product, two product, and three or more product customers represent residential customers that subscribe to one, two, or three or more of our services, respectively. For MDUs, including buildings located on college campuses, whose residents have the ability to receive additional services, such as additional programming choices or our HD or DVR services, we count and report customers based on the number of potential billable relationships within each MDU. For MDUs whose residents are not able to receive additional services, the MDU is counted as a single customer. Residential high-speed internet and video customers as of December 31, 2019 included prepaid customers totaling approximately 196,000 and 7,000, respectively. Wireless lines represent the number of activated eligible wireless devices on customers' accounts. Individual customer relationships may have multiple wireless lines.

	2019	2018	2017
Average monthly total revenue per customer relationship	**$ 156.24**	$ 156.23	$ 153.60
Average monthly Adjusted EBITDA per customer relationship	**$ 62.59**	$ 60.45	$ 59.13

Average monthly total revenue per customer relationship is impacted by rate adjustments and changes in the types and levels of services received by our residential and business services customers, as well as changes in advertising revenue. While revenue from our residential high-speed internet, video and voice services are also impacted by changes in the allocation of revenue among services sold in a bundle, the allocation does not impact average monthly total revenue per customer relationship.

Each of our services has a different contribution to operating margin. We use average monthly Adjusted EBITDA per customer relationship to evaluate the profitability of our customer base across our service offerings. We believe this metric is useful particularly as we continue to focus on growing our higher-margin businesses, including residential high-speed internet and business services.

Cable Communications Segment – Revenue

We are a leading provider of high-speed internet, video, voice, wireless, and security and automation services to residential customers in the United States under the Xfinity brand; we also provide these and other services to business customers and sell advertising. We generate revenue primarily from residential and business customers that subscribe to our services, which we market individually and as bundled services. We also generate revenue from selling through our allocation of scheduled advertising time on cable networks that is received as part of distribution agreements with these networks to local, regional and national advertisers.

High-Speed Internet

We offer high-speed internet services with downstream speeds that range up to 1 gigabit per second (“Gbps”) and fiber-based speeds that range up to 2 Gbps. We also deploy wireless gateways to customers that combine an internet and voice modem with a Wi-Fi router to deliver reliable internet speeds and enhanced coverage through an in-and-out-of-home Wi-Fi network. Customers with xFi-enabled wireless gateways may also personalize and manage their Wi-Fi network remotely, which includes viewing and changing their Wi-Fi password, identifying which devices are connected to their in-home network, setting parental controls and schedules, advanced security, as well as other features. We believe our customer base will continue to grow as consumers choose our high-speed internet service and seek higher-speed offerings.

Revenue increased in 2019 primarily due to an increase in the number of residential high-speed internet customers. The remaining increase in revenue in 2019 was due to an increase in average rates.

Video

We offer a broad variety of video services packages that may include premium networks, pay-per-view services and our On Demand service. Our video customers may also subscribe for additional fees to our HD and DVR services.

Revenue was flat in 2019 primarily due to a decline in the number of residential video customers, offset by an increase in average rates.

We have experienced, and expect that we will continue to experience, declines in the number of residential video customers due to competitive pressures, and we expect that our video revenue will continue to decline as a result of the competitive environment and shifting video consumption patterns. We believe our X1 platform helps us compete more effectively against this competition, and have also continued to employ sales and marketing programs, such as promotions, bundled service offerings and service offerings targeted at specific market segments.

Voice

We offer voice services that provide local and long-distance calling and other related features.

Revenue decreased in 2019 primarily due to a decline in the number of residential voice customers.

We expect that the number of residential voice customers and voice revenue will continue to decline.

Wireless

We offer wireless phone services to customers that may choose to pay for services on an unlimited data plan or per gigabyte of data used.

Revenue increased in 2019 primarily due to an increase in the number of customer lines.

Business Services

We offer a variety of products and services to businesses. Our service offerings for small business locations primarily include high-speed internet services, as well as voice and video services, that are similar to those provided to residential customers, as well as cloud-based cybersecurity services, wireless backup connectivity, advanced Wi-Fi solutions, video monitoring services and cloud-based services that provide file sharing, online backup and web conferencing, among other features. We also offer Ethernet network services that connect multiple locations and provide higher downstream and upstream speed options to medium-sized customers and larger enterprises, as well as advanced voice services, along with video solutions that serve hotels and other large venues. In addition, we provide cellular backhaul services to mobile network operators to help them manage their network bandwidth.

We have expanded our service offerings to include a software-defined networking product for medium-sized and enterprise customers. Larger enterprises may also receive support services related to Wi-Fi networks, router management, network security, business continuity risks and other services. These service offerings are primarily provided to Fortune 1000 companies and other large enterprises with multiple locations.

Revenue increased in 2019 primarily due to an increase in the number of customers receiving our services and an increase in average rates.

Advertising

As part of our distribution agreements with cable networks, we generally receive an allocation of scheduled advertising time that is sold through our advertising business to local, regional and national advertisers. In most cases, the available advertising units are sold by our sales force. In some cases, we work with representation firms as an extension of our sales force to sell a portion of the advertising units allocated to us. We also represent the advertising sales efforts of other multichannel video providers in some markets. In addition, we generate revenue from the sale of advertising on our digital platforms. We also provide technology, tools, data-driven services and marketplace solutions to customers in the media industry, which allow advertisers to more effectively engage with their target audiences. Revenue is affected by the strength of the advertising market, general economic conditions, and cyclicality related to political campaigns and issue-oriented advertising.

Revenue decreased in 2019 primarily due to a decrease in political advertising revenue. Excluding political advertising revenue, advertising revenue was consistent with the prior year.

In 2019, 5% of our advertising revenue was generated from our NBCUniversal segments, compared to 4% and 5% in 2018 and 2017, respectively. These amounts are eliminated in our consolidated financial statements but are included in the amounts presented above.

Other

Other revenue primarily includes revenue related to our security and automation services. We also receive revenue related to residential customer late fees and from other services, such as the licensing of our technology platforms to other multichannel video providers.

Revenue increased in 2019 primarily due to an increase in revenue from our security and automation services and the timing of the licensing of our technology platforms to other multichannel video providers.

Cable Communications Segment – Operating Costs and Expenses

Programming Expenses

Programming expenses, which represent our most significant operating expense, are the fees we incur to provide content to our customers. These expenses are affected by the programming license fees charged by content providers, the fees charged for retransmission of the signals from local broadcast television stations, the number of customers we serve and the amount of content we provide.

Programming expenses increased in 2019 primarily due to an increase in retransmission consent and sports programming fees, partially offset by a decline in the number of video subscribers.

We anticipate that our programming expenses will increase at rates higher than those experienced in 2019, due to the timing of contract renewals in 2020.

Technical and Product Support Expenses

Expenses include costs to complete service call and installation activities, as well as costs for network operations, product development, fulfillment and provisioning, as well as the cost of wireless handsets and tablets sold to customers and monthly wholesale wireless access fees.

Expenses increased in 2019 primarily due to expenses related to the continued development, deployment and support of our products and services, expenses related to the continued growth in business services, and increased costs associated with our wireless phone service. Wireless phone service costs increased primarily due to an increase in the number of lines.

Customer Service Expenses

Expenses include the personnel and other costs associated with handling the sale of services to customers and customer service activity.

Expenses decreased in 2019 primarily due to lower personnel costs as a result of decreased customer call activity.

Advertising, Marketing and Promotion Expenses

Expenses include the costs associated with attracting new customers and promoting our service offerings.

Expenses were flat in 2019 primarily due to an increase in spending associated with attracting new customers, offset by the absence of advertising expenses associated with the 2018 PyeongChang Olympics.

Franchise and Other Regulatory Fees

Franchise and other regulatory fees represent the fees we are required to pay to federal, state and local authorities under the terms of our cable franchise agreements.

Franchise and other regulatory fees were flat in 2019.

Other Expenses

Expenses primarily include personnel costs, advertising expenses, and building and facilities costs.

Other operating costs and expenses decreased in 2019 primarily due to increased costs incurred in the prior year as we continued to scale our wireless phone service, partially offset by higher personnel costs in the current year.

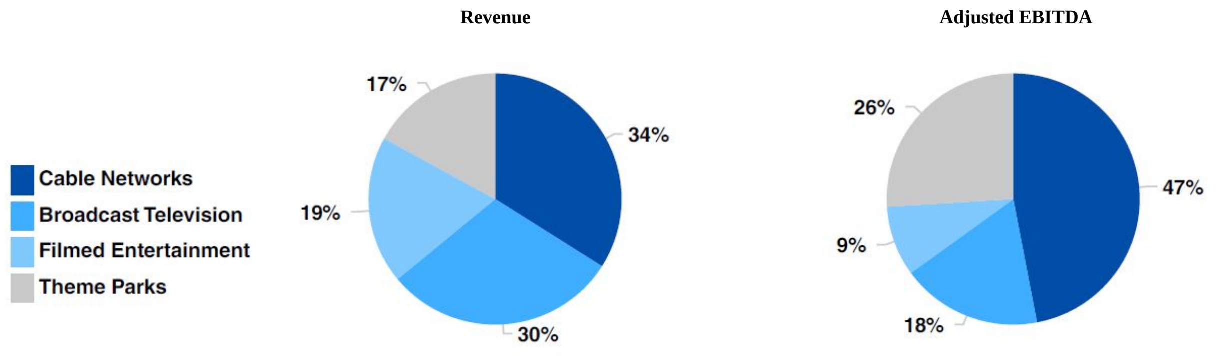
Cable Communications Segment – Operating Margin

Our operating margin is Adjusted EBITDA as a percentage of revenue. The most significant operating costs and expenses are the programming expenses we incur to provide content to our video customers, which increased 1.1% in 2019.

Our operating margin was 40.1%, 38.7% and 38.5% in 2019, 2018 and 2017, respectively. We continue to focus on growing our higher-margin businesses, particularly residential high-speed internet and business services, and on improving losses related to our wireless phone service and overall operating cost management. Losses from our wireless phone service were $401 million, $743 million and $480 million in 2019, 2018 and 2017, respectively.

NBCUniversal Segments Overview

2019 NBCUniversal Segments Operating Results(a)



(a) Charts exclude the results of NBCUniversal Headquarters, other, and eliminations.

Year ended December 31 (in millions)		2019		2018		2017	% Change 2018 to 2019	% Change 2017 to 2018
Revenue								
Cable Networks	**$**	**11,513**	$	11,773	$	10,497	**(2.2)%**	12.2 %
Broadcast Television		**10,261**		11,439		9,563	**(10.3)**	19.6
Filmed Entertainment		**6,493**		7,152		7,595	**(9.2)**	(5.8)
Theme Parks		**5,933**		5,683		5,443	**4.4**	4.4
Headquarters, other and eliminations		**(233)**		(286)		(262)	**NM**	NM
Total revenue	**$**	**33,967**	$	35,761	$	32,836	**(5.0)%**	8.9 %
Adjusted EBITDA								
Cable Networks	**$**	**4,444**	$	4,428	$	4,053	**0.4 %**	9.3 %
Broadcast Television		**1,730**		1,657		1,251	**4.4**	32.5
Filmed Entertainment		**833**		734		1,276	**13.5**	(42.5)
Theme Parks		**2,455**		2,455		2,384	**—**	3.0
Headquarters, other and eliminations		**(690)**		(676)		(746)	**NM**	NM
Total Adjusted EBITDA	**$**	**8,772**	$	8,598	$	8,218	**2.0 %**	4.6 %

Percentage changes that are considered not meaningful are denoted with NM.

Cable Networks Segment Results of Operations

Year ended December 31 (in millions)	2019	2018	2017	% Change 2018 to 2019	% Change 2017 to 2018
Revenue					
Distribution	**$ 6,790**	$ 6,826	$ 6,081	**(0.5)%**	12.3%
Advertising	**3,478**	3,587	3,359	**(3.0)**	6.8
Content licensing and other	**1,245**	1,360	1,057	**(8.5)**	28.6
Total revenue	**11,513**	11,773	10,497	**(2.2)**	12.2
Operating costs and expenses					
Programming and production	**5,107**	5,357	4,599	**(4.7)**	16.5
Other operating and administrative	**1,499**	1,453	1,326	**3.2**	9.5
Advertising, marketing and promotion	**463**	535	519	**(13.6)**	3.2
Total operating costs and expenses	**7,069**	7,345	6,444	**(3.8)**	14.0
Adjusted EBITDA	**$ 4,444**	$ 4,428	$ 4,053	**0.4 %**	9.3%

Cable Networks Segment – Revenue

Distribution

Revenue is generated from the distribution of our cable network programming to traditional and virtual multichannel video providers and is affected by the number of subscribers receiving our cable networks and the fees we charge per subscriber.

Year ended December 31 (in millions)	2019	2018	2017	% Change 2018 to 2019	% Change 2017 to 2018
Distribution	**$ 6,790**	$ 6,826	$ 6,081	**(0.5)%**	12.3%
Distribution, excluding 2018 PyeongChang Olympics	***6,790***	*6,590*	*6,081*	***3.0***	*8.4*

Revenue was flat in 2019 compared to 2018, which included the revenue associated with our broadcast of the 2018 PyeongChang Olympics. Excluding $236 million of revenue associated with our broadcast of the 2018 PyeongChang Olympics, distribution revenue increased in 2019 compared to 2018 primarily due to increases in the contractual rates charged under distribution agreements and the timing of contract renewals, partially offset by increased declines in the number of subscribers at our cable networks.

Advertising

Revenue is generated from the sale of advertising units sold on our cable networks and digital properties. Advertising revenue is primarily based on the price we charge for each advertising unit, which is generally based on audience ratings, the value of our viewer demographics to advertisers and the number of advertising units we can place in our cable networks' programming schedules. Advertising revenue is affected by the audience ratings of our programming, the strength of the national advertising market and general economic conditions.

Year ended December 31 (in millions)	2019	2018	2017	% Change 2018 to 2019	% Change 2017 to 2018
Advertising	**$ 3,478**	$ 3,587	$ 3,359	**(3.0)%**	6.8%
Advertising, excluding 2018 PyeongChang Olympics	***3,478***	*3,445*	*3,359*	***1.0***	*2.6*

Revenue decreased in 2019 primarily due to the absence of revenue associated with our broadcast of the 2018 PyeongChang Olympics. Excluding $142 million of revenue associated with our broadcast of the 2018 PyeongChang Olympics, advertising revenue increased reflecting higher prices for advertising units sold, partially offset by declines in audience ratings at our networks.

Content Licensing and Other

Revenue is generated primarily from the licensing of our owned programming in the United States and internationally to cable and broadcast networks and subscription video on demand services, as well as from the sale of our owned programming on DVDs and through digital distribution services such as iTunes. In addition, our cable television studio production operations generate revenue from programming the studio produces for third-party networks and for subscription video on demand services.

Revenue decreased in 2019 primarily due to the timing of content provided under our licensing agreements.

In 2019, 2018 and 2017, 15%, 14% and 15%, respectively, of our Cable Networks segment revenue was generated from our Cable Communications segment. These amounts are eliminated in Comcast's consolidated financial statements but are included in the amounts presented above.

Cable Networks Segment – Operating Costs and Expenses

Programming and Production Costs

Costs include the amortization of owned and acquired programming, sports rights, direct production costs, residual and participation payments, production overhead, costs associated with the distribution of our programming to third-party networks and other distribution platforms, and on-air talent costs.

Costs decreased in 2019 primarily due to the absence of costs associated with our broadcast of the 2018 PyeongChang Olympics.

Other Operating and Administrative Expenses

Other operating and administrative costs and expenses include salaries, employee benefits, rent and other overhead expenses.

Expenses increased in 2019 primarily due to higher employee-related costs and increases in costs associated with our various digital properties.

Advertising, Marketing and Promotion Expenses

Expenses consist primarily of the costs associated with promoting programming on our cable networks and digital properties.

Expenses decreased in 2019 primarily due to lower spending on marketing related to our programming and digital properties, as well as the absence of spending on marketing related to the 2018 PyeongChang Olympics.

Broadcast Television Segment Results of Operations

Year ended December 31 (in millions)	**2019**	2018	2017	**% Change 2018 to 2019**	% Change 2017 to 2018
Revenue					
Advertising	**$ 5,712**	$ 7,010	$ 5,654	**(18.5)%**	24.0 %
Content licensing	**2,157**	2,182	2,114	**(1.1)**	3.2
Distribution and other	**2,392**	2,247	1,795	**6.4**	25.2
Total revenue	**10,261**	11,439	9,563	**(10.3)**	19.6
Operating costs and expenses					
Programming and production	**6,547**	7,789	6,440	**(15.9)**	20.9
Other operating and administrative	**1,564**	1,547	1,391	**1.1**	11.1
Advertising, marketing and promotion	**420**	446	481	**(5.9)**	(7.3)
Total operating costs and expenses	**8,531**	9,782	8,312	**(12.8)**	17.7
Adjusted EBITDA	**$ 1,730**	$ 1,657	$ 1,251	**4.4 %**	32.5 %

Broadcast Television Segment – Revenue

Advertising

Revenue is generated from the sale of advertising units sold on our broadcast networks, owned local broadcast television stations and digital properties. Advertising revenue is primarily based on the price we charge for each advertising unit, which is generally based on audience ratings and the value of our viewer demographics to advertisers, and the number of advertising units we can place in our broadcast networks' and owned local television stations' programming schedules. Advertising revenue is affected by the strength of the national and local advertising markets, general economic conditions, cyclicality related to political campaigns and issue-oriented advertising, and the success and ratings of our programming.

Year ended December 31 (in millions)	**2019**	2018	2017	**% Change 2018 to 2019**	% Change 2017 to 2018
Advertising	**$ 5,712**	$ 7,010	$ 5,654	**(18.5)%**	24.0%
Advertising, excluding 2018 PyeongChang Olympics and 2018 Super Bowl	***5,712***	*5,929*	*5,654*	***(3.7)***	*4.9*

Revenue decreased in 2019 primarily due to the absence of revenue associated with our broadcasts of the 2018 PyeongChang Olympics and the 2018 Super Bowl. Excluding $1.1 billion of revenue associated with our broadcasts of the 2018 PyeongChang Olympics and the 2018 Super Bowl, advertising revenue decreased due to the absence of revenue associated with Telemundo's broadcast of the 2018 FIFA World Cup Russia™, as well as the impact of continued declines in audience ratings, partially offset by higher pricing for advertising units sold.

Content Licensing

Revenue is generated from the licensing of our owned programming in the United States and internationally to various distribution platforms, including to cable and broadcast networks, and to subscription video on demand services. In addition, our broadcast television studio production operations develop and produce original content that they license to broadcast networks, cable networks and local broadcast television stations owned by us and third parties, as well as to subscription video on demand services. The production and distribution costs related to our owned programming generally exceed the revenue generated from the initial network license, which means the subsequent licensing of our owned programming series following the initial network license is critical to their financial success.

Content licensing revenue decreased in 2019 primarily due to the timing of content provided under our licensing agreements.

Distribution and Other

We generate distribution and other revenue primarily from fees for retransmission consent of our owned local broadcast television stations and associated fees received from NBC-affiliated local broadcast television stations, as well as from the sale of our owned programming on DVDs and through digital distribution services. The sale of our owned programming is driven primarily by the popularity of our broadcast networks and programming series and therefore fluctuates based on consumer spending and acceptance. Distribution and other revenue also includes distribution revenue associated with our periodic broadcasts of the Olympic Games.

Year ended December 31 (in millions)	**2019**	2018	2017	**% Change 2018 to 2019**	% Change 2017 to 2018
Distribution and other	**$ 2,392**	$ 2,247	$ 1,795	**6.4%**	25.2%
Distribution and other, excluding 2018 PyeongChang Olympics	***2,392***	*2,135*	*1,795*	***12.0***	*19.0*

Revenue increased in 2019 primarily due to increases in fees recognized under our retransmission consent agreements, which was partially offset by the absence of $112 million of revenue resulting from our broadcast of the 2018 PyeongChang Olympics.

Broadcast Television Segment – Operating Costs and Expenses

Programming and Production Costs

Expenses relate to content that originates on our broadcast networks and owned local broadcast television stations, as well as owned content that is licensed to third parties. These costs include the amortization of owned and acquired programming costs, sports rights, direct production costs, residual and participation payments, production overhead, costs associated with the distribution of our programming to third-party networks and other distribution platforms, and on-air talent costs.

Expenses decreased in 2019 primarily due to the absence of costs associated with our broadcasts of the 2018 PyeongChang Olympics and the 2018 Super Bowl.

Other Operating and Administrative Expenses

Other operating and administrative costs and expenses include salaries, employee benefits, rent and other overhead expenses. Expenses increased in 2019 primarily due to increases in overhead expenses, partially offset by decreases in employee-related costs.

Advertising, Marketing and Promotion Expenses

Expenses consist primarily of the costs associated with promoting our owned and acquired television programming, as well as the marketing of DVDs and costs associated with our digital properties. These expenses decreased in 2019 primarily due to decreased spending on marketing related to our sports and local programming.

Filmed Entertainment Segment Results of Operations

Year ended December 31 (in millions)	2019	2018	2017	% Change 2018 to 2019	% Change 2017 to 2018
Revenue					
Theatrical	**$ 1,469**	$ 2,111	$ 2,192	**(30.4)%**	(3.7)%
Content licensing	**3,045**	2,899	2,956	**5.1**	(1.9)
Home entertainment	**957**	1,048	1,287	**(8.7)**	(18.6)
Other	**1,022**	1,094	1,160	**(6.7)**	(5.7)
Total revenue	**6,493**	7,152	7,595	**(9.2)**	(5.8)
Operating costs and expenses					
Programming and production	**2,949**	3,446	3,500	**(14.4)**	(1.5)
Other operating and administrative	**1,131**	1,189	1,260	**(4.9)**	(5.7)
Advertising, marketing and promotion	**1,580**	1,783	1,559	**(11.4)**	14.3
Total operating costs and expenses	**5,660**	6,418	6,319	**(11.8)**	1.6
Adjusted EBITDA	**$ 833**	$ 734	$ 1,276	**13.5 %**	(42.5)%

Filmed Entertainment Segment – Revenue

Theatrical

Revenue is generated from the worldwide theatrical release of our produced and acquired films for exhibition in movie theaters and is significantly affected by the timing of each release and the number of films we distribute, as well as their acceptance by audiences. Theatrical revenue is also affected by the number of exhibition screens, ticket prices, the percentage of ticket sale retention by the exhibitors and the popularity of competing films at the time our films are released. The success of a film in movie theaters is a significant factor in determining the revenue a film is likely to generate in succeeding distribution platforms.

Revenue decreased in 2019 primarily due to the strength and volume of releases in our 2018 film slate, partially offset by the releases in our 2019 film slate. The following key titles released in each respective fiscal year were contributors to the drivers of changes in theatrical revenue:

Worldwide Theatrical Releases	
2019	2018
Fast & Furious: Hobbs & Shaw	*Jurassic World: Fallen Kingdom*
How to Train Your Dragon: The Hidden World	*Dr. Seuss' The Grinch*
Secret Life of Pets 2	*Mamma Mia! Here We Go Again*
Us	*Fifty Shades Freed*

Content Licensing

Revenue is generated primarily from the licensing of our produced and acquired films to cable, broadcast and premium networks, and to subscription video on demand services.

Revenue increased in 2019 primarily due to the timing of when content was made available under licensing agreements.

Home Entertainment

Revenue is generated from the sale of our produced and acquired films on DVDs to retail stores and rental kiosks, and through digital distribution services and video on demand services provided by multichannel video providers. Revenue is significantly affected by the timing and number of our releases and their acceptance by consumers. Release dates are determined by several factors, including the timing of the exhibition of a film in movie theaters, holiday periods and the timing of competitive releases. The overall DVD market continues to experience declines due to the maturation of the DVD format from increasing shifts in consumer behavior toward digital distribution services and subscription rental services, both of which generate less revenue per transaction than DVD sales, as well as due to piracy.

Revenue decreased in 2019 primarily due to higher sales of 2018 releases in the prior year period, partially offset by sales of 2019 releases in the current year period. The following key titles released in each respective fiscal year were contributors to the drivers of changes in home entertainment revenue:

Home Entertainment Releases	
2019	2018
How to Train Your Dragon: The Hidden World	*Jurassic World: Fallen Kingdom*
Fast & Furious: Hobbs & Shaw	*Fifty Shades Freed*
Dr. Seuss' The Grinch	*Mamma Mia! Here We Go Again*

Other

Revenue is generated from Fandango, our movie ticketing and entertainment business, consumer products, the production and licensing of live stage plays, and the distribution of filmed entertainment produced by third parties.

Revenue decreased in 2019 primarily due to a decrease in revenue from consumer products and the absence of revenue associated with the sale of a business in 2018, partially offset by an increase in revenue from our movie ticketing and entertainment business.

Filmed Entertainment Segment – Operating Costs and Expenses

Programming and Production Costs

Expenses include the amortization of capitalized film production and acquisition costs, residual and participation payments, and distribution expenses. Residual payments represent amounts payable to individuals hired under collective bargaining agreements to work on productions and are calculated based on post-theatrical revenue. Participation payments are primarily based on film performance and represent contingent consideration payable to creative talent, to third parties that have entered into cofinancing agreements with us and to other parties involved in the production of a film. The costs associated with producing films have generally increased in recent years and may continue to increase in the future.

Expenses decreased in 2019 due to higher amortization of film production costs in 2018 compared to 2019.

Other Operating and Administrative Expenses

Expenses include salaries, employee benefits, rent and other overhead expenses.

Expenses decreased in 2019 primarily due to the absence of expenses associated with the sale of a business in 2018.

Advertising, Marketing and Promotion Expenses

Expenses consist primarily of expenses associated with advertising for our theatrical releases and the marketing of our films on DVDs and in digital formats. We incur significant marketing expenses before and throughout the release of a film in movie theaters. As a result, we typically incur losses on a film prior to and during the film's exhibition in movie theaters and may not realize profits, if any, until the film generates home entertainment and content licensing revenue. The costs associated with marketing films have generally increased in recent years and may continue to increase in the future.

Expenses decreased in 2019 primarily due to higher spending on the marketing of releases in the prior year.

Theme Parks Segment Results of Operations

Year ended December 31 (in millions)	**2019**	2018	2017	**% Change 2018 to 2019**	% Change 2017 to 2018
Revenue	**$ 5,933**	$ 5,683	$ 5,443	**4.4%**	4.4%
Operating costs and expenses	**3,478**	3,228	3,059	**7.7**	5.5
Adjusted EBITDA	**$ 2,455**	$ 2,455	$ 2,384	**—%**	3.0%

Theme Parks Segment – Revenue

Revenue is generated primarily from guest spending at Universal theme parks. Guest spending includes ticket sales and in-park spending on food, beverages and merchandise. Guest spending depends heavily on the general environment for travel and tourism, including consumer spending on travel and other recreational activities.

Revenue increased in 2019 due to increases in guest spending driven by new attractions, such as *Hagrid's Magical Creatures Motorbike Adventure*™ in Orlando, and also higher attendance due, in part, to natural disasters that negatively impacted attendance in Japan in 2018.

Theme Parks Segment – Operating Costs and Expenses

Expenses consist primarily of theme park operations, including repairs and maintenance and related administrative expenses; food, beverage and merchandise costs; labor costs; and sales and marketing costs.

Expenses increased in 2019 primarily due to higher costs to operate the parks and attractions.

NBCUniversal Headquarters, Other and Eliminations

Expenses incurred by our NBCUniversal businesses include overhead, personnel costs and costs associated with corporate initiatives. Expenses increased in 2019 primarily due to higher employee-related costs.

Sky Segment Results of Operations

Sky's results of operations are included in our consolidated financial statements following the October 9, 2018 acquisition date, impacting the comparability of results of operations from fiscal year 2018 to fiscal year 2019, and as a result, actual growth rates are not meaningful.

The discussion below compares Sky's actual results for 2019 to pro forma results for 2018. The pro forma segment information includes adjustments as if the Sky transaction occurred on January 1, 2017. Pro forma data is also adjusted for the effects of acquisition accounting and eliminating the costs and expenses directly related to the transaction, but does not include adjustments for costs related to integration activities, cost savings or synergies that have been or may be achieved by the combined business. Pro forma amounts are not necessarily indicative of what our results would have been had we operated the Sky business since January 1, 2017, nor of our future results.

	2019	2018			% Change 2018 to 2019	
Year ended December 31 (in millions)	**Actual**	Actual October 9 to December 31	Pro Forma Adjustments[(a)]	Pro Forma Combined	**Pro Forma Combined Growth**	**Constant Currency Growth[(b)]**
Revenue						
Direct-to-consumer	**$ 15,538**	$ 3,632	$ 12,445	$ 16,077	**(3.4)%**	**1.4 %**
Content	**1,432**	304	944	1,248	**14.7**	**19.7**
Advertising	**2,249**	651	1,838	2,489	**(9.6)**	**(5.4)**
Total revenue	**19,219**	4,587	15,227	19,814	**(3.0)**	**1.7**
Operating costs and expenses						
Programming and production	**8,865**	2,137	6,685	8,822	**0.5**	**5.4**
Direct network costs	**1,746**	399	1,225	1,624	**7.5**	**12.3**
Other	**5,509**	1,359	5,115	6,474	**(14.9)**	**(10.8)**
Total operating costs and expenses	**16,120**	3,895	13,025	16,920	**(4.7)**	**(0.1)**
Adjusted EBITDA	**$ 3,099**	$ 692	$ 2,202	$ 2,894	**7.1 %**	**12.2 %**

All percentages are calculated based on actual amounts. Minor differences may exist due to rounding.

(a) Pro forma amounts include the results of operations for Sky for the period January 1, 2018 through October 8, 2018, as well as acquisition accounting adjustments.

(b) Constant currency growth is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures" section on page 51 for additional information, including our definition and our use of constant currency, and for a reconciliation of Sky's constant currency growth rates.

Customer Metrics

			Net Additions	
	2019	2018	**2019**	2018
(in thousands)	**Actual**	Actual	**Actual**	Pro Forma
Total customer relationships	**23,994**	23,600	**394**	735

Sky customer relationships represent the number of residential retail customers that subscribe to at least one of Sky's four primary services of video, high-speed internet, voice and wireless phone service. Commercial retail customers include hotels, bars, workplaces and restaurants with an active subscription for the purpose of providing Sky services to customers. Sky reports commercial customers based on the number of commercial agreements per venue in the U.K., a residential equivalent unit based upon the multiple of residential customer revenue in Italy and the number of active venues (bars and restaurants) or rooms (hotels and clinics) in Germany.

	2019	2018	% Change 2018 to 2019	
	Actual	Pro Forma	**Pro Forma Growth**	**Constant Currency Growth[(a)]**
Average monthly direct-to-consumer revenue per customer relationship	**$ 54.41**	$ 57.67	**(5.7)%**	**(1.0)%**

(a) Constant currency growth is a non-GAAP financial measure. Refer to the "Non-GAAP Financial Measures" section on page 51 for additional information, including our definition and our use of constant currency, and for a reconciliation of Sky's constant currency growth rates.

Average monthly direct-to-consumer revenue per customer relationship is impacted by rate adjustments and changes in the types and levels of services received by Sky's customers. Each of Sky's services has a different contribution to Adjusted EBITDA.

Sky Segment – Revenue

Direct-to-Consumer

Revenue is derived from subscription and transactional revenue from residential and business customers. Subscription revenue includes revenue from residential and business subscribers to video, high-speed internet, voice and wireless phone services, including OTT subscriptions and income from set-top boxes, wireless phone handset and tablet sales, installation, service calls and warranties. Transactional revenue includes the purchase of physical and digital content, OTT daily and weekly passes, and pay-per-view programming.

Revenue decreased in 2019 compared to 2018. Excluding the impact of foreign currency, revenue increased primarily due to increases in customer relationships, partially offset by decreases in average revenue per customer relationship.

Content

Revenue is derived from the distribution of Sky's owned television channels on third-party platforms and the licensing of owned and acquired programming to third-party video providers.

Revenue increased in 2019 compared to 2018. Excluding the impact of foreign currency, revenue increased reflecting the wholesaling of sports programming, including exclusive sports rights acquired in Italy and Germany and the monetization of Sky's slate of original programming.

Advertising

Revenue is derived from the sale of advertising and sponsorships across Sky's owned television channels and where it represents the sales efforts of third-party channels.

Revenue decreased in 2019 compared to 2018. Excluding the impact of foreign currency, revenue decreased reflecting the impact of changes in legislation related to gambling advertisements in the U.K. and Italy that occurred in the third quarter of 2019, as well as overall market weakness.

Sky Segment – Operating Costs and Expenses

Programming and Production Costs

Expenses primarily relate to content originating on Sky's channels. These costs include the amortization of owned and acquired programming costs, sports rights, direct production costs, residual and participation payments, production overhead, and on-air talent costs. These expenses also include the fees associated with programming distribution agreements for channels owned by third parties, which are generally based on the number of customers who are able to watch the programming and the platforms on which the content is provided.

Expenses were flat in 2019 compared to 2018. Excluding the impact of foreign currency, expenses increased primarily due to an increase in the cost of sports programming contracts.

Direct Network Costs

Expenses primarily include costs directly related to the supply of high-speed internet and voice services, including wireless phone services, to Sky's customers. This includes call costs, monthly wholesale access fees and other variable costs associated with Sky's network. In addition, it includes the cost of mobile handsets sold to customers.

Expenses increased in 2019 compared to 2018. Excluding the impact of foreign currency, expenses increased primarily due to increases in costs associated with Sky's wireless phone service as a result of increases in the number of customers receiving the service.

Other Expenses

Expenses include costs related to marketing, fees paid to third-party channels where Sky represents the advertising sales efforts, subscriber management, supply chain, transmission, technology, fixed networks and general administrative costs.

Expenses decreased in 2019 compared to 2018. Excluding the impact of foreign currency, expenses decreased primarily due to contract termination costs and costs related to a settlement in the prior year, and a favorable settlement in the current year.

We anticipate that expenses will increase in 2020 compared to 2019 due to the launch of high-speed internet service in Italy, as well as continued acceleration of Sky Q across all of our markets.

Corporate and Other Results of Operations

Year ended December 31 (in millions)	2019	2018	2017	% Change 2018 to 2019	% Change 2017 to 2018
Revenue	**$ 333**	$ 513	$ 864	**(35.0)%**	(40.7)%
Operating costs and expenses	**1,393**	1,772	1,973	**(21.3)**	(10.2)
Adjustment for legal settlement	**—**	(125)	(250)	**NM**	NM
Adjustment for Sky transaction-related costs	**(180)**	(355)	—	**NM**	NM
Adjusted EBITDA	**$ (880)**	$ (779)	$ (859)	**(12.9)%**	9.3 %

Percentage changes that are considered not meaningful are denoted with NM.

Corporate and Other – Revenue

Revenue primarily relates to Comcast Spectacor, which owns the Philadelphia Flyers and the Wells Fargo Center arena in Philadelphia, Pennsylvania.

Revenue decreased in 2019 primarily due to the sale of a controlling interest in our arena management-related businesses in the second quarter of 2018.

Corporate and Other – Operating Costs and Expenses

Expenses primarily include overhead, personnel costs, the costs of other business initiatives, such as the development of Peacock and operating costs and expenses associated with Comcast Spectacor.

Expenses decreased in 2019 primarily due to costs directly related to the Sky transaction and a legal settlement in the prior year, as well as the absence of costs associated with our arena management-related businesses. The decrease was partially offset by an increase in other costs associated with the Sky transaction, including expenses resulting from the replacement of share-based compensation awards and costs related to integration activities, as well as start up costs associated with Peacock. Corporate and Other Adjusted EBITDA excludes Sky transaction-related costs and costs associated with a legal settlement.

We plan to launch Peacock in 2020 and expect to incur significant costs to develop and scale our direct-to-consumer streaming service.

Non-GAAP Financial Measures

Consolidated Adjusted EBITDA

Adjusted EBITDA is a non-GAAP financial measure and is the primary basis used to measure the operational strength and performance of our businesses as well as to assist in the evaluation of underlying trends in our businesses. This measure eliminates the significant level of noncash depreciation and amortization expense that results from the capital-intensive nature of certain of our businesses and from intangible assets recognized in business combinations. It is also unaffected by our capital and tax structures, and by our investment activities, including the results of entities that we do not consolidate, as our management excludes these results when evaluating our operating performance. Our management and Board of Directors use this financial measure to evaluate our consolidated operating performance and the operating performance of our operating segments and to allocate resources and capital to our operating segments. It is also a significant performance measure in our annual incentive compensation programs. Additionally, we believe that Adjusted EBITDA is useful to investors because it is one of the bases for comparing our operating performance with that of other companies in our industries, although our measure of Adjusted EBITDA may not be directly comparable to similar measures used by other companies.

We define Adjusted EBITDA as net income attributable to Comcast Corporation before net income (loss) attributable to noncontrolling interests and redeemable subsidiary preferred stock, income tax expense, investment and other income (loss), net, interest expense, depreciation and amortization expense, and other operating gains and losses (such as impairment charges related to fixed and intangible assets and gains or losses on the sale of long-lived assets), if any. From time to time we may exclude from Adjusted EBITDA the impact of certain events, gains, losses or other charges (such as significant legal settlements) that affect the period-to-period comparability of our operating performance.

We reconcile consolidated Adjusted EBITDA to net income attributable to Comcast Corporation. This measure should not be considered a substitute for operating income (loss), net income (loss), net income (loss) attributable to Comcast Corporation, or net cash provided by operating activities that we have reported in accordance with GAAP.

Reconciliation from Net Income Attributable to Comcast Corporation to Adjusted EBITDA

Year ended December 31 (in millions)	2019	2018	2017
Net income attributable to Comcast Corporation	**$ 13,057**	$ 11,731	$ 22,735
Net income attributable to noncontrolling interests and redeemable subsidiary preferred stock	**266**	131	187
Income tax (benefit) expense	**3,673**	3,380	(7,569)
Investment and other (income) loss, net	**(438)**	225	(421)
Interest expense	**4,567**	3,542	3,086
Depreciation	**8,663**	8,281	7,914
Amortization	**4,290**	2,736	2,216
Other operating gains	**—**	(341)	(442)
Adjustment for Sky transaction-related costs	**180**	355	—
Adjustment for legal settlement	**—**	125	250
Adjusted EBITDA	**$ 34,258**	$ 30,165	$ 27,956

Constant Currency

Constant currency and constant currency growth rates are non-GAAP financial measures that present our results of operations excluding the estimated effects of foreign currency exchange rate fluctuations. Certain of our businesses, including Sky, have operations outside the United States that are conducted in local currencies. As a result, the comparability of the financial results reported in U.S. dollars is affected by changes in foreign currency exchange rates. In our Sky segment, we use constant currency and constant currency growth rates to evaluate the underlying performance of the business, and we believe it is helpful for investors to present operating results on a comparable basis year over year to evaluate its underlying performance.

Constant currency and constant currency growth rates are calculated by comparing the prior year results adjusted to reflect the average exchange rates from the current year rather than the actual exchange rates that were in effect during the respective prior year.

Reconciliation of Sky Constant Currency Growth Rates

	2019	2018	**% Change 2018 to 2019**
Year ended December 31 (in millions, except per customer data)	**Actual**	Constant Currency	**Constant Currency Growth**
Revenue			
Direct-to-consumer	**$ 15,538**	15,326	**1.4 %**
Content	**1,432**	1,196	**19.7**
Advertising	**2,249**	2,376	**(5.4)**
Total revenue	**19,219**	18,898	**1.7**
Operating costs and expenses			
Programming and production	**8,865**	8,406	**5.4**
Direct network costs	**1,746**	1,555	**12.3**
Other	**5,509**	6,173	**(10.8)**
Total operating costs and expenses	**16,120**	16,134	**(0.1)**
Adjusted EBITDA	**$ 3,099**	$ 2,764	**12.2 %**
Average monthly direct-to-consumer revenue per customer relationship	**$ 54.41**	$ 54.98	**(1.0)%**

Liquidity and Capital Resources

Our businesses generate significant cash flows from operating activities. We believe that we will be able to continue to meet our current and long-term liquidity and capital requirements, including fixed charges, through our cash flows from operating activities; existing cash, cash equivalents and investments; available borrowings under our existing credit facilities; and our ability to obtain future external financing. We anticipate that we will continue to use a substantial portion of our cash flows in repaying our debt obligations, funding our capital expenditures, investing in business opportunities and returning capital to shareholders.

We maintain significant availability under our revolving credit facilities and our commercial paper programs to meet our short-term liquidity requirements. Our commercial paper programs provide a lower-cost source of borrowing to fund our short-term working capital requirements. See Note 7 to Comcast's consolidated financial statements for additional information on our revolving credit facilities. As of December 31, 2019, amounts available under our revolving credit facilities, net of amounts outstanding under our commercial paper programs and outstanding letters of credit and bank guarantees, totaled $9.2 billion.

Comcast, NBCUniversal and Comcast Cable are subject to the covenants and restrictions set forth in the indentures governing our public debt securities and in the credit agreements governing the Comcast revolving credit facility. The financial covenant in the credit facility pertains to leverage, which is the ratio of debt to EBITDA, as defined in the credit facility. We test for compliance with this financial covenant on an ongoing basis. As of December 31, 2019, we met this financial covenant by a significant margin. We do not expect to have to reduce debt or improve operating results in order to continue to comply with this financial covenant. In addition, the Universal Studios Japan term loans contain certain financial covenants. As of December 31, 2019, Universal Studios Japan was in compliance with all of these covenants.

Operating Activities

Components of Net Cash Provided by Operating Activities

Year ended December 31 (in millions)	**2019**	2018	2017
Operating income	**$ 21,125**	$ 19,009	$ 18,018
Depreciation, amortization and other operating gains	**12,953**	10,676	9,688
Noncash share-based compensation	**1,021**	826	751
Changes in operating assets and liabilities	**(2,335)**	(1,313)	(546)
Payments of interest	**(4,254)**	(2,897)	(2,820)
Payments of income taxes	**(3,231)**	(2,355)	(4,057)
Proceeds from investments and other	**418**	351	227
Net cash provided by operating activities	**$ 25,697**	$ 24,297	$ 21,261

The variance in changes in operating assets and liabilities in 2019 compared to 2018 was primarily related to the timing of film and television costs and our broadcast of the 2018 Super Bowl at NBCUniversal, partially offset by the timing of collections on receivables and our broadcast of the 2018 PyeongChang Olympics.

The increase in interest payments in 2019 was primarily due to higher levels of debt outstanding, including the issuance of new debt in 2018 associated with the financing of the Sky transaction.

The increase in income tax payments in 2019 was primarily due to reduced tax payments in 2018 as a result of federal income tax overpayments in 2017.

Investing Activities

Net cash used in investing activities in 2019 consisted primarily of capital expenditures, purchases of investments, cash paid for intangible assets and the construction of Universal Beijing Resort. Net cash used in investing activities in 2018 consisted primarily of cash paid for acquisitions, cash paid for capital expenditures, cash paid for intangible assets and purchase of investments.

Capital Expenditures

Capital expenditures increased in 2019 primarily due to the acquisition of Sky in the fourth quarter of 2018, with a full year of capital expenditures for 2019. Sky capital expenditures totaled $768 million in 2019, reflecting the continued deployment of Sky Q and high-speed internet services.

Capital expenditures in our NBCUniversal segments increased 19.7% to $2.1 billion in 2019 primarily due to an increase in spending at our Universal theme parks, including construction of an additional theme park in Orlando, Florida.

Our most significant recurring investing activity has been capital expenditures in our Cable Communications segment, and we expect that this will continue in the future. Cable Communications' capital expenditures decreased 10.5% in 2019 compared to

2018 primarily due to lower spending on scalable infrastructure and customer premise equipment. The table below summarizes the capital expenditures we incurred in our Cable Communications segment in 2019, 2018 and 2017.

Year ended December 31 (in millions)	2019	2018	2017
Customer premise equipment	**$ 2,659**	$ 2,917	$ 3,337
Scalable infrastructure	**2,000**	2,555	2,369
Line extensions	**1,392**	1,484	1,367
Support capital	**858**	767	905
Total	**$ 6,909**	$ 7,723	$ 7,978

We expect our capital expenditures for 2020 will be focused on the continued investment in scalable infrastructure to increase network capacity in our Cable Communications segment; increased investment in line extensions for the expansion of both business services and residential; and the continued deployment of wireless gateways, our X1 platform, cloud DVR technology, Sky Q, and international OTT platforms. In addition, we expect to continue to invest in existing and new attractions at our Universal theme parks, including the additional theme park being constructed in Orlando, Florida. Capital expenditures for subsequent years will depend on numerous factors, including acquisitions, competition, changes in technology, regulatory changes, the timing and rate of deployment of new services, the capacity required for existing services, and the timing of new attractions at our theme parks.

Cash Paid for Intangible Assets

In 2019, cash paid for intangible assets increased primarily due to the acquisition of Sky in the fourth quarter of 2018, with a full year of expense included in our results of operations for 2019, and to a lesser extent, expenditures for software in our Cable Communications segment. Our Sky segment's cash paid for intangible assets totaled $707 million in 2019 and consisted primarily of expenditures for software development related to Sky Q and high-speed internet services. In 2018, cash paid for intangible assets consisted primarily of expenditures for software in our Cable Communication segment, and to a lesser extent, expenditures for software in our NBCUniversal segments.

Acquisitions and Construction of Real Estate Properties

Acquisitions and construction of real estate properties primarily included the construction of the Comcast Technology Center in Philadelphia, Pennsylvania, which was completed in 2019.

Construction of Universal Beijing Resort

Construction of Universal Beijing Resort includes costs related to the construction of the Universal theme park and resort in Beijing, China. See Note 8 to Comcast's consolidated financial statements and Note 7 to NBCUniversal's consolidated financial statements for further information on Universal Beijing Resort.

Purchases of Investments

Purchases of investments in 2019 and 2018 were primarily related to capital contributions to Hulu and Atairos.

Other

Other investing activities in 2019 were primarily related to distributions received from equity method investments. Other investing activities in 2018 were primarily related to proceeds received from the sale of an investment and proceeds from the settlement of derivative contracts.

Financing Activities

Net cash used in financing activities in 2019 consisted primarily of repayments of debt, dividend payments and repurchases of common stock under our employee plans, partially offset by proceeds from issuance of senior notes and a collateralized obligation. Net cash provided by financing activities in 2018 consisted primarily of proceeds from borrowings, including the financing of the Sky acquisition, partially offset by repayments of debt, repurchases of common stock under our share repurchase program and employee plans, and dividend payments.

In 2019, we made debt repayments of $14.4 billion, including $6.1 billion of optional repayments of term loans due 2021 to 2023, $5.2 billion of senior notes due 2020 and $3.0 billion of senior notes due 2019.

In August 2019, we received proceeds of approximately $5.2 billion under a term loan facility due 2024 which is presented as a collateralized obligation, the principal amount of which is fully secured by the minimum guaranteed proceeds under the put/call provisions related to our investment in Hulu. In November 2019, we issued $1.6 billion of senior notes due 2030, $1.35 billion of senior notes due 2039 and $1.8 billion of senior notes due 2050. The proceeds from the collateralized obligation and the senior notes were used to repay debt. In 2019, we made borrowings of $728 million under the Universal Beijing Resort term loan.

In 2019, we made net repayments of $673 million under our commercial paper programs and made net repayments of $615 million under Sky's £1 billion revolving credit facility, which was terminated in February 2019.

In December 2019, we announced our election to exercise our option to redeem at par $1.49 billion of senior notes due 2046 in February 2020.

We have made, and may from time to time in the future make, optional repayments on our debt obligations, which may include repurchases or exchanges of our outstanding public notes and debentures, depending on various factors, such as market conditions. See Note 7 to Comcast's consolidated financial statements and Note 6 to NBCUniversal's consolidated financial statements for additional information on our financing activities.

Share Repurchases and Dividends

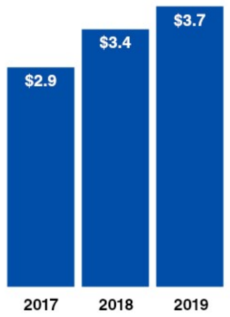
Effective January 1, 2017, our Board of Directors increased our share repurchase program authorization to $12 billion, which does not have an expiration date. As of December 31, 2019, $2 billion remained under this authorization. Under the authorization, we may repurchase shares in the open market or in private transactions. We have paused our share repurchase program in order to accelerate the reduction of indebtedness we incurred in connection with the acquisition of Sky, and no common shares were repurchased in 2019 under the authorization. Under our share repurchase program authorization, we repurchased a total of 140 million shares of Class A common stock for $5.0 billion in 2018, and 131 million shares of Class A Common stock for $5.0 billion in 2017.

Our Board of Directors declared quarterly dividends totaling $3.9 billion in 2019. We paid dividends of $3.7 billion in 2019. In January 2020, our Board of Directors approved a 10% increase in our dividend to $0.92 per share on an annualized basis. We expect to continue to pay quarterly dividends, although each dividend is subject to approval by our Board of Directors.

The chart below summarizes our dividends paid in 2019, 2018 and 2017. In addition, we paid $504 million and $320 million in 2019 and 2018, respectively, related to employee taxes associated with the administration of our share-based compensation plans.

Dividends Paid

(in billions)



Contractual Obligations

As of December 31, 2019 (in millions)	Total	Year 1	Years 2-3	Years 4-5	More than 5
	Payment Due by Period				
Debt obligations[a]	$ 103,100	$ 4,274	$ 14,535	$ 14,362	$ 69,929
Collateralized obligation[a][b]	5,166	—	—	5,166	—
Capital lease obligations	790	181	171	61	377
Operating lease obligations	5,626	877	1,460	1,046	2,243
Purchase obligations[c]	66,559	23,902	17,571	9,200	15,886
Other long-term liabilities reflected on the balance sheet[d]	6,493	2,011	1,353	1,044	2,085
Total[e][f]	$ 187,734	$ 31,245	$ 35,090	$ 30,879	$ 90,520

Refer to Note 7 and Note 17 to Comcast's consolidated financial statements.

(a) Excludes interest payments.

(b) Collateralized obligation relates to a $5.2 billion term loan facility, the principal amount of which is fully secured by the minimum guaranteed proceeds under the put/call provisions related to our investment in Hulu. See Note 10 to Comcast's consolidated financial statements.

(c) Purchase obligations consist of agreements to purchase goods and services that are legally binding on us and specify all significant terms, including fixed or minimum quantities to be purchased and price provisions. Our purchase obligations related to Cable Communications and Sky include programming contracts with cable networks and local broadcast television stations; contracts with customer premise equipment manufacturers; contracts with communications vendors and multichannel video providers for which we provide advertising sales representation; contracts to acquire handsets and other equipment; and other contracts entered into in the normal course of business. Cable Communications' and Sky's programming contracts include amounts payable under fixed or minimum guaranteed commitments and do not represent the total fees that are expected to be paid under programming contracts, which we expect to be significantly higher because these contracts are generally based on the number of subscribers receiving the programming. Our purchase obligations related to NBCUniversal and Sky include commitments to acquire film and television programming, and broadcast rights relating to sporting events, such as the Olympics, as well as obligations under various creative talent agreements, including obligations to actors, producers and television personalities, and various other television commitments. Purchase obligations do not include contracts with immaterial future commitments.

(d) Other long-term liabilities reflected on the balance sheet consist primarily of mandatorily redeemable subsidiary preferred shares; deferred compensation obligations; and postretirement, pension and postemployment benefit obligations. A contractual obligation with a carrying value of $1.1 billion is not included in the table above because it is uncertain if the arrangement will be settled. The contractual obligation involves an interest held by a third party in the revenue of certain theme parks. The arrangement provides the counterparty with the right to periodic payments associated with current period revenue and, beginning in June 2017, the option to require NBCUniversal to purchase the interest for cash in an amount based on a contractual formula. The contractual formula is based on an average of specified historical theme park revenue at the time of exercise, which amount could be significantly higher than the carrying value. As of December 31, 2019, the value of the contractual obligation was $1.8 billion, based on inputs to the contractual formula as of that date. See Note 17 to Comcast's consolidated financial statements for additional information related to this arrangement. Liabilities for uncertain tax positions of $1.0 billion and the associated interest and penalties are not included in the table above because it is uncertain if or when these amounts will become payable. Our total recorded liability of $2.7 billion related to participations and residuals are also not included in the table above because we cannot make a reliable estimate of the period in which these obligations will be settled.

(e) Our contractual obligations do not include our commitment to invest up to $5 billion at any one time as an investor in Atairos due to our inability to estimate the timing of this funding. As of December 31, 2019, our remaining commitment is $2.2 billion based on the capital calls received as of that date (see Note 10 to Comcast's consolidated financial statements).

(f) Total contractual obligations are made up of the following components.

(in millions)	
Liabilities recorded on the balance sheet	$ 124,760
Commitments not recorded on the balance sheet	62,974
Total	$ 187,734

Off-Balance Sheet Arrangements

As of December 31, 2019, we did not have any material off-balance sheet arrangements that are reasonably likely to have a current or future effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Recent Accounting Pronouncements

See Note 9 to Comcast's consolidated financial statements and Note 8 to NBCUniversal's consolidated financial statements for additional information related to recent accounting pronouncements, including the impact of the adoption of the updated accounting guidance related to leases.

Critical Accounting Judgments and Estimates

The preparation of our consolidated financial statements requires us to make estimates that affect the reported amounts of assets, liabilities, revenue and expenses, and the related disclosure of contingent assets and contingent liabilities. We base our judgments on our historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making estimates about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe our judgments and related estimates associated with the valuation and impairment testing of goodwill and cable franchise rights, the accounting for film and television costs, and the valuation of acquisition-related assets and liabilities are critical in the preparation of our consolidated financial statements. Management has discussed the development and selection of these critical accounting judgments and estimates with the Audit Committee of our Board of Directors, and the Audit Committee has reviewed our disclosures relating to them, which are presented below. See Notes 4, 8 and 12 to Comcast's consolidated financial statements.

Valuation and Impairment Testing of Goodwill and Cable Franchise Rights

We assess the recoverability of our goodwill and indefinite-lived intangible assets, including cable franchise rights, annually, or more frequently whenever events or substantive changes in circumstances indicate that the assets might be impaired. The assessment of recoverability may first consider qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit or an indefinite-lived intangible asset is less than its carrying amount. A quantitative assessment is performed if the qualitative assessment results in a more-likely-than-not determination or if a qualitative assessment is not performed.

Goodwill

Goodwill results from business combinations and represents the excess amount of the consideration paid over the identifiable assets and liabilities recorded in the acquisition. We test goodwill for impairment at the reporting unit level and have concluded that our reporting units are generally the same as our reportable segments. We evaluate the determination of our reporting units periodically or whenever events or substantive changes in circumstances occur. When performing a quantitative assessment, we estimate the fair value of our reporting units primarily based on a discounted cash flow analysis that involves significant judgment, including market participant estimates of future cash flows expected to be generated by the business and the selection of discount rates. When analyzing the fair values indicated under discounted cash flow models, we also consider multiples of Adjusted EBITDA generated by the underlying assets, current market transactions and profitability information.

We performed a qualitative assessment for our reporting units in 2019. This assessment considered changes in our projected future cash flows and discount rates, recent market transactions and overall macroeconomic conditions. Based on this assessment, we concluded that it was more likely than not that the estimated fair values of our reporting units were higher than their carrying values and that the performance of a quantitative impairment test was not required. Assets and liabilities resulting from a business combination are initially recorded at fair value and the risk of goodwill impairment is reduced as the value of the businesses in a reporting unit increases and as the carrying value of the reporting unit decreases due to the amortization of the historical cost of acquired long-lived assets over time. Goodwill in our Cable Communications segment and our NBCUniversal segments has resulted from the combination of legacy businesses and newly acquired businesses and as a result, the fair values of the reporting units are significantly in excess of the respective carrying values. The goodwill in our Sky segment resulted from our acquisition of Sky in the fourth quarter of 2018. Given this was a recent transaction, the fair value is in close proximity to the carrying value of the Sky reporting unit.

Changes in market conditions, laws and regulations, and key assumptions made in future quantitative assessments, including expected cash flows, competitive factors and discount rates, could negatively impact the results of future impairment testing and could result in the recognition of an impairment charge.

Cable Franchise Rights

Our cable franchise rights assets result from agreements we have with state and local governments that allow us to construct and operate a cable business within a specified geographic area. The value of a franchise is derived from the economic benefits we receive from the right to solicit new customers and to market additional services in a particular service area. The amounts we record for cable franchise rights are primarily a result of cable system acquisitions. Typically when we acquire a cable system, the most significant asset we record is the value of the cable franchise rights. Often these cable system acquisitions include multiple franchise areas. We currently serve approximately 6,400 franchise areas in the United States.

We have concluded that our cable franchise rights have an indefinite useful life since there are no legal, regulatory, contractual, competitive, economic or other factors which limit the period over which these rights will contribute to our cash flows. Accordingly, we do not amortize our cable franchise rights.

For purposes of our impairment testing, we have grouped the recorded values of our various cable franchise rights into our three Cable Communications divisions or units of account. We evaluate the unit of account periodically to ensure our impairment testing is performed at an appropriate level.

When performing a quantitative assessment, we estimate the fair value of our cable franchise rights primarily based on a discounted cash flow analysis that involves significant judgment, including the estimate of future cash flows and the selection of discount rates. When analyzing the fair values indicated under the discounted cash flow models, we also consider multiples of Adjusted EBITDA generated by the underlying assets, current market transactions and profitability information.

In 2019, we performed a qualitative assessment of our cable franchise rights. At the time of our previous quantitative assessment in 2018, the estimated fair values of our franchise rights exceeded the carrying value of the Northeast, Central and West divisions by 29%, 46% and 58%, respectively. We also considered various factors that would affect the estimated fair values of our cable franchise rights in our qualitative assessment, including changes in our projected future cash flows associated with our Cable Communications segment; market transactions and macroeconomic conditions; discount rates; and changes in our market capitalization. Based on this assessment, we concluded that it was more likely than not that the estimated fair values of our cable franchise rights were higher than the carrying values and that the performance of a quantitative impairment test was not required.

Changes in market conditions, laws and regulations and key assumptions made in future quantitative assessments, including expected cash flows, competitive factors and discount rates, could negatively impact the results of future impairment testing and could result in the recognition of an impairment charge.

Film and Television Costs

We capitalize film and television production costs, including direct costs, production overhead, print costs, development costs and interest. We amortize capitalized film and television production costs, including acquired libraries, and accrue costs associated with participation and residual payments to programming and production expenses. We generally record the amortization and the accrued costs using the individual film forecast computation method, which amortizes the costs using the ratio of the current period's revenue to estimated total remaining revenue from all sources ("ultimate revenue"). Estimates of ultimate revenue have a significant impact on how quickly capitalized costs are amortized and, therefore, are updated regularly.

Our estimates of ultimate revenue for films generally include revenue from all sources that are expected to be earned within 10 years from the date of a film's initial release. These estimates are based on the historical performance of similar content, as well as factors unique to the content itself. The most sensitive factor affecting our estimate of ultimate revenue for a film intended for theatrical release is the film's theatrical performance, as subsequent revenue from the licensing and sale of a film has historically exhibited a high correlation to its theatrical performance. Upon a film's release, our estimates of revenue from succeeding markets, including from content licensing across multiple platforms and home entertainment sales, are revised based on historical relationships and an analysis of current market trends.

With respect to television series or other owned television programming, the most sensitive factor affecting our estimate of ultimate revenue is whether the series can be successfully licensed beyond its initial license. Initial estimates of ultimate revenue are limited to the amount of revenue contracted for each episode under the initial license. Once it is determined that a television series or other owned television programming can be licensed for subsequent platforms, revenue estimates for these platforms, such as U.S. and international syndication, home entertainment, and other distribution platforms, are included in ultimate revenue. Revenue estimates for produced episodes include revenue expected to be earned within 10 years of delivery of the initial episode or, if still in production, 5 years from the delivery of the most recent episode, if later.

We capitalize the costs of programming rights for content that we license but do not own at the earlier of when payments are made for the programming or when the license period begins and the content is made available for use. We amortize capitalized programming costs as the associated programs are broadcast. We recognize the costs of multiyear, live-event sports programming rights as the rights are utilized over the contract term based on estimated relative value. Estimated relative value is generally based on the ratio of the current period revenue to the estimated ultimate revenue or the terms of the contract. Advance payments for rights to multiyear, live-event sports programming are included in programming rights.

Capitalized film and television costs are subject to impairment testing when certain triggering events are identified. If the fair value of a production were to fall below its unamortized cost, we would record an adjustment for the amount by which the unamortized capitalized costs exceed the production's fair value. The fair value assessment is generally based on estimated future discounted cash flows, which are supported by our internal forecasts. Adjustments to capitalized film production costs were not material in any of the periods presented.

Fair Value of Acquisition-Related Assets and Liabilities

We allocate the purchase price of acquired businesses to tangible and intangible assets and liabilities based on their estimated fair values. In determining fair value, management is required to make estimates and assumptions that affect the recorded amounts. Management's estimates of fair value are based on assumptions believed to be reasonable but that are inherently uncertain. As part of the estimation process, third-party valuation specialists are engaged to assist in the valuation of certain of these assets and liabilities.

Our judgments used to determine the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives and depreciation and amortization methods, have a material impact on our consolidated financial statements. For instance, the determination of asset lives impacts our results of operations as different types of assets have different useful lives and certain assets may be considered to have indefinite useful lives.

Intangible Assets

Intangible assets primarily consist of our estimates of fair value for finite-lived customer relationships and indefinite-lived trade names.

Customer relationships were valued using a discounted cash flow analysis that involves significant judgment, including the estimate of future cash flows and the selection of discount rates. This measure of fair value also requires considerable judgments about future events, including attrition, contract renewal estimates and technology changes.

In determining the estimated lives and method of amortization for finite-lived intangibles, we use a method and life that closely follows the undiscounted cash flows over the estimated life of the asset.

Trade names were valued using the relief-from-royalty method, a form of the income approach. This measure of fair value requires considerable judgment about the value a market participant would be willing to pay in order to achieve the benefits associated with the trade name.

Property and Equipment

Property and equipment includes customer premise equipment as well as network assets, real estate, and other machinery and equipment.

Property and equipment was valued using the reproduction and replacement cost approaches as well as a cost approach for real estate. The reproduction and replacement cost approaches measure the value of an asset by estimating the cost to acquire or construct comparable assets and adjust for the age and condition of the asset. The cost approach measures the value of real estate through an evaluation of recent, comparable transactions or current listings of available properties.

Contractual Obligations

Contractual obligations were adjusted to market rates using a combination of discounted cash flows and market assumptions, when available.

Item 7A: Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk Management

We maintain a mix of fixed-rate and variable-rate debt and we are exposed to the market risk of adverse changes in interest rates. In order to manage the cost and volatility relating to the interest cost of our outstanding debt, we enter into various interest rate risk management derivative transactions in accordance with our policy.

We monitor our exposure to the risk of adverse changes in interest rates through the use of techniques that include market valuation and sensitivity analyses. We do not engage in any speculative or leveraged derivative transactions.

Our interest rate derivative financial instruments, which primarily include cross currency swaps, represent an integral part of our interest rate risk management program. These cross currency swaps effectively change our current fixed interest rates to different fixed interest rates.

The effect of our interest rate derivative financial instruments to our consolidated interest expense was a decrease of $49 million in 2019, an increase of $2 million in 2018, and a decrease of $5 million in 2017. The effect of NBCUniversal's interest rate derivative financial instruments was not material to NBCUniversal's consolidated financial statements for any period presented. Interest rate derivative financial instruments may have a significant effect on consolidated interest expense in the future.

The table below summarizes as of December 31, 2019 by contractual year of maturity the principal amount of our debt, effective rates, and fair values subject to interest rate risk maintained by us.

(in millions)		2020		2021		2022		2023		2024		Thereafter		Total		Estimated Fair Value as of December 31, 2019
Debt																
Fixed rate debt	$	2,267	$	5,801	$	3,735	$	3,839	$	6,226	$	69,020	$	90,888	$	102,819
Average interest rate		4.4%		3.2%		4.9%		2.6%		3.3%		4.3%		4.1%		
Variable rate debt	$	2,188	$	3,324	$	1,847	$	3,824	$	533	$	1,286	$	13,002	$	13,023
Average interest rate		1.4%		1.9%		0.8%		1.8%		2.7%		4.4%		1.9%		

The average interest rates on our debt in the table above reflect the effects of our derivative financial instruments. We estimate interest rates on variable rate debt and swaps using the relevant average implied forward rates through the year of maturity based on the yield curve in effect on December 31, 2019, plus the applicable borrowing margin.

Additionally, we have a $5.2 billion variable rate term loan presented separately as a collateralized obligation that will mature in March 2024. We entered into a series of variable-to-fixed rate interest rate swaps on $3.6 billion of this term loan with average pay rate and average receive rate related to these interest rate swaps of 1.23% and 1.80% as of December 31, 2019 and 2018, respectively. As of December 31, 2019, the estimated fair value of the term loan was $5.2 billion and the estimated fair value of the related interest rate swaps was a net asset of $34 million.

See Notes 1, 7 and 10 to Comcast's and Notes 1 and 9 to NBCUniversal's consolidated financial statements for additional information on our derivative instruments and hedging activities.

Foreign Exchange Risk Management

We have significant operations in a number of countries outside the United States through Sky and NBCUniversal, and certain of our operations are conducted in foreign currencies. The value of these currencies fluctuates relative to the U.S. dollar. These changes could adversely affect the U.S. dollar equivalent value of our non-U.S. dollar revenue and operating costs and expenses, which could negatively affect our business, financial condition and results of operations in a given period or in specific territories.

As part of our overall strategy to manage the level of exposure to the risk of foreign exchange rate fluctuations, we enter into derivative financial instruments related to a significant portion of our foreign currency exposure for transactions denominated in other than the functional currency. We enter into foreign currency forward contracts that change in value as currency exchange rates fluctuate to protect the functional currency equivalent value of non-functional currency denominated assets, liabilities, commitments, and forecasted non-functional currency revenue and expenses. In accordance with our policy, we hedge forecasted foreign currency transactions for periods generally not to exceed 30 months. As of December 31, 2019 and 2018, we had foreign exchange contracts on transactions other than debt with a total notional value of $6.3 billion and $5.8 billion, respectively, including contracts at NBCUniversal of $1.4 billion and $1.2 billion, respectively. As of December 31, 2019 and 2018, the aggregate estimated fair value of these foreign exchange contracts was not material.

We use cross-currency swaps as cash flow hedges for foreign currency denominated debt obligations when those obligations are denominated in a currency other than the functional currency. Cross-currency swaps effectively convert foreign currency denominated debt to debt denominated in the functional currency, which hedge currency exchange risks associated with foreign currency denominated cash flows such as interest and principal debt repayments. As of both December 31, 2019 and 2018, we had cross-currency swaps designated as cash flow hedges on $3.7 billion of our foreign currency denominated debt. As of December 31, 2019 and 2018, the aggregate estimated fair values of cross-currency swaps designated as cash flow hedges were a net asset of $373 million and $399 million, respectively.

We are also exposed to foreign exchange risk on the consolidation of our foreign operations. We have foreign currency denominated debt and use cross-currency swaps to hedge our net investments in certain of these subsidiaries. Transaction gains and losses resulting from currency movements on debt and changes in fair value of cross-currency swaps designated as net investment hedges are recorded within the currency translation adjustments component of accumulated other comprehensive income (loss). The aggregate amount of our net investment in foreign subsidiaries that have been hedged using cross-currency swaps and foreign currency denominated debt was $14.0 billion and $15.6 billion, as of December 31, 2019 and 2018, respectively. As of December 31, 2019 and 2018, the aggregate estimated fair value of the cross-currency swaps was a net liability of $373 million and $587 million, respectively. As of December 31, 2019 and 2018, there were pre-tax cumulative translation gains of $339 million and pre-tax cumulative translation losses of $4 million, respectively, related to these net investment hedges recorded in accumulated other comprehensive income (loss).

We have analyzed our foreign currency exposure related to our foreign operations as of December 31, 2019, including our hedging contracts, to identify assets and liabilities denominated in a currency other than their functional currency. For those assets and liabilities, we then evaluated the effect of a hypothetical 10% shift in currency exchange rates, inclusive of the effects of derivatives. The results of our analysis indicate that such a shift in exchange rates would not have a material impact on our 2019 net income attributable to Comcast Corporation.

Counterparty Credit Risk Management

We manage the credit risks associated with our derivative financial instruments through diversification and the evaluation and monitoring of the creditworthiness of counterparties. Although we may be exposed to losses in the event of nonperformance by counterparties, we do not expect such losses, if any, to be significant. We have agreements with certain counterparties that include collateral provisions. These provisions require a party with an aggregate unrealized loss position in excess of certain thresholds to post cash collateral for the amount in excess of the threshold. The threshold levels in our collateral agreements are based on our and the counterparty’s credit ratings. As of December 31, 2019 and 2018, we were not required to post collateral under the terms of these agreements, nor did we hold any collateral under the terms of these agreements.

Item 8: Comcast Corporation Financial Statements and Supplementary Data

NBCUniversal Media, LLC

See Index to NBCUniversal Media, LLC Financial Statements and Supplementary Data on page 123.

Report of Management

Management’s Report on Comcast’s Financial Statements

Our management is responsible for the preparation, integrity and fair presentation of information in Comcast’s consolidated financial statements, including estimates and judgments. The consolidated financial statements presented in this report have been prepared in accordance with accounting principles generally accepted in the United States. Our management believes the Comcast consolidated financial statements and other financial information included in this report fairly present, in all material respects, Comcast’s financial condition, results of operations and cash flows as of and for the periods presented in this report. The Comcast consolidated financial statements have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is included herein.

Management’s Report on Comcast’s Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining an adequate system of internal control over financial reporting. Our system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States.

Our internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets.
- Provide reasonable assurance that our transactions are recorded as necessary to permit preparation of our financial statements in accordance with accounting principles generally accepted in the United States, and that our receipts and expenditures are being made only in accordance with authorizations of our management and our directors.
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Further, because of changes in conditions, effectiveness of internal control over financial reporting may vary over time. Our system contains self-monitoring mechanisms, and actions are taken to correct deficiencies as they are identified.

Our management conducted an evaluation of the effectiveness of the system of internal control over financial reporting based on the framework in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that Comcast’s system of internal control over financial reporting was effective as of December 31, 2019. The effectiveness of Comcast’s internal controls over financial reporting of Comcast has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is included herein.

Audit Committee Oversight

The Audit Committee of the Board of Directors, which is comprised solely of independent directors, has oversight responsibility for our financial reporting process and the audits of Comcast’s consolidated financial statements and internal control over financial reporting. The Audit Committee meets regularly with management and with our internal auditors and independent registered public accounting firm (collectively, the “auditors”) to review matters related to the quality and integrity of our financial reporting, internal control over financial reporting (including compliance matters related to our Code of Conduct), and the nature, extent, and results of internal and external audits. Our auditors have full and free access and report directly to the Audit Committee. The Audit Committee recommended, and the Board of Directors approved, that the Comcast audited consolidated financial statements be included in this Form 10-K.

/s/ BRIAN L. ROBERTS	/s/ MICHAEL J. CAVANAGH	/s/ DANIEL C. MURDOCK
Brian L. Roberts	**Michael J. Cavanagh**	**Daniel C. Murdock**
Chairman and Chief Executive Officer	Senior Executive Vice President and Chief Financial Officer	Senior Vice President, Chief Accounting Officer and Controller

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of
Comcast Corporation
Philadelphia, Pennsylvania

Opinions on the Consolidated Financial Statements and Internal Control over Financial Reporting
We have audited the accompanying consolidated balance sheets of Comcast Corporation and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, cash flows, and changes in equity for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

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

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

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

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

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

Critical Audit Matters
The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Acquisition of Sky Limited - Refer to Note 8 to the financial statements

Critical Audit Matter Description

The Company obtained a controlling interest in Sky Limited ("Sky") for $39.4 billion on October 9, 2018 and finalized the purchase price allocation in 2019. The Company accounted for the acquisition under the acquisition method of accounting for business combinations. Accordingly, the purchase price was allocated to the assets acquired and liabilities assumed based on their respective fair values, including identified intangible assets of $19.5 billion and resulting goodwill of $31.3 billion.

The assets acquired and liabilities assumed included, among others, certain customer relationships, trade names, and contractual obligations. The fair value determination of these assets and liabilities required management to make significant estimates and assumptions, including future cash flows and discount rates as well as royalty rates and current market rates for trade names and contractual obligations, respectively. Given the judgments necessary to estimate the fair value determination, auditing these estimates involved especially subjective judgment and involved the use of fair value specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the significant estimates and assumptions used in the valuation of customer relationships, trade names, and contractual obligations included the following, among others:

- We tested the effectiveness of management's controls over the valuation of assets and liabilities, including management's controls over forecasts of future cash flows, assumptions of market rates for contractual obligations, and selection of the discount rates and royalty rates.
- We assessed the reasonableness of management's forecasts of future cash flows by comparing the projections to historical results and certain peer companies.
- We assessed the reasonableness of management's assumptions of current market rates for contractual obligations by comparing the rates to historical contractual rates and industry data for similar contracts.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the valuation methodology, discount rates, and royalty rates by:
  - Testing the source information underlying the determination of the discount rates and royalty rates and testing the mathematical accuracy of the calculations.
  - Developing a range of independent estimates for the discount rates and comparing those to the discount rates selected by management.

Film and Television Costs - Refer to Note 4 to the financial statements

Critical Audit Matter Description

The Company amortizes capitalized film and television production costs using the individual film forecast computation method, which amortizes such costs using the ratio of current period revenue to the total remaining revenue forecasted to be realized, also known as "ultimate revenue." In addition, the Company recognizes the costs of multiyear, live-event sports programming rights as the rights are utilized over the contractual term based on estimated relative value. Estimated relative value is generally based on the ratio of current period revenue to the estimated ultimate revenue or the terms of the contract. The estimates of ultimate revenue have a significant impact on the rate at which capitalized costs are amortized.

The determination of ultimate revenue for capitalized film and television costs requires the Company to make significant estimates of future revenue based on anticipated release patterns, public acceptance, and historical results for similar productions. The determination of ultimate revenue for multiyear, live-event sports programming rights requires the Company to make significant estimates of future revenue based on historical and expected trends in the advertising market as well as the number of subscribers receiving or viewing the sports programming. Given the judgments necessary to estimate ultimate revenue, auditing these estimates involved especially subjective judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to forecasts of ultimate revenue for individual film or television productions and for sports programming rights included the following, among others:

- We tested the effectiveness of management's controls over its amortization of film and television costs and sports programming rights, including controls over forecasts of ultimate revenue.
- We evaluated the historical accuracy of management's forecast of future revenues by comparing actual results to management's historical estimates of ultimate revenue.
- For film and television productions, we tested management's selection of inputs and assumptions, including considering the historical performance of similar titles, factors unique to the individual film or television production, and third-party projections.

/s/ Deloitte & Touche LLP
Philadelphia, Pennsylvania
January 30, 2020

We have served as the Company's auditor since 1963.

Comcast Corporation
Consolidated Statement of Income

Year ended December 31 (in millions, except per share data)		2019		2018		2017
Revenue	**$**	**108,942**	$	94,507	$	85,029
Costs and Expenses:						
Programming and production		**34,440**		29,692		25,355
Other operating and administrative		**32,807**		28,094		25,449
Advertising, marketing and promotion		**7,617**		7,036		6,519
Depreciation		**8,663**		8,281		7,914
Amortization		**4,290**		2,736		2,216
Other operating gains		**—**		(341)		(442)
Total costs and expenses		**87,817**		75,498		67,011
Operating income		**21,125**		19,009		18,018
Interest expense		**(4,567)**		(3,542)		(3,086)
Investment and other income (loss), net		**438**		(225)		421
Income before income taxes		**16,996**		15,242		15,353
Income tax (expense) benefit		**(3,673)**		(3,380)		7,569
Net income		**13,323**		11,862		22,922
Less: Net income attributable to noncontrolling interests and redeemable subsidiary preferred stock		**266**		131		187
Net income attributable to Comcast Corporation	**$**	**13,057**	$	11,731	$	22,735
Basic earnings per common share attributable to Comcast Corporation shareholders	**$**	**2.87**	$	2.56	$	4.83
Diluted earnings per common share attributable to Comcast Corporation shareholders	**$**	**2.83**	$	2.53	$	4.75

See accompanying notes to consolidated financial statements.

Table of Contents

Comcast Corporation

Consolidated Statement of Comprehensive Income

Year ended December 31 (in millions)		2019		2018		2017
Net income	**$**	**13,323**	$	11,862	$	22,922
Unrealized gains (losses) on marketable securities, net of deferred taxes of $—, $(1) and $25		**3**		1		(42)
Deferred gains (losses) on cash flow hedges, net of deferred taxes of $(4), $(3) and $(35)		**19**		50		60
Amounts reclassified to net income:						
Realized (gains) losses on marketable securities, net of deferred taxes of $—, $— and $1		**—**		—		(1)
Realized (gains) losses on cash flow hedges, net of deferred taxes of $(10), $(4) and $22		**65**		(6)		(37)
Employee benefit obligations, net of deferred taxes of $16, $(2) and $(24)		**(60)**		7		41
Currency translation adjustments, net of deferred taxes of $(66), $9 and $(40)		**1,375**		(916)		147
Comprehensive income		**14,725**		10,998		23,090
Less: Net income attributable to noncontrolling interests and redeemable subsidiary preferred stock		**266**		131		187
Less: Other comprehensive income (loss) attributable to noncontrolling interests		**(13)**		(41)		81
Comprehensive income attributable to Comcast Corporation	**$**	**14,472**	$	10,908	$	22,822

See accompanying notes to consolidated financial statements.

Comcast Corporation
Consolidated Statement of Cash Flows

Year ended December 31 (in millions)	2019	2018	2017
Operating Activities			
Net income	**$ 13,323**	$ 11,862	$ 22,922
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation, amortization and other operating gains	**12,953**	10,676	9,688
Share-based compensation	**1,021**	826	751
Noncash interest expense (income), net	**417**	364	272
Net (gain) loss on investment activity and other	**(20)**	576	(194)
Deferred income taxes	**563**	290	(10,646)
Changes in operating assets and liabilities, net of effects of acquisitions and divestitures:			
Current and noncurrent receivables, net	**(57)**	(802)	(869)
Film and television costs, net	**(929)**	(395)	(197)
Accounts payable and accrued expenses related to trade creditors	**(347)**	(394)	173
Other operating assets and liabilities	**(1,227)**	1,294	(639)
Net cash provided by operating activities	**25,697**	24,297	21,261
Investing Activities			
Capital expenditures	**(9,953)**	(9,774)	(9,550)
Cash paid for intangible assets	**(2,475)**	(1,935)	(1,605)
Acquisitions and construction of real estate properties	**(54)**	(143)	(418)
Construction of Universal Beijing Resort	**(1,116)**	(460)	(71)
Acquisitions, net of cash acquired	**(370)**	(38,219)	(532)
Proceeds from sales of businesses and investments	**886**	141	150
Purchases of investments	**(1,899)**	(1,257)	(2,292)
Other	**140**	793	785
Net cash provided by (used in) investing activities	**(14,841)**	(50,854)	(13,533)
Financing Activities			
Proceeds from (repayments of) short-term borrowings, net	**(1,288)**	379	(1,905)
Proceeds from borrowings	**5,479**	44,781	11,466
Proceeds from collateralized obligation	**5,175**	—	—
Repurchases and repayments of debt	**(14,354)**	(8,798)	(6,364)
Repurchases of common stock under repurchase program and employee plans	**(504)**	(5,320)	(5,435)
Dividends paid	**(3,735)**	(3,352)	(2,883)
Purchase of Universal Studios Japan noncontrolling interests	**—**	—	(2,299)
Distributions to noncontrolling interests and dividends for redeemable subsidiary preferred stock	**(311)**	(277)	(252)
Other	**357**	(273)	100
Net cash provided by (used in) financing activities	**(9,181)**	27,140	(7,572)
Impact of foreign currency on cash, cash equivalents and restricted cash	**5**	(245)	—
Increase (decrease) in cash, cash equivalents and restricted cash	**1,680**	338	156
Cash, cash equivalents and restricted cash, beginning of year	**3,909**	3,571	3,415
Cash, cash equivalents and restricted cash, end of year	**$ 5,589**	$ 3,909	$ 3,571

See accompanying notes to consolidated financial statements.

Comcast Corporation
Consolidated Balance Sheet

December 31 (in millions, except share data)	2019	2018
Assets		
Current Assets:		
Cash and cash equivalents	**$ 5,500**	$ 3,814
Receivables, net	**11,292**	11,104
Programming rights	**3,877**	3,746
Other current assets	**4,723**	3,184
Total current assets	**25,392**	21,848
Film and television costs	**8,933**	7,837
Investments	**6,989**	7,883
Investment securing collateralized obligation	**694**	—
Property and equipment, net	**48,322**	44,437
Goodwill	**68,725**	66,154
Franchise rights	**59,365**	59,365
Other intangible assets, net	**36,128**	38,358
Other noncurrent assets, net	**8,866**	5,802
Total assets	**$ 263,414**	$ 251,684
Liabilities and Equity		
Current Liabilities:		
Accounts payable and accrued expenses related to trade creditors	**$ 10,826**	$ 8,494
Accrued participations and residuals	**1,730**	1,808
Deferred revenue	**2,768**	2,182
Accrued expenses and other current liabilities	**10,516**	10,721
Current portion of long-term debt	**4,452**	4,398
Total current liabilities	**30,292**	27,603
Long-term debt, less current portion	**97,765**	107,345
Collateralized obligation	**5,166**	—
Deferred income taxes	**28,180**	27,589
Other noncurrent liabilities	**16,765**	15,329
Commitments and contingencies (Note 17)		
Redeemable noncontrolling interests and redeemable subsidiary preferred stock	**1,372**	1,316
Equity:		
Preferred stock—authorized, 20,000,000 shares; issued, zero	**—**	—
Class A common stock, $0.01 par value—authorized, 7,500,000,000 shares; issued, 5,416,381,298 and 5,389,309,175; outstanding, 4,543,590,270 and 4,516,518,147	**54**	54
Class B common stock, $0.01 par value—authorized, 75,000,000 shares; issued and outstanding, 9,444,375	**—**	—
Additional paid-in capital	**38,447**	37,461
Retained earnings	**50,695**	41,983
Treasury stock, 872,791,028 Class A common shares	**(7,517)**	(7,517)
Accumulated other comprehensive income (loss)	**1,047**	(368)
Total Comcast Corporation shareholders' equity	**82,726**	71,613
Noncontrolling interests	**1,148**	889
Total equity	**83,874**	72,502
Total liabilities and equity	**$ 263,414**	$ 251,684

See accompanying notes to consolidated financial statements.

Comcast Corporation

Consolidated Statement of Changes in Equity

(in millions, except per share data)		2019		2018		2017
Redeemable Noncontrolling Interests and Redeemable Subsidiary Preferred Stock						
Balance, beginning of year	**$**	**1,316**	$	1,357	$	1,446
Contributions from (distributions to) noncontrolling interests, net		**(62)**		(56)		(39)
Other		**(38)**		(43)		(123)
Net income (loss)		**156**		58		73
Balance, end of year	**$**	**1,372**	$	1,316	$	1,357
Class A common stock						
Balance, beginning of year	**$**	**54**	$	55	$	56
Repurchases of common stock under repurchase program and employee plans		**—**		(1)		(1)
Balance, end of year	**$**	**54**	$	54	$	55
Class B common stock						
Balance, beginning and end of year	**$**	**—**	$	—	$	—
Additional Paid-In Capital						
Balance, beginning of year	**$**	**37,461**	$	37,497	$	38,230
Stock compensation plans		**783**		607		554
Repurchases of common stock under repurchase program and employee plans		**(34)**		(920)		(832)
Employee stock purchase plans		**222**		214		190
Purchase of Universal Studios Japan noncontrolling interests		**—**		—		(696)
Other		**15**		63		51
Balance, end of year	**$**	**38,447**	$	37,461	$	37,497
Retained Earnings						
Balance, beginning of year	**$**	**41,983**	$	38,202	$	23,065
Cumulative effects of adoption of accounting standards		**—**		(43)		—
Repurchases of common stock under repurchase program and employee plans		**(485)**		(4,408)		(4,623)
Dividends declared		**(3,860)**		(3,499)		(2,975)
Net income (loss)		**13,057**		11,731		22,735
Balance, end of year	**$**	**50,695**	$	41,983	$	38,202
Treasury Stock at Cost						
Balance, beginning and end of year	**$**	**(7,517)**	$	(7,517)	$	(7,517)
Accumulated Other Comprehensive Income (Loss)						
Balance, beginning of year	**$**	**(368)**	$	379	$	98
Cumulative effects of adoption of accounting standards		**—**		76		—
Other comprehensive income (loss)		**1,415**		(823)		87
Purchase of Universal Studios Japan noncontrolling interests		**—**		—		194
Balance, end of year	**$**	**1,047**	$	(368)	$	379
Noncontrolling Interests						
Balance, beginning of year	**$**	**889**	$	843	$	2,231
Other comprehensive income (loss)		**(13)**		(41)		81
Contributions from (distributions to) noncontrolling interests, net		**176**		294		(108)
Purchase of Universal Studios Japan noncontrolling interests		**—**		—		(1,736)
Other		**(14)**		(280)		261
Net income (loss)		**110**		73		114
Balance, end of year	**$**	**1,148**	$	889	$	843
Total equity	**$**	**83,874**	$	72,502	$	69,459
Cash dividends declared per common share	**$**	**0.84**	$	0.76	$	0.63

See accompanying notes to consolidated financial statements.

Note 1: Basis of Presentation and Summary of Significant Accounting Policies

We are a global media and technology company with three primary businesses: Comcast Cable, NBCUniversal and Sky. We present our operations for (1) Comcast Cable in one reportable business segment, referred to as Cable Communications; (2) NBCUniversal in four reportable business segments: Cable Networks, Broadcast Television, Filmed Entertainment and Theme Parks (collectively, the "NBCUniversal segments"); and (3) Sky in one reportable business segment. See Note 2 for additional information on our reportable business segments.

Basis of Presentation

The accompanying consolidated financial statements include all entities in which we have a controlling voting interest and variable interest entities ("VIEs") required to be consolidated in accordance with generally accepted accounting principles in the United States ("GAAP").

We translate assets and liabilities of our foreign operations where the functional currency is the local currency, primarily the British pound, euro, Japanese yen and Chinese renminbi, into U.S. dollars at the exchange rate as of the balance sheet date and translate revenue and expenses using average monthly exchange rates. The related translation adjustments are recorded as a component of accumulated other comprehensive income (loss) in our consolidated balance sheet. Any foreign currency transaction gains or losses are included in our consolidated statement of income.

Reclassifications

Reclassifications have been made to our consolidated financial statements for the prior periods to conform to classifications used in 2019. See Note 9 for a discussion of the effects of the adoption of new accounting pronouncements on our consolidated financial statements.

Accounting Policies

Our consolidated financial statements are prepared in accordance with GAAP, which require us to select accounting policies, including in certain cases industry-specific policies, and make estimates that affect the reported amount of assets, liabilities, revenue and expenses, and the related disclosure of contingent assets and contingent liabilities. Actual results could differ from these estimates. We believe that the judgments and related estimates for the following items are critical in the preparation of our consolidated financial statements:

- valuation and impairment testing of goodwill and cable franchise rights (see Note 12)
- film and television costs (see Note 4)
- fair value of acquisition-related assets and liabilities (see Note 8)

In addition, the following accounting policies are specific to the industries in which we operate:

- capitalization and amortization of film and television costs (see Note 4)
- costs for connecting customers to our cable systems (see Note 11)

Information on other accounting policies and methods that we use in the preparation of our consolidated financial statements are included, where applicable, in their respective footnotes that follow. The collateralized obligation related to our investment in Hulu is discussed in Note 10 and our other long-term debt is discussed in Note 7. Below is a discussion of accounting policies and methods used in our consolidated financial statements that are not presented within other footnotes.

Advertising Expenses

Advertising costs are expensed as incurred.

Derivative Financial Instruments

We use derivative financial instruments to manage our exposure to the risks associated with fluctuations in interest rates, foreign exchange rates and equity prices. Our objective is to manage the financial and operational exposure arising from these risks by offsetting gains and losses on the underlying exposures with gains and losses on the derivatives used to economically hedge them.

Our derivative financial instruments are recorded in our consolidated balance sheet at fair value. We designate certain derivative instruments as cash flow hedges of forecasted foreign currency denominated transactions, including cash flows associated with non-functional currency debt and non-functional currency revenues and expense. Changes in the fair value of derivative instruments accounted for as cash flow hedges are recorded as a component of accumulated other comprehensive income (loss) until the hedged item affects earnings. For derivatives not designated as cash flow hedges, changes in fair value are recognized in earnings.

Refer to Note 7 for further information on derivative instruments related to debt. The impact of our remaining derivative financial instruments was not material to our consolidated financial statements in any of the periods presented.

Fair Value Measurements

The accounting guidance related to fair value measurements establishes a hierarchy based on the types of inputs used for the various valuation techniques. The levels of the hierarchy are described below.

- Level 1: Values are determined using quoted market prices for identical financial instruments in an active market
- Level 2: Values are determined using quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets
- Level 3: Values are determined using models that use significant inputs that are primarily unobservable, discounted cash flow methodologies or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment or estimation

We use these levels of hierarchy to measure the fair value of certain financial instruments on a recurring basis, such as for investments; on a non-recurring basis, such as for acquisitions and impairment testing; for disclosure purposes, such as for long-term debt; and for other applications, as discussed in their respective footnotes. Our assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation and classification within the fair value hierarchy.

Note 2: Segment Information

Cable Communications is a leading provider of high-speed internet, video, voice, wireless, and security and automation services to residential customers in the United States under the Xfinity brand; we also provide these and other services to business customers and sell advertising. As of December 31, 2019, our cable systems had 31.5 million total customer relationships, including 29.1 million residential and 2.4 million business customer relationships, of which 28.6 million received our high-speed internet service, 21.3 million received our video service, 11.3 million received our voice service, and 1.4 million received our security and automation service. As of December 31, 2019, there were 2.1 million activated lines that received our wireless phone service.

Cable Networks consists primarily of our national cable networks that provide a variety of entertainment, news and information, and sports content; our regional sports and news networks; our international cable networks; our cable television studio production operations; and various digital properties.

Broadcast Television consists primarily of the NBC and Telemundo broadcast networks, our NBC and Telemundo owned local broadcast television stations, the NBC Universo national cable network, our broadcast television studio production operations, and various digital properties.

Filmed Entertainment consists primarily of the operations of Universal Pictures, which produces, acquires, markets and distributes filmed entertainment worldwide; our films are also produced under the Illumination, DreamWorks Animation and Focus Features names.

Theme Parks consists primarily of our Universal theme parks in Orlando, Florida; Hollywood, California; and Osaka, Japan. In addition, we are developing a theme park in Beijing, China along with a consortium of Chinese state-owned companies, and an additional theme park in Orlando, Florida.

Sky is one of Europe’s leading entertainment companies, which primarily includes a direct-to-consumer business, providing video, high-speed internet, voice and wireless phone services, and a content business, operating entertainment networks, the Sky News broadcast network and Sky Sports networks. As of December 31, 2019, Sky had 24.0 million retail customer relationships.

We use Adjusted EBITDA to evaluate the profitability of our operating segments and the components of net income attributable to Comcast Corporation excluded from Adjusted EBITDA are not separately evaluated. Beginning in the first quarter of 2019, Comcast Cable’s wireless phone service and certain other Cable-related business development initiatives are presented in the Cable Communications segment. Results were previously presented in Corporate and Other. Prior periods have been adjusted to reflect this presentation. We do not present a measure of total assets for our reportable business segments as this information is not used by management to allocate resources and capital. Our financial data by business segment is presented in the tables below.

Comcast Corporation

(in millions)		Revenue		Adjusted EBITDA[d]		Depreciation and Amortization		Capital Expenditures		Cash Paid for Intangible Assets
2019										
Cable Communications	$	58,082	$	23,266	$	7,994	$	6,909	$	1,426
NBCUniversal										
Cable Networks		11,513		4,444		735		41		17
Broadcast Television		10,261		1,730		157		161		15
Filmed Entertainment		6,493		833		79		21		22
Theme Parks		5,933		2,455		696		1,605		60
Headquarters and Other[a]		83		(689)		462		244		171
Eliminations[b]		(316)		(1)		—		—		—
NBCUniversal		33,967		8,772		2,129		2,072		285
Sky		19,219		3,099		2,699		768		707
Corporate and Other[c]		333		(880)		131		204		57
Eliminations[b]		(2,659)		1		—		—		—
Comcast Consolidated	**$**	**108,942**	**$**	**34,258**	**$**	**12,953**	**$**	**9,953**	**$**	**2,475**

(in millions)		Revenue		Adjusted EBITDA[d]		Depreciation and Amortization		Capital Expenditures		Cash Paid for Intangible Assets
2018										
Cable Communications	$	56,033	$	21,681	$	8,262	$	7,723	$	1,346
NBCUniversal										
Cable Networks[e]		11,773		4,428		738		42		23
Broadcast Television[e]		11,439		1,657		146		204		81
Filmed Entertainment		7,152		734		145		35		25
Theme Parks		5,683		2,455		660		1,143		173
Headquarters and Other[a]		63		(680)		419		306		146
Eliminations[b][e]		(349)		4		—		—		—
NBCUniversal		35,761		8,598		2,108		1,730		448
Sky		4,587		692		539		222		137
Corporate and Other[c]		513		(779)		108		99		4
Eliminations[b][e]		(2,387)		(27)		—		—		—
Comcast Consolidated	$	94,507	$	30,165	$	11,017	$	9,774	$	1,935

(in millions)		Revenue		Adjusted EBITDA[d]		Depreciation and Amortization		Capital Expenditures		Cash Paid for Intangible Assets
2017										
Cable Communications	$	53,399	$	20,555	$	8,019	$	7,978	$	1,294
NBCUniversal										
Cable Networks		10,497		4,053		755		33		19
Broadcast Television		9,563		1,251		133		180		22
Filmed Entertainment		7,595		1,276		109		58		23
Theme Parks		5,443		2,384		648		960		78
Headquarters and Other[a]		45		(741)		396		271		153
Eliminations[b]		(307)		(5)		—		—		—
NBCUniversal		32,836		8,218		2,041		1,502		295
Corporate and Other[c]		864		(859)		70		70		16
Eliminations[b]		(2,070)		42		—		—		—
Comcast Consolidated	$	85,029	$	27,956	$	10,130	$	9,550	$	1,605

(a) NBCUniversal Headquarters and Other activities include costs associated with overhead, allocations, personnel costs and headquarter initiatives.

(b) Included in Eliminations are transactions that our segments enter into with one another. The most common types of transactions are the following:

- Cable Networks generates revenue by selling programming to Cable Communications, which represents a substantial majority of the revenue elimination amount
- Broadcast Television generates revenue from the fees received under retransmission consent agreements with Cable Communications
- Cable Communications generates revenue by selling advertising and by selling the use of satellite feeds to Cable Networks
- Cable Networks and Broadcast Television generate revenue by selling advertising to Cable Communications
- Filmed Entertainment and Broadcast Television generate revenue by licensing content to our Cable Networks; for segment reporting, this revenue is recognized as the programming rights asset for the licensed content is amortized based on third-party revenue
- Filmed Entertainment, Cable Networks and Broadcast Television generate revenue by licensing content to Sky; for segment reporting, this revenue is recognized as content is delivered and available for use by Sky

(c) Corporate and Other activities include costs associated with overhead and personnel, revenue and expenses associated with the operations of Comcast Spectacor, which owns the Philadelphia Flyers and the Wells Fargo Center arena in Philadelphia, Pennsylvania, and other business initiatives, such as the development of Peacock.

(d) We use Adjusted EBITDA as the measure of profit or loss for our operating segments. Adjusted EBITDA is defined as net income attributable to Comcast Corporation before net income (loss) attributable to noncontrolling interests and redeemable subsidiary preferred stock, income tax expense, investment and other income (loss), net, interest expense, depreciation and amortization expense, and other operating gains and losses (such as impairment charges related to fixed and intangible assets and gains or losses on the sale of long-lived assets), if any. From time to time we may exclude from Adjusted EBITDA the impact of certain events, gains, losses or other charges (such as significant legal settlements) that affect the period-to-period comparability of our operating performance. Our reconciliation of the aggregate amount of Adjusted EBITDA for our reportable segments to consolidated income before income taxes is presented in the table below.

Year ended December 31 (in millions)	2019	2018	2017
Adjusted EBITDA	$ 34,258	$ 30,165	$ 27,956
Adjustment for legal settlement	—	(125)	(250)
Adjustment for Sky transaction-related costs	(180)	(355)	—
Depreciation	(8,663)	(8,281)	(7,914)
Amortization	(4,290)	(2,736)	(2,216)
Other operating gains	—	341	442
Interest expense	(4,567)	(3,542)	(3,086)
Investment and other income (loss), net	438	(225)	421
Income before income taxes	$ 16,996	$ 15,242	$ 15,353

(e) The revenue and operating costs and expenses associated with our broadcast of the 2018 PyeongChang Olympics were reported in Cable Networks and Broadcast Television. The revenue and operating costs and expenses associated with our broadcast of the 2018 Super Bowl were reported in Broadcast Television. Included in Eliminations are transactions relating to these events that Broadcast Television and Cable Networks enter into with other segments.

Note 3: Revenue

Year ended December 31 (in millions)	2019	2018	2017
Residential:			
High-speed internet	$ 18,752	$ 17,144	$ 15,681
Video	22,270	22,455	22,874
Voice	3,879	3,960	4,090
Wireless	1,167	890	329
Business services	7,795	7,129	6,437
Advertising	2,465	2,795	2,450
Other	1,754	1,660	1,538
Total Cable Communications[a][b]	58,082	56,033	53,399
Distribution	6,790	6,826	6,081
Advertising	3,478	3,587	3,359
Content licensing and other	1,245	1,360	1,057
Total Cable Networks	11,513	11,773	10,497
Advertising	5,712	7,010	5,654
Content licensing	2,157	2,182	2,114
Distribution and other	2,392	2,247	1,795
Total Broadcast Television	10,261	11,439	9,563
Theatrical	1,469	2,111	2,192
Content licensing	3,045	2,899	2,956
Home entertainment	957	1,048	1,287
Other	1,022	1,094	1,160
Total Filmed Entertainment	6,493	7,152	7,595
Total Theme Parks	5,933	5,683	5,443
Headquarters and Other	83	63	45
Eliminations[c]	(316)	(349)	(307)
Total NBCUniversal	33,967	35,761	32,836
Direct-to-consumer	15,538	3,632	—
Content	1,432	304	—
Advertising	2,249	651	—
Total Sky	19,219	4,587	—
Corporate and Other[b]	333	513	864
Eliminations[c]	(2,659)	(2,387)	(2,070)
Total revenue	**$ 108,942**	**$ 94,507**	**$ 85,029**

(a) For 2019, 2018 and 2017, 2.6%, 2.6% and 2.8%, respectively, of Cable Communications segment revenue was derived from franchise and other regulatory fees.

(b) Comcast Cable's wireless phone service is now presented in the Cable Communications segment. Results were previously presented in Corporate and Other.

(c) Included in Eliminations are transactions that our segments enter into with one another. See Note 2 for a description of these transactions.

We operate primarily in the United States but also in select international markets. The table below summarizes revenue by geographic location.

Year ended December 31 (in millions)	2019	2018	2017
United States	$ 82,952	$ 82,233	$ 77,246
Europe	21,553	7,721	3,190
Other	4,437	4,553	4,593
Total revenue	**$ 108,942**	**$ 94,507**	**$ 85,029**

No single customer accounted for a significant amount of revenue in any period presented.

Cable Communications Segment

Residential

Revenue is generated from subscribers to our high-speed internet, video, voice, wireless and security and automation services, which we market individually and as bundled services at a discounted rate in the United States. Revenue from customers that purchase bundled services at a discounted rate is allocated between the separate services based on the respective stand-alone selling prices. The stand-alone selling prices are determined based on the current prices at which we separately sell the services. Significant judgment is used to determine performance obligations that should be accounted for separately and the allocation of revenue when services are combined in a bundle. Revenue related to our security and automation services is reported in other revenue.

We recognize revenue as the services are provided on a monthly basis. Subscription rates and related charges vary according to the services and features customers receive. Customers are typically billed in advance and pay on a monthly basis. Installation fees are deferred and recognized as revenue over the period of benefit to the customer, which is less than a year for residential customers. While a portion of our customers are subject to contracts for their services, which are typically 1 to 2 years in length, based on our evaluation of the terms of these contracts, we recognize revenue for these services on a basis that is consistent with our customers that are not subject to contracts. Our services generally involve customer premise equipment, such as set-top boxes, cable modems and wireless gateways. The timing and pattern of recognition for customer premise equipment revenue are consistent with those of our services. We recognize revenue from the sale of wireless handsets at the point of sale. Sales commissions are expensed as incurred, as the related period of benefit is less than a year.

Under the terms of cable franchise agreements, we are generally required to pay the cable franchising authority an amount based on gross video revenue. We generally pass these and other similar fees through to our customers and classify these fees in the respective Cable Communications services revenue, with the corresponding costs included in other operating and administrative expenses.

Business Services

Revenue is generated from subscribers to a variety of our products and services which are offered to businesses. Our service offerings for small business locations primarily include high-speed internet services, as well as voice and video services, that are similar to those provided to residential customers, as well as cloud-based cybersecurity services, wireless backup connectivity, advanced Wi-Fi solutions, video monitoring services and cloud-based services that provide file sharing, online backup and web conferencing, among other features. We also offer Ethernet network services that connect multiple locations and provide higher downstream and upstream speed options to medium-sized customers and larger enterprises, as well as advanced voice services, along with video solutions that serve hotels and other large venues. In addition, we provide cellular backhaul services to mobile network operators to help them manage their network bandwidth.

We have expanded our service offerings to include a software-defined networking product for medium-sized and enterprise customers. Larger enterprises may also receive support services related to Wi-Fi networks, router management, network security, business continuity risks and other services. These service offerings are primarily provided to Fortune 1000 companies and other large enterprises with multiple locations both within and outside of our cable distribution footprint, where we have agreements with other companies to use their networks to provide coverage outside of our service areas.

We recognize revenue as the services are provided on a monthly basis. Substantially all of our customers are initially under contracts, with terms typically ranging from 2 years for small and medium-sized businesses to up to 5 years for larger enterprises. At any given time, the amount of future revenue to be earned related to fixed pricing under existing agreements is equal to approximately half of our annual business services revenue, of which the substantial majority will be recognized within 2 years. Customers with contracts may only discontinue service in accordance with the terms of their contracts. We receive payments based on a billing schedule established in our contracts, which is typically on a monthly basis. Installation revenue and sales commissions are generally deferred and recognized over the respective contract terms.

Advertising

Revenue is generated from the sale of advertising and technology, tools and solutions relating to advertising businesses. As part of distribution agreements with cable networks, we generally receive an allocation of scheduled advertising time that we sell to local, regional and national advertisers. In most cases, the available advertising units are sold by our sales force. We also represent the advertising sales efforts of other multichannel video providers in some markets. Since we are acting as the principal in these arrangements, we record the advertising that is sold in advertising revenue and the fees paid to multichannel video providers in other operating and administrative expenses. In some cases, we work with representation firms as an extension of our sales force to sell a portion of the advertising units allocated to us and record the revenue net of agency commissions. In addition, we generate revenue from the sale of advertising on digital platforms. We enter into advertising arrangements with customers and have determined that a contract exists once all terms and conditions are agreed upon, typically when the number of advertising units is specifically identified and the timing of airing is scheduled. Advertisements are generally aired or viewed within one year once all terms and conditions are agreed upon. Revenue from these arrangements is recognized in the period in which advertisements are aired or viewed. Payment terms vary by contract, although terms generally require payment within 30 to 60 days from when advertisements are aired or viewed. In addition, we also provide technology, tools, data-driven services and marketplace solutions to customers in the media industry, which allows advertisers to more effectively engage with their target audiences. Revenue earned in this manner is recognized when services are provided.

NBCUniversal Segments

Distribution

Cable Networks generates revenue from the distribution of our cable network programming to traditional and virtual multichannel video providers. Broadcast Television generates revenue from the fees received under retransmission consent agreements and associated fees received from NBC-affiliated local broadcast television stations.

These arrangements are accounted for as licenses of functional intellectual property and revenue is recognized as programming is provided on a monthly basis, generally under multiyear agreements. Monthly fees received under distribution agreements with multichannel video providers are generally based on the number of subscribers. Payment terms and conditions vary by contract type, although terms generally include payment within 60 days.

Advertising

Cable Networks and Broadcast Television generate revenue from the sale of advertising on our cable and broadcast networks, our owned local broadcast television stations and various digital properties.

We enter into advertising arrangements with customers and have determined that a contract exists once all terms and conditions are agreed upon, typically when the number of advertising units is specifically identified and the timing of airing is scheduled. Advertisements are generally aired or viewed within one year once all terms are agreed upon. Revenue is recognized, net of agency commissions, in the period in which advertisements are aired or viewed and payment occurs thereafter, with payment generally required within 30 days. In some instances, we guarantee audience ratings for the advertisements. To the extent there is a shortfall in contracts where the ratings were guaranteed, a portion of the revenue is deferred until the shortfall is settled, typically by providing additional advertising units generally within one year of the original airing.

Theatrical

Filmed Entertainment generates revenue from the worldwide theatrical release of produced and acquired films for exhibition in movie theaters. Theatrical revenue is affected by the timing, nature and number of films released in movie theaters and their acceptance by audiences. It is also affected by the number of exhibition screens, ticket prices, the percentage of ticket sale retention by the exhibitors and the popularity of competing films at the time when films are released. We recognize revenue as the films are viewed and exhibited in theaters and payment generally occurs within 30 days after exhibition.

Content Licensing

Cable Networks, Broadcast Television and Filmed Entertainment generate revenue from the licensing of our owned film and television content in the United States and internationally to cable, broadcast and premium networks and subscription video on demand services. Our agreements generally include fixed pricing and span multiple years. For example, following a film’s theatrical release, Filmed Entertainment may license the exhibition rights of a film to different customers over multiple successive distribution windows.

We recognize revenue when the content is delivered and available for use by the licensee. When the term of an existing agreement is renewed or extended, we recognize revenue at the later of when the content is available or when the renewal or extension period begins. Payment terms and conditions vary by contract type, although payments are generally collected over the license term. The amount of future revenue to be earned related to fixed pricing under existing agreements at any given time equals approximately 1 to 2 years of annual Filmed Entertainment content licensing revenue, which is the segment with the largest portion of this future revenue. The majority of this revenue will be recognized within 2 years. This amount may fluctuate from period to period depending on the timing of the releases and the availability of content under existing agreements and may not represent the total revenue expected to be recognized as it does not include revenue from future agreements or from variable pricing or optional purchases under existing agreements.

For our agreements that include variable pricing, such as pricing based on the number of subscribers to a subscription video on demand service sold by our customers, we generally recognize revenue as our customers sell to their subscribers.

Home Entertainment

Filmed Entertainment generates revenue from the sale of our produced and acquired films on standard-definition digital video discs and Blu-ray discs (together, “DVDs”) and through digital distribution services. Cable Networks and Broadcast Television also generate revenue from the sale of owned programming on DVDs and through digital distribution services, which is reported in other revenue. We generally recognize revenue from DVD sales, net of estimated returns and customer incentives, on the date that DVDs are delivered to and made available for sale by retailers. Payment terms generally include payment within 60 to 90 days from delivery to the retailer.

Theme Parks

Theme Parks generates revenue primarily from guest spending at our Universal theme parks in Orlando, Florida; Hollywood, California; and Osaka, Japan. Guest spending includes ticket sales and in-park spending on food, beverages and merchandise. We recognize revenue from ticket sales when the tickets are used, generally within a year from the date of purchase. For annual passes, we generally recognize revenue on a straight-line basis over the period the pass is available to be used. We recognize revenue from in-park spending at the point of sale.

Sky Segment

Direct-to-Consumer

Revenue is generated from subscribers to our video services from both residential and business customers. We also provide high-speed internet, voice and wireless phone services in select countries. Generally, all of our residential customers are initially under contracts, with terms typically ranging from rolling monthly to 2 years, depending on the product and territory, and may only discontinue service in accordance with the terms of their contracts. Subscription rates and related charges vary according to the services and features customers receive and the types of equipment they use. Our video, high-speed internet, voice and wireless phone services generally may be purchased individually or in bundles. We recognize revenue from video, high-speed internet, voice and wireless phone services as the services are provided on a monthly basis. At any given time, the amount of future revenue to be earned related to existing agreements is equal to less than half of our annual direct-to-consumer revenue, which generally will be recognized within 2 years.

Content

Revenue is generated from the distribution of our television channels on third-party platforms and the licensing of owned and acquired programming to third-party video providers. See the NBCUniversal segment discussion of distribution and content licensing revenue above for accounting policies for these types of arrangements.

Advertising

Revenue is generated from advertising and sponsorships across our owned television channels and where we represent the sales efforts of third-party channels. We also sell targeted advertising and generate revenue from online and mobile advertising and advertising across our On Demand services. Revenue is recognized when the advertising is aired or viewed. Since we are acting as the principal in the arrangements where we represent the sales efforts of third parties, we record the advertising that is sold in advertising revenue and the fees paid to the third-party channels in other operating and administrative expenses.

Consolidated Balance Sheet

The following tables summarize our accounts receivable and other balances that are not separately presented in our consolidated balance sheet that relate to the recognition of revenue and collection of the related cash, as well as deferred costs associated with our contracts with customers.

December 31 (in millions)		**2019**		2018
Receivables, gross	**$**	**11,711**	$	11,456
Less: Allowance for doubtful accounts		**419**		352
Receivables, net	**$**	**11,292**	$	11,104

December 31 (in millions)		**2019**		2018
Noncurrent receivables (included in other noncurrent assets, net)	**$**	**1,337**	$	1,399
Contract acquisition and fulfillment costs (included in other noncurrent assets, net)	**$**	**1,083**	$	991
Noncurrent deferred revenue (included in other noncurrent liabilities)	**$**	**618**	$	650

In Cable Communications and Sky, we manage credit risk by screening applicants through the use of internal customer information, identification verification tools and credit bureau data, as well as by offering customers the opportunity to establish automatic monthly payments. If a customer’s account is delinquent, various measures are used to collect outstanding amounts, including termination of the customer’s services.

Note 4: Programming and Production Costs

Video Distribution Programming Expenses

Programming expenses for Cable Communications and Sky are the fees we pay to license the programming we distribute to our customers. Programming is generally acquired under multiyear distribution agreements, with rates typically based on the number of customers that receive the programming and the extent of distribution. From time to time, these contracts expire and programming continues to be provided under interim arrangements while the parties negotiate new contract terms, sometimes with effective dates that affect prior periods. While payments are typically made under the prior contract's terms, the amount of programming expenses recorded during the interim arrangement is based on our estimate of the ultimate contract terms expected to be negotiated. Differences between actual amounts determined upon resolution of negotiations and amounts recorded during these interim arrangements are recorded in the period of resolution.

Film and Television Costs

Cable Networks, Broadcast Television, Filmed Entertainment and Sky produce owned content or acquire the rights to programming from third parties, which are described as film and television costs and programming rights, respectively.

December 31 (in millions)		**2019**		2018
Film Costs:				
Released, less amortization	**$**	**1,551**	$	1,600
Completed, not released		**187**		144
In production and in development		**1,314**		1,063
		3,052		2,807
Television Costs:				
Released, less amortization		**2,810**		2,289
In production and in development		**1,162**		953
		3,972		3,242
Programming rights, less amortization		**5,786**		5,534
		12,810		11,583
Less: Current portion of programming rights		**3,877**		3,746
Film and television costs	**$**	**8,933**	$	7,837

Based on our current estimates of the total remaining revenue from all sources ("ultimate revenue"), in 2020 we expect to amortize approximately $1.9 billion of film and television costs associated with our original film and television productions that have been released, or are completed and have not been released. Through 2022, we expect to amortize approximately 88% of unamortized film and television costs for our released productions, excluding amounts allocated to acquired libraries.

As of December 31, 2019, acquired film and television libraries, which are included within the "released, less amortization" captions in the table above, had remaining unamortized costs of $328 million. These costs are generally amortized over a period not to exceed 20 years, and approximately 47% of these costs are expected to be amortized through 2022.

Capitalization of Film and Television Costs

We capitalize film and television production costs, including direct costs, production overhead, print costs, development costs and interest. We amortize capitalized film and television production costs, including acquired libraries, and accrue costs associated with participation and residual payments to programming and production expenses. We generally record the amortization and the accrued costs using the individual film forecast computation method, which amortizes the costs in the same ratio as the associated ultimate revenue. Estimates of ultimate revenue and total costs are based on anticipated release patterns, public acceptance and historical results for similar productions. Unamortized film and television production costs, including acquired libraries, are stated at the lower of unamortized cost or fair value. We do not capitalize costs related to the distribution of a film in movie theaters or the licensing or sale of a film or television production, which primarily include costs associated with marketing and distribution.

In determining the method of amortization and estimated life of an acquired film or television library, we generally use the method and the life that most closely follow the undiscounted cash flows over the estimated life of the asset.

When an event or a change in circumstance occurs that was known or knowable as of the balance sheet date and that indicates the fair value of a film is less than its unamortized costs, we determine the fair value of the film and record an impairment charge for the amount by which the unamortized capitalized costs exceed the film's fair value. The estimated fair value of a production is based on level 3 inputs that primarily use an analysis of future expected cash flows. Adjustments to capitalized film production costs were not material in any of the periods presented.

We may enter into cofinancing arrangements with third parties to jointly finance or distribute certain of our film productions. Cofinancing arrangements can take various forms, but in most cases involve the grant of an economic interest in a film to an investor. The number of investors and the terms of these arrangements can vary, although investors generally assume the full risks and rewards for the portion of the film acquired in these arrangements. We account for the proceeds received from a third-party investor under these arrangements as a reduction to our capitalized film costs. Under these arrangements, the investor owns an undivided copyright interest in the film, and therefore in each period we record either a charge or a benefit to programming and production expenses to reflect the estimate of the third-party investor's interest in the profit or loss of the film. The estimate of the third-party investor's interest in the profit or loss of a film is determined using the ratio of actual revenue earned to date to the ultimate revenue expected to be recognized over the film's useful life.

We capitalize the costs of programming rights for content that we license but do not own at the earlier of when payments are made for the programming or when the license period begins and the content is made available for use. We amortize capitalized programming costs as the associated programs are broadcast. We recognize the costs of multiyear, live-event sports programming rights as the rights are utilized over the contract term based on estimated relative value. Estimated relative value is generally based on the ratio of the current period revenue to the estimated ultimate revenue or the terms of the contract. Advance payments for rights to multiyear, live-event sports programming are included in programming rights.

Programming costs are recorded at the lower of unamortized cost or net realizable value on a program by program, package, channel or daypart basis. A daypart is an aggregation of programs broadcast during a particular time of day or programs of a similar type. Programming acquired by Cable Networks is primarily tested on a channel basis for impairment, whereas programming acquired by Broadcast Television is tested on a daypart basis. If we determine that the estimates of future cash flows are insufficient or if there is no plan to broadcast certain programming, we recognize an impairment charge to programming and production expenses.

Note 5: Income Taxes

Income Before Income Taxes

Year ended December 31 (in millions)	**2019**	2018	2017
Domestic	**$ 16,646**	$ 14,387	$ 14,331
Foreign	**350**	855	1,022
	$ 16,996	$ 15,242	$ 15,353

Components of Income Tax (Expense) Benefit

Year ended December 31 (in millions)	**2019**	2018	2017
Current (Expense) Benefit:			
Federal	**$ (2,085)**	$ (2,026)	$ (2,411)
State	**(425)**	(639)	(277)
Foreign	**(600)**	(425)	(389)
	(3,110)	(3,090)	(3,077)
Deferred (Expense) Benefit:			
Federal	**(902)**	(546)	10,651
State	**15**	167	(11)
Foreign	**324**	89	6
	(563)	(290)	10,646
Income tax (expense) benefit	**$ (3,673)**	$ (3,380)	$ 7,569

Comcast Corporation

Our income tax (expense) benefit differs from the federal statutory amount because of the effect of the items detailed in the table below.

Year ended December 31 (in millions)	**2019**	2018	2017
Federal tax at statutory rate	**$ (3,569)**	$ (3,201)	$ (5,374)
State income taxes, net of federal benefit	**(306)**	(212)	(299)
Foreign income taxed at different rates	**(126)**	(147)	(70)
Nontaxable income attributable to noncontrolling interests	**51**	20	45
Adjustments to uncertain and effectively settled tax positions, net	**(3)**	(144)	62
Accrued interest and penalties on uncertain and effectively settled tax positions, net	**13**	(29)	(3)
Excess tax benefits recognized on share-based compensation	**196**	75	297
Tax legislation	**31**	120	12,682
Other	**40**	138	229
Income tax (expense) benefit	**$ (3,673)**	$ (3,380)	$ 7,569

We base our provision for income taxes on our current period income, changes in our deferred income tax assets and liabilities, income tax rates, changes in estimates of our uncertain tax positions, tax planning opportunities available in the jurisdictions in which we operate and excess tax benefits or deficiencies that arise when the tax consequences of share-based compensation differ from amounts previously recognized in the statement of income. We recognize deferred tax assets and liabilities when there are temporary differences between the financial reporting basis and tax basis of our assets and liabilities and for the expected benefits of using net operating loss carryforwards. When a change in the tax rate or tax law has an impact on deferred taxes, we apply the change based on the years in which the temporary differences are expected to reverse. We record the change in our consolidated financial statements in the period of enactment.

The determination of the income tax consequences of a business combination includes identifying the tax basis of assets and liabilities acquired and any contingencies associated with uncertain tax positions assumed or resulting from the business combination. Deferred tax assets and liabilities related to temporary differences of an acquired entity are recorded as of the date of the business combination and are based on our estimate of the ultimate tax basis that will be accepted by the various tax authorities. We record liabilities for contingencies associated with prior tax returns filed by the acquired entity based on criteria set forth in the appropriate accounting guidance. We adjust the deferred tax accounts and the liabilities periodically to reflect any revised estimated tax basis and any estimated settlements with the various tax authorities. The effects of these adjustments are recorded to income tax (expense) benefit.

From time to time, we engage in transactions in which the tax consequences may be subject to uncertainty. In these cases, we evaluate our tax position using the recognition threshold and the measurement attribute in accordance with the accounting guidance related to uncertain tax positions. Examples of these transactions include business acquisitions and dispositions, including consideration paid or received in connection with these transactions, certain financing transactions, and the allocation of income among state and local tax jurisdictions. Significant judgment is required in assessing and estimating the tax consequences of these transactions. We determine whether it is more likely than not that a tax position will be sustained on examination, including the resolution of any related appeals or litigation processes, based on the technical merits of the position. 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 consolidated financial statements. We classify interest and penalties, if any, associated with our uncertain tax positions as a component of income tax (expense) benefit.

Tax Reform

On December 22, 2017, new federal tax reform legislation was enacted in the United States, resulting in significant changes from previous tax law. The new legislation reduced the federal corporate income tax rate to 21% from 35% effective January 1, 2018, which resulted in a $12.7 billion net income tax benefit to us for 2017, primarily related to the remeasurement of deferred taxes at the new tax rate. Our federal income tax expense for periods beginning in 2018 is based on the new rate.

Components of Net Deferred Tax Liability

December 31 (in millions)	2019	2018
Deferred Tax Assets:		
Net operating loss and other loss carryforwards	$ 2,017	$ 1,926
Nondeductible accruals and other	2,779	2,656
Less: Valuation allowance	1,906	632
	2,890	3,950
Deferred Tax Liabilities:		
Differences between book and tax basis of property and equipment and intangible assets	29,387	29,139
Differences between book and tax basis of investments	702	491
Differences between book and tax basis of long-term debt	751	604
Differences between book and tax basis of foreign subsidiaries and undistributed foreign earnings	143	85
	30,983	30,319
Net deferred tax liability	$ 28,093	$ 26,369

Changes in our net deferred tax liability in 2019 that were not recorded as deferred income tax benefit (expense) are primarily related to an increase of $118 million associated with items included in other comprehensive income (loss) and an increase in net deferred tax liabilities of $1.0 billion as a result of the finalization of acquisition accounting for Sky. Our net deferred tax liability includes $15.4 billion related to cable franchise rights that will remain unchanged unless we recognize an impairment or dispose of a cable franchise or there is a change in the tax law.

As of December 31, 2019, we had federal net operating loss carryforwards of $274 million, and various state net operating loss carryforwards, the majority of which expire in periods through 2039. As of December 31, 2019, we also had foreign net operating loss carryforwards of $5.6 billion related to the foreign operations of Sky and NBCUniversal, the majority of which can be carried forward indefinitely. The determination of the realization of the state and foreign net operating loss carryforwards is dependent on our subsidiaries' taxable income or loss, apportionment percentages, redetermination from taxing authorities, and state and foreign laws that can change from year to year and impact the amount of such carryforwards. We recognize a valuation allowance if we determine it is more likely than not that some portion, or all, of a deferred tax asset will not be realized. As of December 31, 2019 and 2018, our valuation allowance was primarily related to foreign and state net operating loss carryforwards. In 2019, in conjunction with the finalization of acquisition accounting for Sky, we recorded an additional valuation allowance of approximately $1.2 billion associated with our assessment of the realization of Sky's deferred tax assets, primarily related to net operating losses.

Uncertain Tax Positions

Our liability for uncertain tax positions as of December 31, 2019 totaled $1.0 billion, which excludes the federal benefits on state tax positions that were recorded as deferred income taxes.

Reconciliation of Unrecognized Tax Benefits

(in millions)	2019	2018	2017
Gross unrecognized tax benefits, January 1	$ 1,543	$ 1,497	$ 1,443
Additions based on tax positions related to the current year	230	229	121
Additions based on tax positions related to prior years	133	125	319
Additions from acquired subsidiaries	1	130	—
Reductions for tax positions of prior years	(344)	(346)	(251)
Reductions due to expiration of statutes of limitations	(117)	(75)	(70)
Settlements with tax authorities	(24)	(17)	(65)
Gross unrecognized tax benefits, December 31	1,422	1,543	1,497
Positions paid	(409)	(531)	(688)
Liability for uncertain tax positions	$ 1,013	$ 1,012	$ 809

Our liability for uncertain tax positions represents the amounts recorded for potential payment obligations. Our gross unrecognized tax benefits also include amounts related to positions for which tax has been assessed and paid. If we were to recognize our gross unrecognized tax benefits in the future, $1.1 billion would impact our effective tax rate and the remaining amount would increase our deferred income tax liability. The amount and timing of the recognition of any such tax benefit is dependent on the completion of examinations of our tax filings by the various tax authorities and the expiration of statutes of limitations. It is reasonably possible that certain tax contests could be resolved within the next 12 months that may result in a decrease in our effective tax rate.

As of December 31, 2019 and 2018, our accrued interest associated with our liability for uncertain tax positions was $186 million and $203 million, respectively.

The IRS has completed its examination of our income tax returns for all years through 2016. Various states are examining our state tax returns and the tax years of those tax returns currently under examination vary by state, with most of the periods relating to tax years 2000 and forward. Various foreign jurisdictions are examining our tax returns and the tax years of those tax returns currently under examination vary by country, with most of the periods relating to tax years 2010 and forward.

Note 6: Earnings Per Share

Computation of Diluted EPS

	2019			2018			2017		
Year ended December 31 (in millions, except per share data)	**Net Income Attributable to Comcast Corporation**	**Shares**	**Per Share Amount**	Net Income Attributable to Comcast Corporation	Shares	Per Share Amount	Net Income Attributable to Comcast Corporation	Shares	Per Share Amount
Basic EPS attributable to Comcast Corporation shareholders	**$ 13,057**	**4,548**	**$ 2.87**	$ 11,731	4,584	$ 2.56	$ 22,735	4,708	$ 4.83
Effect of dilutive securities:									
Assumed exercise or issuance of shares relating to stock plans		**62**			56			78	
Diluted EPS attributable to Comcast Corporation shareholders	**$ 13,057**	**4,610**	**$ 2.83**	$ 11,731	4,640	$ 2.53	$ 22,735	4,786	$ 4.75

Diluted earnings per common share attributable to Comcast Corporation shareholders (“diluted EPS”) considers the impact of potentially dilutive securities using the treasury stock method. Our potentially dilutive securities include potential common shares related to our stock options and our restricted share units (“RSUs”). Diluted EPS excludes the impact of potential common shares related to our stock options in periods in which the combination of the option exercise price and the associated unrecognized compensation expense is greater than the average market price of our common stock. The amount of potential common shares related to our share-based compensation plans that were excluded from diluted EPS because their effect would have been antidilutive was not material in any of the periods presented.

Note 7: Long-Term Debt

Long-Term Debt Outstanding

December 31 (in millions)	Weighted-Average Interest Rate as of December 31, 2019	**2019[b]**	2018[b]
Commercial paper	—	**$ —**	$ 675
Revolving credit facilities	—	**—**	606
Term loans	1.87%	**8,078**	13,268
Senior notes with maturities of 5 years or less, at face value	3.29%	**26,378**	26,331
Senior notes with maturities between 5 and 10 years, at face value	3.74%	**21,683**	26,727
Senior notes with maturities greater than 10 years, at face value	4.54%	**46,653**	45,030
Other, including capital lease obligations	—	**1,098**	808
Debt issuance costs, premiums, discounts, fair value adjustments for acquisition accounting and hedged positions, net[a]	—	**(1,673)**	(1,702)
Total debt	3.78% [a]	**102,217**	111,743
Less: Current portion		**4,452**	4,398
Long-term debt		**$ 97,765**	$ 107,345

(a) Includes the effects of our derivative financial instruments.

(b) As of December 31, 2019, included in our outstanding debt were foreign currency denominated borrowings with principal amounts of £4.9 billion, €4.9 billion, ¥267 billion and ¥9 billion RMB. As of December 31, 2018, included in our outstanding debt were foreign currency denominated borrowings with principal amounts of £7.3 billion, €4.9 billion, ¥390 billion and ¥4 billion RMB.

As of December 31, 2019 and 2018, our debt had an estimated fair value of $115.8 billion and $114.1 billion, respectively. The estimated fair value of our publicly traded debt was primarily based on level 1 inputs that use quoted market value for the debt. The estimated fair value of debt for which there are no quoted market prices was based on level 2 inputs that use interest rates available to us for debt with similar terms and remaining maturities.

Principal Maturities of Debt

(in millions)		
2020	$	4,455
2021	$	9,125
2022	$	5,581
2023	$	7,664
2024	$	6,759
Thereafter	$	70,306

We use cross-currency swaps as cash flow hedges for foreign currency denominated debt obligations when those obligations are denominated in a currency other than the functional currency. Cross-currency swaps effectively convert foreign currency denominated debt to debt denominated in the functional currency, which hedge currency exchange risks associated with foreign currency denominated cash flows such as interest and principal debt repayments. As of both December 31, 2019 and 2018, we had cross-currency swaps designated as cash flow hedges on $3.7 billion of our foreign currency denominated debt. As of December 31, 2019 and 2018, the aggregate estimated fair values of cross-currency swaps designated as cash flow hedges were a net asset of $373 million and $399 million, respectively.

We are also exposed to foreign exchange risk on the consolidation of our foreign operations. We have foreign currency denominated debt and use cross-currency swaps to hedge our net investments in certain of these subsidiaries. Transaction gains and losses resulting from currency movements on debt and changes in fair value of cross-currency swaps designated as net investment hedges are recorded within the currency translation adjustments component of accumulated other comprehensive income (loss).The aggregate amount of our net investment in foreign subsidiaries that have been hedged using cross-currency swaps and foreign currency denominated debt was $14.0 billion and $15.6 billion, as of December 31, 2019 and 2018, respectively. As of December 31, 2019 and 2018, the aggregate estimated fair value of the cross-currency swaps was a net liability of $373 million and $587 million, respectively. As of December 31, 2019 and 2018, there were pre-tax cumulative translation gains of $339 million and pre-tax cumulative translation losses of $4 million, respectively, related to these net investment hedges recorded in accumulated other comprehensive income (loss).

Commercial Paper Programs

Our commercial paper programs provide a lower-cost source of borrowing to fund our short-term working capital requirements.

Revolving Credit Facilities

As of December 31, 2019, we had $9.2 billion of revolving credit facilities due 2022 with a syndicate of banks that may be used for general corporate purposes. In June 2019, we amended the terms of our revolving credit facilities to extend their expiration dates from May 26, 2021 to May 26, 2022. We may increase the commitment under the revolving credit facilities up to a total of $12 billion, as well as extend the expiration dates to no later than 2023, subject to approval of the lenders. The interest rates on the revolving credit facilities consist of a base rate plus a borrowing margin that is determined based on Comcast's credit rating. As of December 31, 2019, the borrowing margin for borrowings based on the London Interbank Offered Rate was 1.00%. Our revolving credit facilities require that we maintain certain financial ratios based on debt and EBITDA, as defined in the revolving credit facilities. We were in compliance with all financial covenants for all periods presented.

As of December 31, 2019, amounts available under our revolving credit facilities, net of amounts outstanding under our commercial paper programs and outstanding letters of credit and bank guarantees, totaled $9.2 billion. In 2019, we made net repayments of $615 million under Sky's £1 billion revolving credit facility, which was terminated in February 2019.

Letters of Credit and Bank Guarantees

As of December 31, 2019, we and certain of our subsidiaries had undrawn irrevocable standby letters of credit and bank guarantees totaling $484 million to cover potential fundings under various agreements.

Guarantee Structure

Comcast, Comcast Cable and NBCUniversal fully and unconditionally guarantee each other's debt securities, including the Comcast revolving credit facility. As of December 31, 2019, the principal amount outstanding of debt securities within the cross-guarantee structure totaled $88.3 billion. Additionally, certain other subsidiary debt securities are guaranteed by Comcast and/or Comcast Cable as described below.

Comcast and Comcast Cable fully and unconditionally guarantee NBCUniversal Enterprise's debt securities, including its revolving credit facility. As of December 31, 2019, the principal amount outstanding of NBCUniversal Enterprise's debt securities guaranteed by Comcast and Comcast Cable totaled $1.5 billion, all of which will mature within the next 3 years.

Comcast fully and unconditionally guarantees Universal Studios Japan's yen-denominated term loans. As of December 31, 2019, the principal amount outstanding of Universal Studio Japan's term loans guaranteed by Comcast totaled $2.5 billion (using exchange rates as of December 31, 2019), all of which will mature within the next 3 years.

In May 2019, Comcast provided a full and unconditional guarantee of Sky's debt securities in connection with Sky's noteholders consenting to (i) the transfer of the listing of three series of Sky notes from the Main Market of the London Stock Exchange to the Professional Securities Market of the London Stock Exchange and (ii) amending certain terms of the Sky notes. As of December 31, 2019, the principal amount outstanding of Sky's debt securities guaranteed by Comcast totaled $9.2 billion (using exchange rates as of December 31, 2019), of which $6.0 billion will mature within the next 5 years.

Note 8: Significant Transactions

2018

Sky Transaction

On October 9, 2018, in connection with our offer to acquire the share capital of Sky, we acquired a controlling interest in Sky through a series of purchases of Sky shares at our offer price of £17.28 per Sky share. In the fourth quarter of 2018, we acquired the remaining Sky shares and now own 100% of Sky's equity interests. Total cash consideration was £30.2 billion (approximately $39.4 billion using the exchange rates on the purchase dates). We financed the acquisition through a combination of fixed and floating rate senior notes, the issuance of term loans and cash on hand.

Allocation of Purchase Price

We have applied acquisition accounting to Sky. Sky's results of operations are included in our consolidated results of operations since the acquisition date and are reported in our Sky segment. The net assets of Sky were recorded at their estimated fair value using level 3 inputs. In valuing acquired assets and liabilities, fair value estimates are based on, but are not limited to, future expected cash flows, market rate assumptions for contractual obligations and appropriate discount rates.

In 2019, we finalized the acquisition accounting in connection with the Sky transaction, which primarily resulted in decreases to intangible assets and investments (included below in other noncurrent assets and (liabilities), net), an increase to property and equipment, and corresponding adjustments to deferred taxes. We also recorded an additional valuation allowance of approximately $1.2 billion associated with our assessment of the realization of Sky's deferred tax assets, primarily related to net operating losses. These changes resulted in an increase in goodwill of approximately $1.4 billion and an adjustment recorded in 2019 related to the fourth quarter of 2018 that resulted in an increase to depreciation and amortization expense of $53 million.

The table below presents the allocation of the all-cash purchase price of £30.2 billion, or $39.4 billion, to the assets and liabilities of Sky as a result of the transaction.

Allocation of Purchase Price

(in millions)		
Consideration transferred	$	39,387
Allocation of purchase price		
Cash	$	1,283
Accounts receivable and other current assets		2,359
Film and television costs (See Note 4)		2,512
Property and equipment (See Note 11)		4,127
Intangible assets (See Note 12)		19,539
Accounts payable, accrued liabilities and other current liabilities		(5,885)
Long-term debt (See Note 7)		(11,468)
Deferred tax assets (liabilities), net (See Note 5)		(2,974)
Other noncurrent assets and (liabilities), net		(1,398)
Fair value of identifiable net assets acquired		8,095
Goodwill (See Note 12)	$	31,292

Property and Equipment

Property and equipment includes customer premise equipment with a carrying value of $1.4 billion, which have original estimated useful lives of 5 to 7 years. The remaining property and equipment includes network assets, real estate and other machinery and equipment.

Intangible Assets

Finite-lived intangible assets primarily consist of customer relationships with a carrying amount of $9.5 billion and developed technology and software with a carrying amount of $4.3 billion, with original estimated useful lives between 6 and 19 years and 4 and 9 years, respectively. Indefinite-lived assets consist of trade names with a carrying amount of $5.8 billion.

Goodwill

Goodwill consists primarily of intangible assets that do not qualify for separate recognition, including increased footprint, assembled workforce, noncontractual relationships and agreements. The acquired goodwill is not expected to be deductible for tax purposes.

Acquisition-Related Costs

As a result of the Sky transaction, we incurred expenses in 2018 related to legal, accounting, valuation and other professional services, which are reflected in other operating and administrative expenses. We also incurred certain financing costs associated with our borrowings, which are reflected in interest expense. The table below presents the amounts related to these expenses included in our consolidated statement of income. The amounts below do not reflect the costs of any integration activities or costs related to synergies that may be achieved as a result of the acquisition.

(in millions)		Year ended December 31, 2018
Other operating and administrative expenses	$	339
Interest expense	$	63

Unaudited Pro Forma Information

The following unaudited pro forma information has been presented as if the Sky transaction occurred on January 1, 2017. This information is based on historical results of operations, adjusted for allocation of purchase price and other acquisition accounting adjustments, and is not necessarily indicative of what the results would have been had we operated the business since January 1, 2017. For pro forma purposes, 2018 earnings were adjusted to exclude acquisition-related costs noted above, and 2017 earnings were adjusted to include these costs. No pro forma adjustments have been made for cost savings or synergies that have been or may be achieved by the combined businesses. The year ended December 31, 2019 is not presented as Sky is included in the consolidated results for the entire period.

Year ended December 31 (in millions, except per share data)		2018		2017
Revenue	$	109,518	$	102,971
Net income attributable to Comcast Corporation	$	12,176	$	22,085
Basic earnings per common share attributable to Comcast Corporation shareholders	$	2.66	$	4.69
Diluted earnings per common share attributable to Comcast Corporation shareholders	$	2.62	$	4.61

Universal Beijing Resort

In 2018, we entered into an agreement with a consortium of Chinese state-owned companies to build and operate a Universal theme park and resort in Beijing, China (“Universal Beijing Resort”). We own a 30% interest in Universal Beijing Resort and the construction is being funded through a combination of debt financing and equity contributions from the investors in accordance with their equity interests. The debt financing, which is being provided by a syndicate of Chinese financial institutions, contains certain financial and operating covenants and a maximum borrowing limit of ¥26.6 billion RMB (approximately $3.8 billion). The debt financing is secured by the assets of Universal Beijing Resort and the equity interests of the investors. As of December 31, 2019, Universal Beijing Resort had $1.3 billion principal amount of a term loan outstanding under the debt financing agreement.

We have concluded that Universal Beijing Resort is a variable interest entity based on its governance structure, and we consolidate it because we have the power to direct activities that most significantly impact its economic performance. There are no liquidity arrangements, guarantees or other financial commitments between us and Universal Beijing Resort, and therefore our maximum risk of financial loss is our 30% interest. Universal Beijing Resort’s results of operations are reported in our Theme Parks segment. Our consolidated statement of cash flows includes the costs of construction and related borrowings in the “construction of Universal Beijing Resort” and “proceeds from borrowings” captions, respectively, and equity contributions from the noncontrolling interests are included in other financing activities.

In March 2018, Universal Beijing Resort received initial equity investments through a combination of cash and noncash contributions from the investors. As of December 31, 2019, our consolidated balance sheet included assets, primarily property and equipment, and liabilities, including the term loan, of Universal Beijing Resort totaling $3.0 billion and $2.1 billion, respectively.

2017

FCC Spectrum Auction

On April 13, 2017, the Federal Communications Commission announced the results of its spectrum auction. In the auction, NBCUniversal relinquished its spectrum rights in the New York, Philadelphia and Chicago designated market areas (“DMAs”) where NBC and Telemundo had overlapping spectrum. NBCUniversal received proceeds of $482 million in July 2017, which were recorded in other investing activities in our consolidated statement of cash flows. NBCUniversal recognized a pretax gain of $337 million in other operating gains in 2017. NBC and Telemundo stations share broadcast signals in these DMAs. In connection with the auction, we also acquired the rights to $1.7 billion of spectrum in the second quarter of 2017, which were recorded to other intangible assets, net. We had previously made a deposit of $1.8 billion to participate in the auction in 2016 and received a refund for amounts in excess of the purchase price in 2017.

Universal Studios Japan

On April 6, 2017, we acquired the remaining interests in Universal Studios Japan that we did not already own for $2.3 billion. The acquisition was funded through cash on hand and borrowings under our commercial paper program. Because we maintained control of Universal Studios Japan, the difference between the consideration transferred and the recorded value of the noncontrolling interests, as well as the related tax and accumulated other comprehensive income impacts, were recorded to additional paid-in capital.

Note 9: Recent Accounting Pronouncements

Leases

In February 2016, the FASB updated the accounting guidance related to leases. The most significant change in the updated accounting guidance requires lessees to recognize lease assets and liabilities on the balance sheet for all operating leases with the exception of short-term leases. The standard also expands the disclosures regarding the amount, timing and uncertainty of cash flows arising from leases. For a lessee, the recognition, measurement and presentation of expenses and cash flows arising from a lease did not significantly change from previous guidance. We adopted the updated guidance on January 1, 2019 on a prospective basis and as a result, prior period amounts were not adjusted to reflect the impacts of the updated guidance. In addition, as permitted under the transition guidance within the new standard, prior scoping and classification conclusions were carried forward for leases existing as of the adoption date.

Upon adoption, we recorded $4.2 billion and $4.8 billion for operating lease assets and liabilities, respectively, which includes the impact of fair value adjustments, prepaid and deferred rent and lease incentives. The adoption of the updated accounting guidance did not significantly impact our recognition of finance leases, which were previously described as capital leases. As of the date of adoption, our liabilities for finance leases were $787 million, including $229 million of additional contracts determined to be leases in connection with the Sky transaction, which were recorded in long-term debt, and the related assets were recorded in property and equipment, net. Our finance leases were not considered material for further disclosure. The adoption of the new accounting guidance did not have a material impact on our consolidated results of operations or cash flows. See Note 17 for further information.

Film and Television Costs

In March 2019, the FASB updated the accounting guidance related to film and television costs. The updated guidance aligns the accounting for production costs of episodic television series with those of films, allowing for costs to be capitalized in excess of amounts of revenue contracted for each episode. The updated guidance also updates certain presentation and disclosure requirements for capitalized film and television costs and requires impairment testing to be performed at a group level for capitalized film and television costs when the content is predominantly monetized with other owned or licensed content. We will adopt the updated accounting guidance prospectively in the first quarter of 2020. Following adoption, we will present all film and television costs, including capitalized costs of acquired programming rights, as noncurrent assets in the consolidated balance sheet. We do not expect the updated accounting guidance to have a material impact on our consolidated results of operations or financial position.

Credit Losses

In June 2016, the FASB updated the accounting guidance related to the measurement of credit losses on financial instruments, including trade receivables and loans. The updated guidance requires the recognition of credit losses on financial instruments based on an estimate of expected losses, replacing the incurred loss model in the prior guidance. We will adopt the updated accounting guidance prospectively in the first quarter of 2020. We do not expect the updated accounting guidance to have a material impact on our consolidated results of operations or financial position.

Note 10: Investments

Investment and Other Income (Loss), Net

Year ended December 31 (in millions)		**2019**		2018		2017
Equity in net income (losses) of investees, net	**$**	**(505)**	$	(364)	$	107
Realized and unrealized gains (losses) on equity securities, net		**656**		(187)		(17)
Other income (loss), net		**287**		326		331
Investment and other income (loss), net	**$**	**438**	$	(225)	$	421

Investments

December 31 (in millions)		**2019**		2018
Equity method	**$**	**5,347**	$	4,035
Marketable equity securities		**353**		341
Nonmarketable equity securities		**1,896**		1,805
Other investments		**1,796**		1,796
Total investments		**9,392**		7,977
Less: Current investments		**1,709**		94
Less: Investment securing collateralized obligation		**694**		—
Noncurrent investments	**$**	**6,989**	$	7,883

Equity Method

We use the equity method to account for investments in which we have the ability to exercise significant influence over the investee's operating and financial policies, or in which we hold a partnership or limited liability company interest in an entity with specific ownership accounts, unless we have virtually no influence over the investee's operating and financial policies. Equity method investments are recorded at cost and are adjusted to recognize (1) our share, based on percentage ownership or other contractual basis, of the investee's net income or loss after the date of investment, (2) amortization of the recorded investment that exceeds our share of the book value of the investee's net assets, (3) additional contributions made and dividends received, and (4) impairments resulting from other-than-temporary declines in fair value. For some investments, we record our share of the investee's net income or loss one quarter in arrears due to the timing of our receipt of such information. Gains or losses on the sale of equity method investments are recorded to other income (loss), net. If an equity method investee were to issue additional securities that would change our proportionate share of the entity, we would recognize the change, if any, as a gain or loss to other income (loss), net.

Atairos

On January 1, 2016, we established Atairos Group, Inc., a strategic company focused on investing in and operating companies in a range of industries and business sectors, both domestically and internationally. Atairos has a term of up to 12 years and is controlled by management companies led by our former CFO through interests that carry all of the voting rights. We are the only investor other than our former CFO and the other management company employees. We have committed to fund Atairos up to $5 billion in the aggregate at any one time, subject to certain offsets, and $45 million annually for a management fee, subject to certain adjustments. The management company investors have committed to fund from $50 million to $100 million, with at least $40 million to be funded by our former CFO, subject to his continued role with Atairos. Our economic interests do not carry voting rights and obligate us to absorb approximately 99% of any losses and they provide us the right to receive approximately 86% of any residual returns in Atairos, in either case on a cumulative basis.

We have concluded that Atairos is a VIE, that we do not have the power to direct the activities that most significantly impact the economic performance of Atairos as we have no voting rights and only certain consent rights, and that we are not a related party with our former CFO or the management companies. We therefore do not consolidate Atairos and account for our investment as an equity method investment. There are no other liquidity arrangements, guarantees or other financial commitments between Comcast and Atairos, and therefore our maximum risk of financial loss is our investment balance and our remaining unfunded capital commitment of $2.2 billion as of December 31, 2019.

Atairos follows investment company accounting and records its investments at their fair values each reporting period with the net gains or losses reflected in its statement of operations. We recognize our share of these gains and losses in equity in net income (losses) of investees, net. In 2019 and 2018, we recognized losses of $64 million and $31 million, respectively; in 2017, we recognized income of $281 million. In 2019, 2018 and 2017, we made cash capital contributions totaling $571 million, $282 million and $994 million, respectively, to Atairos. As of December 31, 2019 and 2018, our investment was $3.2 billion and $2.7 billion, respectively.

In April 2018, we sold a controlling interest in our arena management-related businesses to Atairos and received as consideration additional equity interests in Atairos. In connection with the sale of the businesses, we recognized a pre-tax gain of $200 million in other operating gains. In July 2017, we sold a business to a company owned by Atairos and received as consideration an investment in that company. In connection with the sale of the business, we recognized a pre-tax gain of $105 million in other operating gains.

Hulu and Collateralized Obligation

In May 2019, we entered into a series of agreements (the "Hulu Transaction") with The Walt Disney Company and certain of its subsidiaries, whereby we relinquished our board seats and substantially all voting rights associated with our investment in Hulu, and Disney assumed full operational control. We also acquired our proportionate share of the approximate 10% interest in Hulu previously held by AT&T Inc. ("AT&T") for approximately $477 million, increasing our ownership interest to approximately 33% from approximately 30%.

Following the Hulu Transaction, future capital calls are limited to $1.5 billion in the aggregate each year, with any excess funding requirements funded with member loans. We have the right, but not the obligation, to fund our proportionate share of these capital calls, and if we elect not to fund our share of future equity capital calls, our ownership interest will be diluted, subject to an ownership floor of 21%. The Hulu Transaction agreements include put and call provisions regarding our ownership interest in Hulu, pursuant to which, as early as January 2024, we can require Disney to buy, and Disney can require us to sell our interest, in either case, for fair value at that future time subject to a minimum equity value of $27.5 billion for 100% of the equity of Hulu. The minimum total equity value and ownership floor guarantee minimum proceeds of approximately $5.8 billion upon exercise of the put or call.

In connection with the Hulu Transaction, we agreed to extend certain licenses of NBCUniversal content until late 2024. We can terminate most of our content license agreements with Hulu beginning in 2022, and beginning in 2020, we have the right to modify certain content licenses that are currently exclusive to Hulu, so that we can exhibit the content on our platforms in return for reducing the license fee.

In August 2019, we entered into a financing arrangement with a syndicate of banks whereby we received proceeds of $5.2 billion under a term loan facility due March 2024. The principal amount of the term loan is secured by the proceeds guaranteed by Disney under the put/call provisions related to our investment in Hulu. The proceeds from the put/call provisions are available only for the repayment of the term loan and are not available to us unless and until the bank lenders are fully paid under the term loan provisions. The bank lenders have no rights to proceeds from the put/call provisions in excess of amounts owed under the term loan. As a result of this transaction, we now present our investment in Hulu and the term loan separately in our consolidated balance sheet in the captions “investment securing collateralized obligation” and “collateralized obligation”, respectively. The recorded value of our investment reflects our historical cost in applying the equity method, and as a result, is less than its fair value. As of December 31, 2019, our collateralized obligation had a carrying value of $5.2 billion and an estimated fair value of $5.2 billion. The estimated fair value was based on level 2 inputs that use interest rates for debt with similar terms and remaining maturities.

We account for our investment using the equity method. In 2019, 2018 and 2017, we recognized losses of $473 million, $454 million and $276 million, respectively, in equity in net income (losses) of investees, net. In 2019, 2018 and 2017, we made cash capital contributions totaling $903 million, inclusive of the funding for the acquisition of the AT&T interest, $454 million and $300 million, respectively, to Hulu. As of December 31, 2019 and 2018, our investment was $694 million and $248 million, respectively.

In August 2016, Time Warner Inc., which was acquired by AT&T in 2018, acquired a 10% interest in Hulu, diluting our interest at that time from approximately 33% to approximately 30%. Given the contingent nature of put and call options related to that interest, we recorded a deferred gain as a result of the dilution. In the first quarter of 2019, the put and call options expired unexercised and we recognized the previously deferred gain of $159 million in other income (loss), net.

Marketable Equity Securities

We classify investments with readily determinable fair values that are not accounted for under the equity method as marketable equity securities. Marketable equity securities are recorded at cost and adjusted to fair value at each reporting period. The changes in fair value between measurement dates are recorded in realized and unrealized gains (losses) on equity securities, net. The fair values of our marketable equity securities are based on level 1 inputs that use quoted market prices.

Snap

In March 2017, we acquired an interest in Snap Inc. for $500 million as part of its initial public offering, which was classified as a marketable equity security and was sold in 2019. We recognized gains of $293 million and losses of $268 million in 2019 and 2018, respectively. As of December 31, 2018, our investment was $162 million.

Peloton

In 2019, we recognized unrealized gains of $184 million, which included unrealized gains as a result of Peloton’s initial public offering in September 2019. Following the initial public offering, we now present our investment in marketable equity securities, which was previously presented in non-marketable equity securities. As of December 31, 2019 and 2018, our investment was $294 million and $110 million, respectively.

Nonmarketable Equity Securities

We classify investments without readily determinable fair values that are not accounted for under the equity method as nonmarketable equity securities. The accounting guidance requires nonmarketable equity securities to be recorded at cost and adjusted to fair value at each reporting period. However, the guidance allows for a measurement alternative, which is to record the investments at cost, less impairment, if any, and subsequently adjust for observable price changes of identical or similar investments of the same issuer. We apply this measurement alternative to a majority of our nonmarketable equity securities. When an observable event occurs, we estimate the fair values of our nonmarketable equity securities based on level 2 inputs that are derived from observable price changes of similar securities adjusted for insignificant differences in rights and obligations. The changes in value are recorded in realized and unrealized gains (losses) on equity securities, net.

Other Investments

AirTouch

We hold two series of preferred stock of Verizon Americas, Inc., formerly known as AirTouch Communications, Inc. (“AirTouch”), a subsidiary of Verizon Communications Inc., which are redeemable in April 2020. As of both December 31, 2019 and 2018, our investment in AirTouch was $1.6 billion, and was included in other current assets and investments, respectively. We account for our investment in AirTouch as a held to maturity investment using the cost method. As of both December 31, 2019 and 2018, the estimated fair value of the AirTouch preferred stock was $1.7 billion.

The dividend and redemption activity of the AirTouch preferred stock determines the dividend and redemption payments associated with substantially all of the preferred shares issued by one of our consolidated subsidiaries, which is a VIE. The subsidiary has three series of preferred stock outstanding with an aggregate redemption value of $1.75 billion. Substantially all of the AirTouch preferred stock is redeemable in April 2020 at a redemption value of $1.65 billion. As of December 31, 2019 and 2018, the two series of redeemable subsidiary preferred shares were recorded at $1.7 billion and $1.6 billion, respectively, and were included in other current liabilities and other noncurrent liabilities, respectively. As of both December 31, 2019 and 2018, the liability related to the redeemable subsidiary preferred shares had an aggregate estimated fair value of $1.7 billion. The estimated fair values of the AirTouch preferred stock and redeemable subsidiary preferred shares are based on level 2 inputs that use pricing models whose inputs are derived primarily from or corroborated by observable market data through correlation or other means for substantially the full term of the financial instrument. The one series of nonredeemable subsidiary preferred shares was recorded at $100 million as of both December 31, 2019 and 2018, and those amounts are included in noncontrolling interests in our consolidated balance sheet. The carrying amount of the nonredeemable subsidiary preferred shares approximates its fair value.

Impairment Testing of Investments

We review our investment portfolio, other than our marketable equity securities, each reporting period to determine whether there are identified events or circumstances that would indicate there is a decline in the fair value. For our nonpublic investments, if there are no identified events or circumstances that would have a significant adverse effect on the fair value of the investment, then the fair value is not estimated. For our equity method investments and held to maturity investments, if an investment is deemed to have experienced an other-than-temporary decline below its cost basis, we reduce the carrying amount of the investment to its quoted or estimated fair value, as applicable, and establish a new cost basis for the investment. For our nonmarketable equity securities, we record the impairment to realized and unrealized gains (losses) on equity securities, net. For our equity method investments and our held to maturity investments, we record the impairment to other income (loss), net.

Note 11: Property and Equipment

December 31 (in millions)	Weighted-Average Original Useful Life as of December 31, 2019		2019		2018
Distribution systems	11 years	$	**40,639**	$	38,380
Customer premise equipment	6 years		**26,065**		26,208
Other equipment	9 years		**13,025**		12,437
Buildings and leasehold improvements	30 years		**15,104**		14,188
Construction in process	N/A		**5,245**		2,991
Land	N/A		**1,483**		1,539
Property and equipment, at cost			**101,561**		95,743
Less: Accumulated depreciation			**53,239**		51,306
Property and equipment, net		$	**48,322**	$	44,437

Property and equipment are stated at cost. We capitalize improvements that extend asset lives and expense repairs and maintenance costs as incurred. We record depreciation using the straight-line method over the asset’s estimated useful life. For assets that are sold or retired, we remove the applicable cost and accumulated depreciation and, unless the gain or loss on disposition is presented separately, we recognize it as a component of depreciation expense. Capital expenditures for acquisitions and construction of real estate properties and the construction of Universal Beijing Resort are presented separately in our consolidated statement of cash flows.

In accordance with the accounting guidance related to cable television companies, Cable Communications capitalizes the costs associated with the construction of and improvements to our cable transmission and distribution facilities, including scalable infrastructure and line extensions; costs associated with acquiring and deploying new customer premise equipment; and costs associated with installation of our services. Costs capitalized include all direct costs for labor and materials, as well as various indirect costs. Costs incurred in connection with subsequent disconnects and reconnects are expensed as they are incurred.

We evaluate the recoverability of our property and equipment whenever events or substantive changes in circumstances indicate that the carrying amount may not be recoverable. The evaluation is based on the cash flows generated by the underlying asset groups, including estimated future operating results, trends or other determinants of fair value. If the total of the expected future undiscounted cash flows were less than the carrying amount of the asset group, we would recognize an impairment charge to the extent the carrying amount of the asset group exceeded its estimated fair value. Unless presented separately, the impairment charge is included as a component of depreciation expense.

Certain of our cable franchise agreements and lease agreements contain provisions requiring us to restore facilities or remove property in the event that the franchise or lease agreement is not renewed. We expect to continually renew our cable franchise agreements and therefore cannot reasonably estimate liabilities associated with such agreements. A remote possibility exists that franchise agreements could be terminated unexpectedly, which could result in us incurring significant expense in complying with restoration or removal provisions. We do not have any material liabilities related to asset retirement obligations recorded in our consolidated financial statements.

Note 12: Goodwill and Intangible Assets

Goodwill

		NBCUniversal						
(in millions)	Cable Communications	Cable Networks	Broadcast Television	Filmed Entertainment	Theme Parks	Sky	Corporate and Other	Total
Balance, December 31, 2017	$ 12,784	$ 13,427	$ 806	$ 3,212	$ 6,544	$ —	$ 7	$ 36,780
Acquisitions[(a)]	—	—	36	—	—	29,889	—	29,925
Dispositions	—	—	—	(8)	—	—	(5)	(13)
Adjustments	—	(13)	1	(9)	—	—	—	(21)
Foreign currency translation	—	(7)	—	(11)	140	(639)	—	(517)
Balance, December 31, 2018	12,784	13,407	843	3,184	6,684	29,250	2	66,154
Acquisitions	**86**	**162**	**14**	**—**	**—**	**17**	**—**	**279**
Dispositions	**—**	**—**	**—**	**—**	**—**	**(12)**	**—**	**(12)**
Adjustments[(b)]	**2,166**	**490**	**199**	**138**	**—**	**(1,616)**	**2**	**1,379**
Foreign currency translation	**38**	**8**	**3**	**(1)**	**55**	**822**	**—**	**925**
Balance, December 31, 2019	**$ 15,074**	**$ 14,067**	**$ 1,059**	**$ 3,321**	**$ 6,739**	**$ 28,461**	**$ 4**	**$ 68,725**

(a) Acquisitions in 2018 primarily included the Sky acquisition. As of December 31, 2018, the goodwill resulting from the Sky acquisition was presented in the Sky segment. See Note 8 for further information on the Sky acquisition.

(b) Adjustments in 2019 primarily included 1) measurement period adjustments resulting from finalization of acquisition accounting for Sky and 2) the final assignment of goodwill resulting from the Sky transaction to our reporting units.

Goodwill is calculated as the excess of the consideration transferred over the identifiable net assets acquired in a business combination and represents the future economic benefits expected to arise from anticipated synergies and intangible assets acquired that do not qualify for separate recognition, including increased footprint, assembled workforce, noncontractual relationships and other agreements. We assess the recoverability of our goodwill annually, or more frequently whenever events or substantive changes in circumstances indicate that the carrying amount of a reporting unit may exceed its fair value. We test goodwill for impairment at the reporting unit level. To determine our reporting units, we evaluate the components one level below the segment level and we aggregate the components if they have similar economic characteristics. As a result of this assessment, our reporting units are generally the same as our reportable segments. We evaluate the determination of our reporting units used to test for impairment periodically or whenever events or substantive changes in circumstances occur. The assessment of recoverability may first consider qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. A quantitative assessment is performed if the qualitative assessment results in a more-likely-than-not determination or if a qualitative assessment is not performed. The quantitative assessment considers whether the carrying amount of a reporting unit exceeds its fair value, in which case an impairment charge is recorded to the extent the reporting unit's carrying value exceeds its fair value. Unless presented separately, the impairment charge is included as a component of amortization expense. We did not recognize any impairment charges in any of the periods presented.

Intangible Assets

December 31 (in millions)	Weighted-Average Original Useful Life as of December 31, 2019	2019 Gross Carrying Amount	2019 Accumulated Amortization	2018 Gross Carrying Amount	2018 Accumulated Amortization
Indefinite-Lived Intangible Assets:					
Franchise rights	N/A	**$ 59,365**		$ 59,365	
Trade names	N/A	**8,809**		9,633	
FCC licenses	N/A	**2,337**		2,333	
Finite-Lived Intangible Assets:					
Customer relationships	14 years	**22,884**	**$ (8,295)**	25,046	$ (6,682)
Software	5 years	**15,357**	**(7,287)**	11,395	(5,990)
Other agreements and rights	23 years	**3,958**	**(1,635)**	4,145	(1,522)
Total		**$ 112,710**	**$ (17,217)**	$ 111,917	$ (14,194)

Indefinite-Lived Intangible Assets

Indefinite-lived intangible assets consist primarily of our cable franchise rights. Our cable franchise rights represent the values we attributed to agreements with state and local authorities that allow access to homes and businesses in cable service areas acquired in business combinations. We do not amortize our cable franchise rights because we have determined that they meet the definition of indefinite-lived intangible assets since there are no legal, regulatory, contractual, competitive, economic or other factors which limit the period over which these rights will contribute to our cash flows. We reassess this determination periodically or whenever events or substantive changes in circumstances occur.

We assess the recoverability of our cable franchise rights and other indefinite-lived intangible assets annually, or more frequently whenever events or substantive changes in circumstances indicate that the assets might be impaired. Our three Cable Communications divisions represent the unit of account we use to test for impairment of our cable franchise rights. We evaluate the unit of account used to test for impairment of our cable franchise rights and other indefinite-lived intangible assets periodically or whenever events or substantive changes in circumstances occur to ensure impairment testing is performed at an appropriate level. The assessment of recoverability may first consider qualitative factors to determine whether it is more likely than not that the fair value of an indefinite-lived intangible asset is less than its carrying amount. A quantitative assessment is performed if the qualitative assessment results in a more-likely-than-not determination or if a qualitative assessment is not performed. When performing a quantitative assessment, we estimate the fair value of our cable franchise rights and other indefinite-lived intangible assets primarily based on a discounted cash flow analysis that involves significant judgment. When analyzing the fair values indicated under the discounted cash flow models, we also consider multiples of Adjusted EBITDA generated by the underlying assets, current market transactions and profitability information. If the fair value of our cable franchise rights or other indefinite-lived intangible assets were less than the carrying amount, we would recognize an impairment charge for the difference between the estimated fair value and the carrying value of the assets. Unless presented separately, the impairment charge is included as a component of amortization expense. We did not recognize any material impairment charges in any of the periods presented.

Finite-Lived Intangible Assets

Estimated Amortization Expense of Finite-Lived Intangible Assets

(in millions)	
2020	$ 4,113
2021	$ 3,649
2022	$ 3,090
2023	$ 2,589
2024	$ 2,184

Finite-lived intangible assets are subject to amortization and consist primarily of customer relationships acquired in business combinations, software and intellectual property rights. Our finite-lived intangible assets are amortized primarily on a straight-line basis over their estimated useful life or the term of the associated agreement.

We capitalize direct development costs associated with internal-use software, including external direct costs of material and services and payroll costs for employees devoting time to these software projects. We also capitalize costs associated with the purchase of software licenses. We generally amortize them on a straight-line basis over a period not to exceed five years. We expense maintenance and training costs, as well as costs incurred during the preliminary stage of a project, as they are incurred. We capitalize initial operating system software costs and amortize them over the life of the associated hardware.

We evaluate the recoverability of our finite-lived intangible assets whenever events or substantive changes in circumstances indicate that the carrying amount may not be recoverable. The evaluation is based on the cash flows generated by the underlying asset groups, including estimated future operating results, trends or other determinants of fair value. If the total of the expected future undiscounted cash flows were less than the carrying amount of the asset group, we would recognize an impairment charge to the extent the carrying amount of the asset group exceeded its estimated fair value. Unless presented separately, the impairment charge is included as a component of amortization expense.

Note 13: Employee Benefit Plans

Deferred Compensation Plans

Year ended December 31 (in millions)	2019	2018	2017
Benefit obligation	**$ 3,273**	$ 2,885	$ 2,539
Interest expense	**$ 285**	$ 222	$ 209

We maintain unfunded, nonqualified deferred compensation plans for certain members of management and nonemployee directors. The amount of compensation deferred by each participant is based on participant elections. Participant accounts are credited with income primarily based on a fixed annual rate. Participants are eligible to receive distributions from their account based on elected deferral periods that are consistent with the plans and applicable tax law.

We have purchased life insurance policies to recover a portion of the future payments related to our deferred compensation plans. As of December 31, 2019 and 2018, the cash surrender value of these policies, which is recorded to other noncurrent assets, was $423 million and $351 million, respectively.

Pension and Postretirement Benefit Plans

We sponsor several 401(k) defined contribution retirement plans that allow eligible employees to contribute a portion of their compensation through payroll deductions in accordance with specified plan guidelines. We make contributions to the plans that include matching a percentage of the employees' contributions up to certain limits. In 2019, 2018 and 2017, expenses related to these plans totaled $573 million, $546 million and $458 million, respectively.

We sponsor a retiree health and welfare benefit plan that provides postretirement benefits to eligible employees. The plan provides, to eligible employees who retire from Comcast or its subsidiaries, an annual stipend for reimbursement of certain eligible healthcare costs. The amount of the stipend for an eligible retiree is fixed at a predetermined amount based on the retiree's years of service and whether the retiree is eligible for Medicare. NBCUniversal sponsors various nonqualified defined benefit pension plans for domestic employees. The future benefits for these plans have been frozen since the beginning of 2013. In addition to the defined benefit plans it sponsors, NBCUniversal is also obligated to reimburse The General Electric Company ("GE") for future benefit payments to those participants who were vested in the supplemental pension plan sponsored by GE at the time of the NBCUniversal transaction in 2011. These plans are all unfunded and not material.

We participate in various multiemployer benefit plans, including pension and postretirement benefit plans, that cover some of our employees and temporary employees who are represented by labor unions. We also participate in other multiemployer benefit plans that provide health and welfare and retirement savings benefits to active and retired participants. If we cease to be obligated to make contributions or were to otherwise withdraw from participation in any of these plans, applicable law would require us to fund our allocable share of the unfunded vested benefits, which is known as a withdrawal liability. In addition, actions taken by other participating employers may lead to adverse changes in the financial condition of one of these plans, which could result in an increase in our withdrawal liability. In 2019, 2018 and 2017, the total contributions we made to multiemployer benefit plans were not material.

Severance Benefits

We provide severance benefits to certain former employees. A liability is recorded when payment is probable, the amount is reasonably estimable, and the obligation relates to rights that have vested or accumulated. In 2019, 2018 and 2017, we recorded severance costs of $359 million, $243 million and $203 million, respectively.

Note 14: Equity

Common Stock

In the aggregate, holders of our Class A common stock have 66²/3% of the voting power of our common stock and holders of our Class B common stock have 33¹/3% of the voting power of our common stock, which percentage is generally non-dilutable under the terms of our articles of incorporation. Each share of our Class B common stock is entitled to 15 votes. The number of votes held by each share of our Class A common stock depends on the number of shares of Class A and Class B common stock outstanding at any given time. The 33¹/3% aggregate voting power of our Class B common stock cannot be diluted by additional issuances of any other class of common stock. Our Class B common stock is convertible, share for share, into Class A common stock, subject to certain restrictions.

Shares of Common Stock Outstanding

(in millions)	Class A	Class B
Balance, December 31, 2016	4,742	9
Stock compensation plans	19	—
Repurchases and retirements of common stock	(131)	—
Employee stock purchase plans	5	—
Balance, December 31, 2017	4,635	9
Stock compensation plans	15	—
Repurchases and retirements of common stock	(140)	—
Employee stock purchase plans	7	—
Balance, December 31, 2018	4,517	9
Stock compensation plans	**21**	**—**
Repurchases and retirements of common stock	**—**	**—**
Employee stock purchase plans	**6**	**—**
Balance, December 31, 2019	**4,544**	**9**

Share Repurchases

Effective January 1, 2017, our Board of Directors increased our share repurchase program authorization to $12 billion, which does not have an expiration date. As of December 31, 2019, $2.0 billion remained under this authorization.

Share Repurchases Under Share Repurchase Program Authorization

Year ended December 31 (in millions)	**2019**	2018	2017
Cash consideration	**$ —**	$ 5,000	$ 5,000
Shares repurchased	**—**	140	131

Accumulated Other Comprehensive Income (Loss)

December 31 (in millions)	**2019**	2018
Unrealized gains (losses) on marketable securities	**$ 6**	$ 3
Deferred gains (losses) on cash flow hedges	**139**	55
Unrecognized gains (losses) on employee benefit obligations	**265**	325
Cumulative translation adjustments	**637**	(751)
Accumulated other comprehensive income (loss), net of deferred taxes	**$ 1,047**	$ (368)

Note 15: Share-Based Compensation

The tables below provide information on our share-based compensation.

Recognized Share-Based Compensation Expense

Year ended December 31 (in millions)	**2019**	2018	2017
Restricted share units	**$ 564**	$ 402	$ 349
Stock options	**231**	205	205
Employee stock purchase plans	**30**	32	32
Total	**$ 825**	$ 639	$ 586

Our share-based compensation plans consist primarily of awards of RSUs and stock options to certain employees and directors as part of our approach to long-term incentive compensation. Awards generally vest over a period of 5 years and in the case of stock options, have a 10 year term. Additionally, through our employee stock purchase plans, employees are able to purchase shares of our common stock at a discount through payroll deductions. As of December 31, 2019, all of our stock options outstanding were net settled stock options. Net settled stock options, as opposed to stock options exercised with a cash payment, result in fewer shares being issued and no cash proceeds being received by us when the options are exercised.

Stock Options and Restricted Share Units

As of December 31, 2019, unless otherwise stated (in millions, except per share data)	Stock Options	RSUs
Awards granted during 2019	42	17
Weighted-average exercise price of awards granted during 2019	$ 40.50	
Stock options outstanding and nonvested RSUs	192	51
Weighted-average exercise price of stock options outstanding	$ 31.84	
Weighted-average fair value at grant date of nonvested RSUs		$ 36.54

The cost associated with our share-based compensation is based on an award's estimated fair value at the date of grant and is recognized over the period in which any related services are provided. RSUs are valued based on the closing price of our common stock on the date of grant and are discounted for the lack of dividends, if any, during the vesting period. We use the Black-Scholes option pricing model to estimate the fair value of stock option awards.

The table below presents the weighted-average fair value on the date of grant of RSUs and stock options awarded under our various plans and the related weighted-average valuation assumptions.

Year ended December 31	**2019**	2018	2017
RSUs fair value	**$ 40.42**	$ 35.56	$ 37.77
Stock options fair value	**$ 7.91**	$ 7.14	$ 7.01
Stock Option Valuation Assumptions:			
Dividend yield	**2.1%**	2.1%	1.7%
Expected volatility	**22.0%**	22.0%	20.1%
Risk-free interest rate	**2.5%**	2.7%	2.2%
Expected option life (in years)	**6.0**	6.0	6.1

As of December 31, 2019, we had unrecognized pretax compensation expense of $1.1 billion related to nonvested RSUs and unrecognized pretax compensation expense of $493 million related to nonvested stock options that will be recognized over a weighted-average period of approximately 1.5 years and 1.7 years, respectively. In 2019, 2018, and 2017, we recognized $196 million, $75 million and $297 million, respectively, as a reduction to income tax expense as a result of excess tax benefits associated with our share-based compensation plans.

Note 16: Supplemental Financial Information

Cash Payments for Interest and Income Taxes

Year ended December 31 (in millions)	**2019**	2018	2017
Interest	**$ 4,254**	$ 2,897	$ 2,820
Income taxes	**$ 3,231**	$ 2,355	$ 4,057

Noncash Activities

During 2019:

- we acquired $1.9 billion of property and equipment and intangible assets that were accrued but unpaid
- we recorded a liability of $956 million for a quarterly cash dividend of $0.21 per common share paid in January 2020

During 2018:

- we acquired $2.1 billion of property and equipment and intangible assets that were accrued but unpaid
- we recorded a liability of $860 million for a quarterly cash dividend of $0.19 per common share paid in January 2019

- we received noncash contributions from noncontrolling interests totaling $391 million related to Universal Beijing Resort (see Note 8)

During 2017:

- we acquired $1.2 billion of property and equipment and intangible assets that were accrued but unpaid
- we recorded a liability of $732 million for a quarterly cash dividend of $0.1575 per common share paid in January 2018
- we completed a senior notes exchange in the fourth quarter of 2017 in which we issued $5.5 billion aggregate principal amount of new senior notes in exchange for $3.9 billion aggregate principal amount of certain series of outstanding senior notes that were issued by us and NBCUniversal

Cash, Cash Equivalents and Restricted Cash

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported in the consolidated balance sheet to the total of the amounts reported in our consolidated statement of cash flows.

December 31 (in millions)		**2019**		2018
Cash and cash equivalents	**$**	**5,500**	$	3,814
Restricted cash included in other current assets		**42**		46
Restricted cash included in other noncurrent assets, net		**47**		49
Cash, cash equivalents and restricted cash, end of year	**$**	**5,589**	$	3,909

The carrying amounts of our cash equivalents approximate their fair values. Our cash equivalents consist primarily of money market funds and U.S. government obligations, as well as commercial paper and certificates of deposit with maturities of three months or less when purchased.

Note 17: Commitments and Contingencies

Programming and Talent Commitments

NBCUniversal and Sky enter into long-term commitments with third parties in the ordinary course of business, including commitments to acquire film and television programming, obligations under various creative talent agreements, and various other television-related commitments. Some of NBCUniversal's employees, including writers, directors, actors, technical and production personnel, and others, as well as some of its on-air and creative talent, are covered by collective bargaining agreements or works councils. As of December 31, 2019, the total number of NBCUniversal employees covered by collective bargaining agreements was 9,400 full-time equivalent employees. Approximately, 12% of these full-time equivalent employees were covered by collective bargaining agreements that have expired or are scheduled to expire during 2020.

We, through Comcast Spectacor, have employment agreements with both players and coaches of the Philadelphia Flyers. Certain of these employment agreements, which provide for payments that are guaranteed regardless of employee injury or termination, are covered by disability insurance if certain conditions are met.

The table below summarizes our minimum annual programming and talent commitments. Programming and talent commitments include acquired film and television programming, broadcast rights to sporting events such as the Olympics, and other programming commitments, as well as various contracts with creative talent.

As of December 31, 2019 (in millions)		Programming and Talent Commitments
2020	$	14,682
2021	$	7,701
2022	$	7,849
2023	$	3,674
2024	$	4,595
Thereafter	$	13,230

Leases

Our leases consist primarily of real estate, vehicles and other equipment. We determine if an arrangement is a lease at inception. Lease assets and liabilities are recognized upon commencement of the lease based on the present value of the future minimum lease payments over the lease term. The lease term includes options to extend the lease when it is reasonably certain that we will exercise that option. We generally utilize our incremental borrowing rate based on information available at the commencement of the lease in determining the present value of future payments. The lease asset also includes any lease payments made and initial direct costs incurred and excludes lease incentives. Lease assets and liabilities are not recorded for leases with an initial term of one year or less. Lease expense for operating leases recorded in the balance sheet is included in operating costs and expenses and is based on the future minimum lease payments recognized on a straight-line basis over the term of the lease plus any variable lease costs. Operating lease expenses, inclusive of short-term and variable lease expenses, recognized in our consolidated statement of income for the period ended December 31, 2019 was $1.1 billion. This amount does not include lease costs associated with production activities or other amounts capitalized in our consolidated balance sheet, which are not material.

The table below summarizes the operating lease assets and liabilities recorded in our consolidated balance sheet.

Consolidated Balance Sheet

(in millions)		December 31, 2019
Other noncurrent assets, net	$	4,038
Accrued expenses and other current liabilities	$	715
Other noncurrent liabilities	$	3,891

The table below summarizes our future minimum lease commitments for operating leases as of December 31, 2019 applying the new guidance.

(in millions)		December 31, 2019
2020	$	877
2021		791
2022		669
2023		566
2024		480
Thereafter		2,243
Total future minimum lease payments		5,626
Less: imputed interest		1,020
Total liability	$	4,606

The weighted average remaining lease term for operating leases and the weighted average discount rate used to calculate our operating lease liabilities as of December 31, 2019 were 10 years and 3.74%, respectively.

In 2019, cash payments for operating leases recorded in the consolidated balance sheet were $914 million. Leases that have not yet commenced and lease assets and liabilities associated with leases entered into during the year were not material.

The tables below summarize our future minimum rental commitments for operating leases as of December 31, 2018 and rent expense for operating leases using the accounting guidance in effect at that time. These amounts have been updated to include $804 million of future cash payments related to additional contracts determined to be operating leases in connection with the Sky transaction.

(in millions)		December 31, 2018
2019	$	891
2020	$	824
2021	$	722
2022	$	592
2023	$	513
Thereafter	$	2,608

Year ended December 31 (in millions)		2018		2017
Rental expense	$	779	$	839

Contractual Obligation

We are party to a contractual obligation that involves an interest held by a third party in the revenue of certain theme parks. The arrangement provides the counterparty with the right to periodic payments associated with current period revenue which are recorded as an operating expense, and beginning in June 2017, the option to require NBCUniversal to purchase the interest for cash in an amount based on a contractual formula. The contractual formula is based on an average of specified historical theme park revenue at the time of exercise, which amount could be significantly higher than our carrying value. As of December 31, 2019, our carrying value was $1.1 billion, and the estimated value of the contractual obligation was $1.8 billion based on inputs to the contractual formula as of that date.

Redeemable Subsidiary Preferred Stock

NBCUniversal Enterprise is a holding company that we control and consolidate whose principal assets are its interests in NBCUniversal Holdings. The holders of the Series A cumulative preferred stock of NBCUniversal Enterprise have the right to cause NBCUniversal Enterprise to redeem their shares at a price equal to the $725 million aggregate liquidation preference plus accrued but unpaid dividends for a 30 day period beginning on March 19, 2020 and thereafter on every third anniversary of such date (each such date, a “put date”). The NBCUniversal Enterprise preferred stock pays dividends at a fixed rate of 5.25% per year. Shares of preferred stock can be called for redemption by NBCUniversal Enterprise at a price equal to the liquidation preference plus accrued but unpaid dividends one year following the put date applicable to such shares. Because certain of these redemption provisions are outside of our control, the NBCUniversal Enterprise preferred stock is presented outside of equity under the caption “redeemable noncontrolling interests and redeemable subsidiary preferred stock” in our consolidated balance sheet. Its initial value was based on the liquidation preference of the preferred stock and is adjusted for accrued but unpaid dividends. As of December 31, 2019 and 2018, the fair value of the NBCUniversal Enterprise redeemable subsidiary preferred stock was $749 million and $741 million, respectively. The estimated fair values are based on level 2 inputs that use pricing models whose inputs are derived primarily from or corroborated by observable market data through correlation or other means for substantially the full term of the financial instrument.

Contingencies

We are subject to legal proceedings and claims that arise in the ordinary course of our business. While the amount of ultimate liability with respect to such actions is not expected to materially affect our results of operations, cash flows or financial position, any litigation resulting from any such legal proceedings or claims could be time-consuming and injure our reputation.

Note 18: Quarterly Financial Information (Unaudited)

(in millions, except per share data)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
2019					
Revenue	**$ 26,859**	**$ 26,858**	**$ 26,827**	**$ 28,398**	**$ 108,942**
Operating income	**$ 5,182**	**$ 5,356**	**$ 5,340**	**$ 5,247**	**$ 21,125**
Net income attributable to Comcast Corporation	**$ 3,553**	**$ 3,125**	**$ 3,217**	**$ 3,162**	**$ 13,057**
Basic earnings per common share attributable to Comcast Corporation shareholders	**$ 0.78**	**$ 0.69**	**$ 0.71**	**$ 0.69**	**$ 2.87**
Diluted earnings per common share attributable to Comcast Corporation shareholders	**$ 0.77**	**$ 0.68**	**$ 0.70**	**$ 0.68**	**$ 2.83**
Dividends declared per common share	**$ 0.21**	**$ 0.21**	**$ 0.21**	**$ 0.21**	**$ 0.84**
2018[(a)]					
Revenue	$ 22,791	$ 21,735	$ 22,135	$ 27,846	$ 94,507
Operating income	$ 4,645	$ 5,014	$ 4,836	$ 4,514	$ 19,009
Net income attributable to Comcast Corporation	$ 3,118	$ 3,216	$ 2,886	$ 2,511	$ 11,731
Basic earnings per common share attributable to Comcast Corporation shareholders	$ 0.67	$ 0.70	$ 0.63	$ 0.55	$ 2.56
Diluted earnings per common share attributable to Comcast Corporation shareholders	$ 0.66	$ 0.69	$ 0.62	$ 0.55	$ 2.53
Dividends declared per common share	$ 0.19	$ 0.19	$ 0.19	$ 0.19	$ 0.76

Minor differences may exist due to rounding.

(a) The 2018 amounts include the operations of Sky from October 9, 2018 through December 31, 2018. See Note 8 for additional information.

Note 19: Condensed Consolidating Financial Information

Comcast (“Comcast Parent”), Comcast Cable Communications, LLC (“CCCL Parent”) and NBCUniversal (“NBCUniversal Media Parent”) fully and unconditionally guarantee each other’s debt. See Note 7 for additional information on the cross-guarantee structure.

Condensed Consolidating Statement of Income

For the Year Ended December 31, 2019 (in millions)	Comcast Parent	Comcast Holdings	CCCL Parent	NBCUniversal Media Parent	Non-Guarantor Subsidiaries	Elimination and Consolidation Adjustments	Consolidated Comcast Corporation
Revenue:							
Service revenue	$ —	$ —	$ —	$ —	$ 108,942	$ —	$ 108,942
Management fee revenue	1,262	—	1,236	—	—	(2,498)	—
Total revenue	1,262	—	1,236	—	108,942	(2,498)	108,942
Costs and Expenses:							
Programming and production	—	—	—	—	34,440	—	34,440
Other operating and administrative	801	16	1,236	957	32,295	(2,498)	32,807
Advertising, marketing and promotion	—	—	—	—	7,617	—	7,617
Depreciation	61	—	—	—	8,602	—	8,663
Amortization	5	—	—	—	4,285	—	4,290
Other operating gains	—	—	—	—	—	—	—
Total costs and expenses	867	16	1,236	957	87,239	(2,498)	87,817
Operating income (loss)	395	(16)	—	(957)	21,703	—	21,125
Interest expense	(3,511)	(13)	(190)	(474)	(379)	—	(4,567)
Investment and other income (loss), net	15,581	15,366	13,787	7,260	5,755	(57,311)	438
Income (loss) before income taxes	12,465	15,337	13,597	5,829	27,079	(57,311)	16,996
Income tax (expense) benefit	592	(9)	40	(45)	(4,251)	—	(3,673)
Net income (loss)	13,057	15,328	13,637	5,784	22,828	(57,311)	13,323
Less: Net income attributable to noncontrolling interests and redeemable subsidiary preferred stock	—	—	—	—	266	—	266
Net income (loss) attributable to Comcast Corporation	**$ 13,057**	**$ 15,328**	**$ 13,637**	**$ 5,784**	**$ 22,562**	**$ (57,311)**	**$ 13,057**
Comprehensive income (loss) attributable to Comcast Corporation	**$ 14,472**	**$ 15,321**	**$ 13,641**	**$ 5,744**	**$ 24,210**	**$ (58,916)**	**$ 14,472**

Comcast Corporation

Condensed Consolidating Statement of Income

For the Year Ended December 31, 2018 (in millions)	Comcast Parent	Comcast Holdings	CCCL Parent	NBCUniversal Media Parent	Non-Guarantor Subsidiaries	Elimination and Consolidation Adjustments	Consolidated Comcast Corporation
Revenue:							
Service revenue	$ —	$ —	$ —	$ —	$ 94,507	$ —	$ 94,507
Management fee revenue	1,197	—	1,175	—	—	(2,372)	—
Total revenue	1,197	—	1,175	—	94,507	(2,372)	94,507
Costs and Expenses:							
Programming and production	—	—	—	—	29,692	—	29,692
Other operating and administrative	947	—	1,175	1,023	27,321	(2,372)	28,094
Advertising, marketing and promotion	—	—	—	—	7,036	—	7,036
Depreciation	46	—	—	—	8,235	—	8,281
Amortization	5	—	—	—	2,731	—	2,736
Other operating gains	—	—	—	—	(341)	—	(341)
Total costs and expenses	998	—	1,175	1,023	74,674	(2,372)	75,498
Operating income (loss)	199	—	—	(1,023)	19,833	—	19,009
Interest expense	(2,644)	(12)	(190)	(430)	(266)	—	(3,542)
Investment and other income (loss), net	13,638	13,604	12,021	6,694	5,054	(51,236)	(225)
Income (loss) before income taxes	11,193	13,592	11,831	5,241	24,621	(51,236)	15,242
Income tax (expense) benefit	538	8	40	(4)	(3,962)	—	(3,380)
Net income (loss)	11,731	13,600	11,871	5,237	20,659	(51,236)	11,862
Less: Net income loss attributable to noncontrolling interests and redeemable subsidiary preferred stock	—	—	—	—	131	—	131
Net income (loss) attributable to Comcast Corporation	**$ 11,731**	**$ 13,600**	**$ 11,871**	**$ 5,237**	**$ 20,528**	**$ (51,236)**	**$ 11,731**
Comprehensive income (loss) attributable to Comcast Corporation	**$ 10,908**	**$ 13,623**	**$ 11,873**	**$ 5,279**	**$ 19,553**	**$ (50,328)**	**$ 10,908**

Comcast Corporation

Condensed Consolidating Statement of Income

For the Year Ended December 31, 2017 (in millions)	Comcast Parent	Comcast Holdings	CCCL Parent	NBCUniversal Media Parent	Non-Guarantor Subsidiaries	Elimination and Consolidation Adjustments	Consolidated Comcast Corporation
Revenue:							
Service revenue	$ —	$ —	$ —	$ —	$ 85,029	$ —	$ 85,029
Management fee revenue	1,128	—	1,109	—	—	(2,237)	—
Total revenue	1,128	—	1,109	—	85,029	(2,237)	85,029
Costs and Expenses:							
Programming and production	—	—	—	—	25,355	—	25,355
Other operating and administrative	766	—	1,109	1,044	24,767	(2,237)	25,449
Advertising, marketing and promotion	—	—	—	—	6,519	—	6,519
Depreciation	31	—	—	—	7,883	—	7,914
Amortization	6	—	—	—	2,210	—	2,216
Other operating gains	—	—	—	—	(442)	—	(442)
Total costs and expenses	803	—	1,109	1,044	66,292	(2,237)	67,011
Operating income (loss)	325	—	—	(1,044)	18,737	—	18,018
Interest expense	(2,172)	(12)	(207)	(456)	(239)	—	(3,086)
Investment and other income (loss), net	24,076	21,767	19,610	6,584	5,545	(77,161)	421
Income (loss) before income taxes	22,229	21,755	19,403	5,084	24,043	(77,161)	15,353
Income tax (expense) benefit	506	156	71	(4)	6,840	—	7,569
Net income (loss)	22,735	21,911	19,474	5,080	30,883	(77,161)	22,922
Less: Net income attributable to noncontrolling interests and redeemable subsidiary preferred stock	—	—	—	—	187	—	187
Net income (loss) attributable to Comcast Corporation	**$ 22,735**	**$ 21,911**	**$ 19,474**	**$ 5,080**	**$ 30,696**	**$ (77,161)**	**$ 22,735**
Comprehensive income (loss) attributable to Comcast Corporation	**$ 22,822**	**$ 21,909**	**$ 19,477**	**$ 5,054**	**$ 30,558**	**$ (76,998)**	**$ 22,822**

Condensed Consolidating Statement of Cash Flows

For the Year Ended December 31, 2019 (in millions)	Comcast Parent	Comcast Holdings	CCCL Parent	NBCUniversal Media Parent	Non-Guarantor Subsidiaries	Elimination and Consolidation Adjustments	Consolidated Comcast Corporation
Net cash provided by (used in) operating activities	$ (1,693)	$ 318	$ (119)	$ (1,232)	$ 28,423	$ —	$ 25,697
Investing Activities:							
Net transactions with affiliates	10,218	(318)	119	3,354	(13,373)	—	—
Capital expenditures	(42)	—	—	—	(9,911)	—	(9,953)
Cash paid for intangible assets	(4)	—	—	—	(2,471)	—	(2,475)
Acquisitions and construction of real estate properties	(51)	—	—	—	(3)	—	(54)
Construction of Universal Beijing Resort	—	—	—	—	(1,116)	—	(1,116)
Acquisitions, net of cash acquired	—	—	—	—	(370)	—	(370)
Proceeds from sales of businesses and investments	—	—	—	—	886	—	886
Purchases of investments	(36)	—	—	(72)	(1,791)	—	(1,899)
Other	—	—	—	—	140	—	140
Net cash provided by (used in) investing activities	10,085	(318)	119	3,282	(28,009)	—	(14,841)
Financing Activities:							
Proceeds from (repayments of) short-term borrowings, net	—	—	—	—	(1,288)	—	(1,288)
Proceeds from borrowings	4,741	—	—	—	738	—	5,479
Proceeds from collateralized obligation	—	—	—	—	5,175	—	5,175
Repurchases and repayments of debt	(8,821)	—	—	(2,010)	(3,523)	—	(14,354)
Repurchases of common stock under repurchase program and employee plans	(504)	—	—	—	—	—	(504)
Dividends paid	(3,735)	—	—	—	—	—	(3,735)
Distributions to noncontrolling interests and dividends for redeemable subsidiary preferred stock	—	—	—	—	(311)	—	(311)
Other	(78)	—	—	(40)	475	—	357
Net cash provided by (used in) financing activities	(8,397)	—	—	(2,050)	1,266	—	(9,181)
Impact of foreign currency on cash, cash equivalents and restricted cash	5	—	—	—	—	—	5
Increase (decrease) in cash and cash equivalents and restricted cash	—	—	—	—	1,680	—	1,680
Cash, cash equivalents and restricted cash, beginning of year	—	—	—	416	3,493	—	3,909
Cash, cash equivalents and restricted cash, end of year	**$ —**	**$ —**	**$ —**	**$ 416**	**$ 5,173**	**$ —**	**$ 5,589**

Comcast Corporation

Condensed Consolidating Statement of Cash Flows

For the Year Ended December 31, 2018 (in millions)	Comcast Parent	Comcast Holdings	CCCL Parent	NBCUniversal Media Parent	Non-Guarantor Subsidiaries	Elimination and Consolidation Adjustments	Consolidated Comcast Corporation
Net cash provided by (used in) operating activities	$ (2,245)	$ 126	$ (112)	$ (1,430)	$ 27,958	$ —	$ 24,297
Investing Activities:							
Net transactions with affiliates	(26,179)	(575)	112	1,336	25,306	—	—
Capital expenditures	(27)	—	—	—	(9,747)	—	(9,774)
Cash paid for intangible assets	(4)	—	—	—	(1,931)	—	(1,935)
Acquisitions and construction of real estate properties	(105)	—	—	—	(38)	—	(143)
Construction of Universal Beijing Resort	—	—	—	—	(460)	—	(460)
Acquisitions, net of cash acquired	—	—	—	—	(38,219)	—	(38,219)
Proceeds from sales of businesses and investments	—	—	—	68	73	—	141
Purchases of investments	(126)	—	—	(50)	(1,081)	—	(1,257)
Other	148	449	—	—	196	—	793
Net cash provided by (used in) investing activities	(26,293)	(126)	112	1,354	(25,901)	—	(50,854)
Financing Activities:							
Proceeds from (repayments of) short-term borrowings, net	(902)	—	—	—	1,281	—	379
Proceeds from borrowings	44,113	—	—	—	668	—	44,781
Repurchases and repayments of debt	(5,737)	—	—	(4)	(3,057)	—	(8,798)
Repurchases of common stock under repurchase program and employee plans	(5,320)	—	—	—	—	—	(5,320)
Dividends paid	(3,352)	—	—	—	—	—	(3,352)
Distributions to noncontrolling interests and dividends for redeemable subsidiary preferred stock	—	—	—	—	(277)	—	(277)
Other	(201)	—	—	—	(72)	—	(273)
Net cash provided by (used in) financing activities	28,601	—	—	(4)	(1,457)	—	27,140
Impact of foreign currency on cash, cash equivalents and restricted cash	(63)	—	—	—	(182)	—	(245)
Increase (decrease) in cash and cash equivalents and restricted cash	—	—	—	(80)	418	—	338
Cash, cash equivalents and restricted cash, beginning of year	—	—	—	496	3,075	—	3,571
Cash, cash equivalents and restricted cash, end of year	**$ —**	**$ —**	**$ —**	**$ 416**	**$ 3,493**	**$ —**	**$ 3,909**

Comcast Corporation

Condensed Consolidating Statement of Cash Flows

For the Year Ended December 31, 2017 (in millions)	Comcast Parent	Comcast Holdings	CCCL Parent	NBCUniversal Media Parent	Non-Guarantor Subsidiaries	Elimination and Consolidation Adjustments	Consolidated Comcast Corporation
Net cash provided by (used in) operating activities	$ 151	$ 15	$ (147)	$ (1,439)	$ 22,681	$ —	$ 21,261
Investing Activities:							
Net transactions with affiliates	5,578	(5)	757	1,447	(7,777)	—	—
Capital expenditures	(12)	—	—	—	(9,538)	—	(9,550)
Cash paid for intangible assets	(4)	—	—	—	(1,601)	—	(1,605)
Acquisitions and construction of real estate properties	(267)	—	—	—	(151)	—	(418)
Construction of Universal Beijing Resort	—	—	—	—	(71)	—	(71)
Acquisitions, net of cash acquired	—	—	—	—	(532)	—	(532)
Proceeds from sales of businesses and investments	—	—	—	14	136	—	150
Purchases of investments	(70)	(10)	(60)	(62)	(2,090)	—	(2,292)
Other	101	—	—	58	626	—	785
Net cash provided by (used in) investing activities	5,326	(15)	697	1,457	(20,998)	—	(13,533)
Financing Activities:							
Proceeds from (repayments of) short-term borrowings, net	(837)	—	—	—	(1,068)	—	(1,905)
Proceeds from borrowings	5,997	—	—	—	5,469	—	11,466
Repurchases and repayments of debt	(2,288)	—	(550)	(4)	(3,522)	—	(6,364)
Repurchases of common stock under repurchase program and employee plans	(5,435)	—	—	—	—	—	(5,435)
Dividends paid	(2,883)	—	—	—	—	—	(2,883)
Purchase of Universal Studios Japan noncontrolling interests	—	—	—	—	(2,299)	—	(2,299)
Distributions to noncontrolling interests and dividends for redeemable subsidiary preferred stock	—	—	—	—	(252)	—	(252)
Other	(31)	—	—	—	131	—	100
Net cash provided by (used in) financing activities	(5,477)	—	(550)	(4)	(1,541)	—	(7,572)
Increase (decrease) in cash and cash equivalents and restricted cash	—	—	—	14	142	—	156
Cash, cash equivalents and restricted cash, beginning of year	—	—	—	482	2,933	—	3,415
Cash, cash equivalents and restricted cash, end of year	**$ —**	**$ —**	**$ —**	**$ 496**	**$ 3,075**	**$ —**	**$ 3,571**

Condensed Consolidating Balance Sheet

December 31, 2019 (in millions)	Comcast Parent	Comcast Holdings	CCCL Parent	NBCUniversal Media Parent	Non-Guarantor Subsidiaries	Elimination and Consolidation Adjustments	Consolidated Comcast Corporation
Assets							
Cash and cash equivalents	$ —	$ —	$ —	$ 416	$ 5,084	$ —	$ 5,500
Receivables, net	—	—	—	—	11,292	—	11,292
Programming rights	—	—	—	—	3,877	—	3,877
Other current assets	115	19	—	24	4,565	—	4,723
Total current assets	115	19	—	440	24,818	—	25,392
Film and television costs	—	—	—	—	8,933	—	8,933
Investments	270	12	156	1,085	5,466	—	6,989
Investment securing collateralized obligation	—	—	—	—	694	—	694
Investments in and amounts due from subsidiaries eliminated upon consolidation	164,754	152,179	135,536	55,472	92,925	(600,866)	—
Property and equipment, net	660	—	—	—	47,662	—	48,322
Goodwill	—	—	—	—	68,725	—	68,725
Franchise rights	—	—	—	—	59,365	—	59,365
Other intangible assets, net	9	—	—	—	36,119	—	36,128
Other noncurrent assets, net	1,058	327	—	97	7,919	(535)	8,866
Total assets	**$ 166,866**	**$ 152,537**	**$ 135,692**	**$ 57,094**	**$ 352,626**	**$ (601,401)**	**$ 263,414**
Liabilities and Equity							
Accounts payable and accrued expenses related to trade creditors	$ 58	$ —	$ —	$ —	$ 10,768	$ —	$ 10,826
Accrued participations and residuals	—	—	—	—	1,730	—	1,730
Deferred revenue	—	—	—	—	2,768	—	2,768
Accrued expenses and other current liabilities	2,333	245	388	380	7,170	—	10,516
Current portion of long-term debt	2,731	—	—	7	1,714	—	4,452
Total current liabilities	5,122	245	388	387	24,150	—	30,292
Long-term debt, less current portion	75,786	154	2,100	5,752	13,973	—	97,765
Collateralized obligation	—	—	—	—	5,166	—	5,166
Deferred income taxes	—	350	—	67	28,298	(535)	28,180
Other noncurrent liabilities	3,232	145	—	1,634	11,754	—	16,765
Redeemable noncontrolling interests and redeemable subsidiary preferred stock	—	—	—	—	1,372	—	1,372
Equity:							
Common stock	54	—	—	—	—	—	54
Other shareholders' equity	82,672	151,643	133,204	49,254	266,765	(600,866)	82,672
Total Comcast Corporation shareholders' equity	82,726	151,643	133,204	49,254	266,765	(600,866)	82,726
Noncontrolling interests	—	—	—	—	1,148	—	1,148
Total equity	82,726	151,643	133,204	49,254	267,913	(600,866)	83,874
Total liabilities and equity	**$ 166,866**	**$ 152,537**	**$ 135,692**	**$ 57,094**	**$ 352,626**	**$ (601,401)**	**$ 263,414**

Comcast Corporation

Condensed Consolidating Balance Sheet

December 31, 2018 (in millions)	Comcast Parent	Comcast Holdings	CCCL Parent	NBCUniversal Media Parent	Non-Guarantor Subsidiaries	Elimination and Consolidation Adjustments	Consolidated Comcast Corporation
Assets							
Cash and cash equivalents	$ —	$ —	$ —	$ 416	$ 3,398	$ —	$ 3,814
Receivables, net	—	—	—	—	11,104	—	11,104
Programming rights	—	—	—	—	3,746	—	3,746
Other current assets	66	20	—	28	3,070	—	3,184
Total current assets	66	20	—	444	21,318	—	21,848
Film and television costs	—	—	—	—	7,837	—	7,837
Investments	270	11	143	790	6,669	—	7,883
Investments in and amounts due from subsidiaries eliminated upon consolidation	157,264	147,028	130,214	53,853	97,872	(586,231)	—
Property and equipment, net	670	—	—	—	43,767	—	44,437
Goodwill	—	—	—	—	66,154	—	66,154
Franchise Rights	—	—	—	—	59,365	—	59,365
Other intangible assets, net	11	—	—	—	38,347	—	38,358
Other noncurrent assets, net	1,057	208	—	85	4,910	(458)	5,802
Total assets	**$ 159,338**	**$ 147,267**	**$ 130,357**	**$ 55,172**	**$ 346,239**	**$ (586,689)**	**$ 251,684**
Liabilities and Equity							
Accounts payable and accrued expenses related to trade creditors	$ 2	$ —	$ —	$ —	$ 8,492	$ —	$ 8,494
Accrued participations and residuals	—	—	—	—	1,808	—	1,808
Deferred revenue	—	—	—	—	2,182	—	2,182
Accrued expenses and other current liabilities	2,357	150	360	282	7,572	—	10,721
Current portion of long-term debt	699	—	—	4	3,695	—	4,398
Total current liabilities	3,058	150	360	286	23,749	—	27,603
Long-term debt, less current portion	81,661	146	2,100	7,748	15,690	—	107,345
Deferred income taxes	—	314	—	65	27,734	(524)	27,589
Other noncurrent liabilities	3,006	—	—	1,201	11,056	66	15,329
Redeemable noncontrolling interests and redeemable subsidiary preferred stock	—	—	—	—	1,316	—	1,316
Equity:							
Common stock	54	—	—	—	—	—	54
Other shareholders' equity	71,559	146,657	127,897	45,872	265,805	(586,231)	71,559
Total Comcast Corporation shareholders' equity	71,613	146,657	127,897	45,872	265,805	(586,231)	71,613
Noncontrolling interests	—	—	—	—	889	—	889
Total equity	71,613	146,657	127,897	45,872	266,694	(586,231)	72,502
Total liabilities and equity	**$ 159,338**	**$ 147,267**	**$ 130,357**	**$ 55,172**	**$ 346,239**	**$ (586,689)**	**$ 251,684**

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

None.

Item 9A: Controls and Procedures

Comcast Corporation

Conclusions regarding disclosure controls and procedures

Our principal executive and principal financial officers, after evaluating the effectiveness of Comcast's disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) as of the end of the period covered by this report, have concluded that, based on the evaluation of these controls and procedures required by paragraph (b) of Exchange Act Rules 13a-15 or 15d-15, Comcast's disclosure controls and procedures were effective.

Management's annual report on internal control over financial reporting

Refer to Management's Report on Comcast's Internal Control Over Financial Reporting on page 63.

Attestation report of the registered public accounting firm

Refer to Report of Independent Registered Public Accounting Firm on page 64.

Changes in internal control over financial reporting

There were no changes in Comcast's internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 or 15d-15 that occurred during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect, Comcast's internal control over financial reporting.

NBCUniversal Media, LLC

Conclusions regarding disclosure controls and procedures

Our principal executive and principal financial officers, after evaluating the effectiveness of NBCUniversal's disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) as of the end of the period covered by this report, have concluded that, based on the evaluation of these controls and procedures required by paragraph (b) of Exchange Act Rules 13a-15 or 15d-15, NBCUniversal's disclosure controls and procedures were effective.

Management's annual report on internal control over financial reporting

Our management is responsible for establishing and maintaining an adequate system of internal control over financial reporting. Our system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States.

Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets
- provide reasonable assurance that our transactions are recorded as necessary to permit preparation of our financial statements in accordance with accounting principles generally accepted in the United States, and that our receipts and expenditures are being made only in accordance with authorizations of our management and our directors
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Further, because of changes in conditions, effectiveness of internal control over financial reporting may vary over time. Our system contains self-monitoring mechanisms, and actions are taken to correct deficiencies as they are identified.

Our management conducted an evaluation of the effectiveness of the system of internal control over financial reporting based on the framework in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the

Treadway Commission. Based on this evaluation, our management concluded that NBCUniversal's system of internal control over financial reporting was effective as of December 31, 2019.

Changes in internal control over financial reporting

There were no changes in NBCUniversal's internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 or 15d-15 that occurred during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect, NBCUniversal's internal control over financial reporting.

Item 9B: Other Information

Iran Threat Reduction and Syria Human Rights Act Disclosure

As previously disclosed in our Form 10-Q filings for 2019, pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012, companies are required, among other things, to disclose certain activities, transactions or dealings with the Government of Iran or entities controlled directly or indirectly by the Government of Iran. Disclosure is generally required even where the activities, transactions or dealings are conducted in compliance with applicable laws and regulations and are *de minimis*. As of the date of this report, we are not aware of any activity, transaction or dealing during the year ended December 31, 2019 that requires disclosure under the Act, except with respect to the following:

- Prior to our August 2016 acquisition of DreamWorks Animation, a non-U.S. subsidiary of DreamWorks Animation entered into a licensing agreement in January 2016 that licensed a prior season of a children's animated television series for a three-year, non-cancelable term and for a one-time fee of $5,200 to a broadcasting company that is owned and controlled by the Government of Iran. The broadcasting company paid the license fee in the first quarter of 2016. We believe that DreamWorks Animation conducted its licensing activity in compliance with applicable laws and that the license is for the permissible exportation of informational materials pursuant to certain statutory and regulatory exemptions from U.S. sanctions.
- Prior to our fourth quarter 2018 acquisition of Sky, a non-U.S. subsidiary of Sky entered into two licensing agreements that licensed some of Sky's owned programming content to a broadcasting company that is owned and controlled by the Government of Iran. The first agreement was entered into in June 2012, and was amended in July 2016, to license 150 hours of programming content for various three-year license terms for a one-time fee of €86,250. The last remaining programming license under this agreement expires in January 2019. The second agreement was entered into in June 2015 to license 80 hours of programming content for various three-year license terms for a one-time fee of €45,700. To date, no programming content has been provided, and the license fee has not been paid, pursuant to the agreement. We believe that Sky conducted its licensing activity in compliance with applicable laws and that the licenses are for the permissible exportation of informational materials pursuant to certain statutory and regulatory exemptions from U.S. sanctions.

Part III

Item 10: Directors, Executive Officers and Corporate Governance

Comcast

Except for the information regarding executive officers required by Item 401 of Regulation S-K, we incorporate the information required by this item by reference to our definitive proxy statement for our annual meeting of shareholders presently scheduled to be held in June 2020. We refer to this proxy statement as the 2020 Proxy Statement.

The term of office of each of our executive officers continues until his successor is selected and qualified or until his earlier death, resignation or removal. The following table sets forth information concerning our executive officers, including their ages, positions and tenure, as of the date of this Annual Report on Form 10-K.

Name	Age	Officer Since	Position with Comcast
Brian L. Roberts	60	1986	Chairman and Chief Executive Officer; President
Michael J. Cavanagh	54	2015	Senior Executive Vice President; Chief Financial Officer
Stephen B. Burke	61	1998	Senior Executive Vice President; Chairman, NBCUniversal
David L. Cohen	64	2002	Senior Executive Vice President
David N. Watson	60	2017	Senior Executive Vice President; President and Chief Executive Officer, Comcast Cable
Thomas J. Reid	55	2019	Senior Executive Vice President; General Counsel; Secretary
Daniel C. Murdock	46	2017	Senior Vice President; Chief Accounting Officer and Controller

Brian L. Roberts has served as a director and as our President, Chief Executive Officer and Chairman of the Board for more than five years. As of December 31, 2019, Mr. Roberts had sole voting power over approximately $33^{1}/_{3}$% of the combined voting power of our two classes of common stock. He is a son of our late founder, Mr. Ralph J. Roberts.

Michael J. Cavanagh has served as the Chief Financial Officer of Comcast Corporation since July 2015. Prior to joining our company, Mr. Cavanagh had been Co-President and Co-Chief Operating Officer for The Carlyle Group, a global investment firm, since 2014. Prior to that, Mr. Cavanagh was the Co-Chief Executive Officer of the Corporate & Investment Bank of JPMorgan Chase & Co. from 2012 until 2014; the Chief Executive Officer of JPMorgan Chase & Co.'s Treasury & Securities Services business from 2010 to 2012; and the Chief Financial Officer of JPMorgan Chase & Co. from 2004 to 2010. Mr. Cavanagh is also a director of Yum! Brands, Inc.

Stephen B. Burke was appointed Chairman of NBCUniversal effective January 1, 2020 and has served as a Senior Executive Vice President of Comcast Corporation since May 2015. From January 2011 to December 2019, Mr. Burke was the President and Chief Executive Officer of NBCUniversal. Prior to leading NBCUniversal, Mr. Burke had been Comcast's Chief Operating Officer and the President of Comcast Cable. Mr. Burke is also a director of JPMorgan Chase & Co. and Berkshire Hathaway Inc.

David L. Cohen has served as a Senior Executive Vice President since March 2015 and previously had served as an Executive Vice President for more than five years. Mr. Cohen is also a director of the FS Global Credit Opportunities Funds, the FS Global Credit Opportunities Fund A and the FS Global Credit Opportunities Fund D.

David N. Watson has served as a Senior Executive Vice President, Comcast Corporation and President and Chief Executive Officer, Comcast Cable since April 2017 and previously had served as Chief Operating Officer, Comcast Cable for more than five years. Mr. Watson is also a director of Amkor Technology, Inc.

Thomas J. Reid has served as a Senior Executive Vice President, General Counsel and Secretary since April 2019. Prior to joining our company, Mr. Reid had served as the Chairman and Managing Partner of Davis Polk & Wardwell LLP, a global law firm, since 2011. Prior to that, Mr. Reid was a partner at Davis Polk & Wardwell LLP from 2003 to 2011 and a Managing Director in the Investment Banking Division of Morgan Stanley from 2000 to 2003.

Daniel C. Murdock has served as a Senior Vice President and our Chief Accounting Officer and Controller since March 2017. He has been our Controller since July 2015. Prior to joining our company, Mr. Murdock had been with the U.S. Securities and Exchange Commission where he served as the Deputy Chief Accountant in the agency's Office of the Chief Accountant since 2013. Prior to that, he was Deloitte & Touche's Audit/Industry Professional Practice Director for media and entertainment.

NBCUniversal

Certain information under this Item 10 has been omitted pursuant to General Instruction I(2)(c) to Form 10-K.

The table below sets forth certain information with respect to each of NBCUniversal's executive officers, each of whom has served as such since the close of the NBCUniversal transaction in January 2011, except for Michael J. Cavanagh, who has served since July 2015, Daniel C. Murdock, who has served since March 2017 and Thomas J. Reid, who has served since April 2019. The table also sets forth NBCUniversal Holdings' directors as of December 31, 2019.

Name	Title
Brian L. Roberts	Principal Executive Officer
Michael J. Cavanagh	Principal Financial Officer; Director of NBCUniversal Holdings
Stephen B. Burke	Chairman
David L. Cohen	Senior Executive Vice President; Director of NBCUniversal Holdings
Thomas J. Reid	Senior Executive Vice President; Director of NBCUniversal Holdings
Daniel C. Murdock	Senior Vice President; Principal Accounting Officer

For the year ended December 31, 2019, NBCUniversal reimbursed Comcast $66 million for direct services provided by our executive officers.

Item 11: Executive Compensation

Comcast incorporates the information required by this item by reference to its 2020 Proxy Statement.

This information is omitted for NBCUniversal pursuant to General Instruction I(2)(c) to Form 10-K.

Item 12: Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Comcast incorporates the information required by this item by reference to its 2020 Proxy Statement.

This information is omitted for NBCUniversal pursuant to General Instruction I(2)(c) to Form 10-K.

Item 13: Certain Relationships and Related Transactions, and Director Independence

Comcast incorporates the information required by this item by reference to its 2020 Proxy Statement.

This information is omitted for NBCUniversal pursuant to General Instruction I(2)(c) to Form 10-K.

Item 14: Principal Accountant Fees and Services

Comcast incorporates the information required by this item by reference to its 2020 Proxy Statement.

NBCUniversal

The Audit Committee of Comcast's Board of Directors appointed Deloitte & Touche LLP as NBCUniversal's independent registered public accounting firm for the years ended December 31, 2019 and 2018. Set forth below are the fees paid or accrued for the services of Deloitte & Touche LLP, the member firms of Deloitte Touche Tohmatsu and their respective affiliates in 2019 and 2018.

(in millions)	**2019**	2018
Audit fees	**$11.9**	$12.8
Audit-related fees	**0.7**	0.7
Tax fees	**0.2**	0.2
All other fees	**—**	0.1
Total	**$12.8**	$13.8

Audit fees in 2019 and 2018 consisted of fees paid or accrued for services rendered to NBCUniversal and its subsidiaries for the audits of its annual financial statements, reviews of its quarterly financial statements and audit services provided in connection with other statutory or regulatory filings.

Audit-related fees in 2019 and 2018 consisted primarily of fees paid or accrued for due diligence services and attestation services related to contractual and regulatory compliance, and audits associated with employee benefit plans in 2018.

Tax fees in 2019 and 2018 consisted of fees paid or accrued for domestic and foreign tax compliance services.

All other fees in 2019 and 2018 primarily consisted of fees paid or accrued for subscription services.

Preapproval Policy of Audit Committee of Services Performed by Independent Auditors

As a consolidated subsidiary of Comcast, NBCUniversal is subject to the policies of Comcast's Audit Committee regarding the preapproval of services provided by the independent auditors. This policy requires that the Audit Committee preapprove all audit and non-audit services performed by the independent auditors to assure that the services do not impair the auditors' independence. Unless a type of service has received general preapproval, it requires separate preapproval by the Audit Committee. Even if a service has received general preapproval, if the fee associated with the service exceeds $1 million in a single engagement or series of related engagements, it requires separate preapproval. The Audit Committee has delegated its preapproval authority to its Chair.

Part IV

Item 15: Exhibits and Financial Statement Schedules

Comcast

(a) Comcast's consolidated financial statements are filed as a part of this report on Form 10-K in Item 8, Financial Statements and Supplementary Data, and a list of Comcast's consolidated financial statements are found on page 62 of this report. Schedule II, Valuation and Qualifying Accounts, is found on page 151 of this report; all other financial statement schedules are omitted because the required information is not applicable, or because the information required is included in the consolidated financial statements and notes thereto.

(b) Exhibits required to be filed by Item 601 of Regulation S-K (all of which are under Commission File No. 001-32871, except as otherwise noted):

3.1	Amended and Restated Articles of Incorporation of Comcast Corporation (incorporated by reference to Exhibit 3.1 to Comcast's Current Report on Form 8-K filed on December 15, 2015).
3.2	Amended and Restated By-Laws of Comcast Corporation (incorporated by reference to Exhibit 3.2 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2018).
4.1	Specimen Class A Common Stock Certificate (incorporated by reference to Exhibit 4.1 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2002).
4.2	Indenture, dated January 7, 2003, between Comcast Corporation, the subsidiary guarantor party thereto, and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee (incorporated by reference to Exhibit 4.4 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2008).
4.3	First Supplemental Indenture, dated March 25, 2003, to the Indenture between Comcast Corporation, the subsidiary guarantors party thereto, and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee, dated January 7, 2003 (incorporated by reference to Exhibit 4.5 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2008).
4.4	Second Supplemental Indenture, dated August 31, 2009, to the Indenture between Comcast Corporation, the subsidiary guarantors party thereto, and The Bank of New York Mellon, as Trustee, dated January 7, 2003, as supplemented by a First Supplemental Indenture dated March 25, 2003 (incorporated by reference to Exhibit 4.1 to Comcast's Current Report on Form 8-K filed on September 2, 2009).
4.5	Third Supplemental Indenture, dated March 27, 2013, to the Indenture between Comcast Corporation, the subsidiary guarantors party thereto, and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee, dated January 7, 2003, as supplemented by a First Supplemental Indenture dated March 25, 2003 and a second Supplemental Indenture dated August 31, 2009 (incorporated by reference to Exhibit 4.4 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013).
4.6	Fourth Supplemental Indenture, dated October 1, 2015, to the Indenture dated January 7, 2003 between Comcast Corporation, the subsidiary guarantors party thereto, and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee, as supplemented by a First Supplemental Indenture dated March 25, 2003, a second Supplemental Indenture dated August 31, 2009 and a Third Supplemental Indenture dated March 27, 2013 (incorporated by reference to Exhibit 4.1 to Comcast's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015).
4.7	Senior Indenture dated September 18, 2013, among Comcast Corporation, the guarantors party thereto and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.3 to Comcast's Registration Statement on Form S-3 filed September 18, 2013).
4.8	First Supplemental Indenture dated as of November 17, 2015, to the Senior Indenture dated September 18, 2013, among Comcast Corporation, the guarantors party thereto, and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.4 to Post Effective Amendment No. 2 to Comcast's Registration Statement on Form S-3 filed November 23, 2015).
4.9	Indenture, dated as of April 30, 2010, between NBC Universal, Inc. (n/k/a NBCUniversal Media, LLC) and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4 to the Registration Statement on Form S-4 of NBCUniversal Media, LLC (Commission File No. 333-174175) filed on May 13, 2011).

4.10	First Supplemental Indenture, dated March 27, 2013, to the Indenture between NBCUniversal Media, LLC (f/k/a NBC Universal, Inc.) and The Bank of New York Mellon, as trustee, dated April 30, 2010 (incorporated by reference to Exhibit 4.3 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013).
4.11	Second Supplemental Indenture, dated October 1, 2015, to the Indenture dated April 30, 2010 between NBC Universal, Inc. (n/k/a NBCUniversal Media, LLC) and The Bank of New York Mellon, as trustee, as supplemented by a First Supplemental Indenture dated March 27, 2013 (incorporated by reference to Exhibit 4.2 to Comcast's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015).
4.12	Indenture, dated March 19, 2013, among NBCUniversal Enterprise, Inc. (f/k/a Navy Holdings, Inc.), Comcast Corporation, the Cable Guarantors party thereto, and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.1 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013).
4.13	Trust Deed dated September 5, 2014 among BSKYB Finance UK plc, British Sky Broadcasting Group plc, the initial guarantors party thereto and BNY Mellon Corporate Trustee Services Limited, as trustee (incorporated by reference to Exhibit 4.13 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2018).
4.14	Supplemental Trust Deed dated March 18, 2015 among Sky Group Finance plc (f/k/a BSKYB Finance UK plc), Sky plc (f/k/a British Sky Broadcasting Group plc), the initial guarantors party thereto and BNY Mellon Corporate Trustee Services Limited, as trustee (incorporated by reference to Exhibit 4.14 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2018).
4.15	Description of Comcast Corporation's securities registered pursuant to Section 12 of the Securities Exchange Act.
	Certain instruments defining the rights of holders of long-term obligation of the registrant and certain of its subsidiaries (the total amount of securities authorized under each of which does not exceed ten percent of the total assets of the registrant and its subsidiaries on a consolidated basis), are omitted pursuant to Item 601(b)(4)(iii)(A) of Regulation S-K. We agree to furnish copies of any such instruments to the SEC upon request.
10.1	Credit Agreement dated as of May 26, 2016, among Comcast Corporation, the financial institutions party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Citibank, N.A., as syndication agent, Morgan Stanley MUFG Partners, LLC, Wells Fargo Bank, National Association and Mizuho Bank, Ltd., as co-documentation agents (incorporated by reference to Exhibit 10.1 to Comcast's Current Report on Form 8-K filed on May 31, 2016).
10.2	Amendment No. 1 dated April 27, 2018, to Credit Agreement dated as of May 26, 2016, among Comcast Corporation, the financial institutions party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Citibank, N.A., as syndication agent, Morgan Stanley MUFG Partners, LLC, Wells Fargo Bank, National Association and Mizuho Bank, Ltd., as co-documentation agents (incorporated by reference to Exhibit 10.1 to Comcast's Current Report on Form 8-K filed on April 30, 2018).
10.3	Amendment No. 2 dated June 18, 2019, to Credit Agreement dated as of May 26, 2016, among Comcast Corporation, the financial institutions party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Citibank, N.A., as syndication agent, Morgan Stanley MUFG Partners, LLC, Wells Fargo Bank, National Association and Mizuho Bank, Ltd., as co-documentation agents (incorporated by reference to Exhibit 10.1 to Comcast's Current Report on Form 8-K filed on June 20, 2019).
10.4	Second Amended and Restated Certificate of Incorporation of NBCUniversal Enterprise, Inc. (f/k/a/ Navy Holdings, Inc.), dated March 19, 2013 (incorporated by reference to Exhibit 10.3 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013).
10.5	Certificate of Designations for Series A Cumulative Preferred Stock of NBCUniversal Enterprise, Inc. (f/k/a/ Navy Holdings, Inc.), dated March 19, 2013 (incorporated by reference to Exhibit 10.4 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013).
10.6	Amendment to Certificate of Designations for Series A Cumulative Preferred Stock of NBCUniversal Enterprise, Inc. dated March 19, 2013 (incorporated by reference to Exhibit 10.5 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013).
10.7	Term Loan Credit Agreement among Comcast, the financial institutions party thereto, Bank of America, N.A., as administrative agent, Wells Fargo Bank, National Association, as syndication agent, and Merrill Lynch, Pierce, Fenner & Smith Incorporated and Wells Fargo Securities LLC, as joint lead arrangers and joint bookrunners, dated April 25, 2018 (incorporated by reference to Exhibit 10.1 to Comcast's Current Report on Form 8-K filed on April 25, 2018).
10.8	Amendment No. 1 dated September 23, 2018, to Term Loan Credit Agreement dated as of April 25, 2018 (incorporated by reference to Exhibit 10.3 to Comcast's Current Report on Form 8-K filed on September 24, 2018).
10.9	Comcast Revolving Credit Agreement Increased Revolving Commitment Activation Notice, dated September 21, 2018 (incorporated by reference to Exhibit 10.1 to Comcast's Current Report on Form 8-K filed on September 24, 2018).

10.10	Comcast Revolving Credit Agreement New Lender Supplement, dated September 21, 2018 (incorporated by reference to Exhibit 10.2 to Comcast's Current Report on Form 8-K filed on September 24, 2018).
10.11*	Comcast Corporation 2003 Stock Option Plan, as amended and restated December 18, 2018 (incorporated by reference to Exhibit 10.13 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2018).
10.12*	Comcast Corporation 2002 Deferred Compensation Plan, as amended and restated effective February 10, 2009 (incorporated by reference to Exhibit 10.5 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2009).
10.13*	Comcast Corporation 2005 Deferred Compensation Plan, as amended and restated effective December 10, 2019.
10.14*	Comcast Corporation 2002 Restricted Stock Plan, as amended and restated effective December 10, 2019.
10.15*	Comcast Corporation 2006 Cash Bonus Plan, as amended and restated effective February 18, 2015 (incorporated by reference to Exhibit 10.11 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2015).
10.16*	Comcast Corporation 2002 Non-Employee Director Compensation Plan, as amended and restated effective December 11, 2019.
10.17*	Comcast Corporation 2002 Employee Stock Purchase Plan, as amended and restated effective February 22, 2016 (incorporated by reference to Appendix C to our Definitive Proxy Statement on Schedule 14A filed on April 8, 2016).
10.18*	Comcast-NBCUniversal 2011 Employee Stock Purchase Plan, as amended and restated effective February 22, 2016 (incorporated by reference to Appendix D to our Definitive Proxy Statement on Schedule 14A filed on April 8, 2016).
10.19*	Employment Agreement with Brian L. Roberts, dated as of July 26, 2017 (incorporated by reference to Exhibit 10.2 to Comcast's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017).
10.20*	Amendment No. 1 to Employment Agreement with Brian L. Roberts, dated as of December 16, 2019.
10.21*	Employment Agreement between Comcast Corporation and Stephen B. Burke, dated as of December 16, 2009 (incorporated by reference to Exhibit 99.1 to Comcast's Current Report on Form 8-K filed on December 22, 2009).
10.22*	Amendment No. 2 to Employment Agreement with Stephen B. Burke, dated as of August 16, 2013 (incorporated by reference to Exhibit 99.1 to Comcast's Current Report on Form 8-K filed on August 16, 2013).
10.23*	Amendment No. 3 to Employment Agreement with Stephen B. Burke dated as of July 25, 2016 (incorporated by reference to Exhibit 99.1 to Comcast's Current Report on Form 8-K filed on July 28, 2016).
10.24*	Amendment No. 4 to Employment Agreement with Stephen B. Burke, dated as of December 16, 2019.
10.25*	Employment Agreement between Comcast Corporation and David L. Cohen, dated as of October 23, 2015 (incorporated by reference to Exhibit 10.1 to Comcast's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015).
10.26*	Amendment No. 1 to Employment Agreement with David L. Cohen, dated as of December 16, 2019.
10.27*	Form of Amendment, dated as of December 14, 2012, to the Employment Agreement with Stephen B. Burke (incorporated by reference to Exhibit 10.41 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2012).
10.28*	Employment Agreement dated as of December 21, 2018 between Comcast Corporation and Michael J. Cavanagh (incorporated by reference to Exhibit 99.1 to Comcast's Current Report on Form 8-K filed on December 21, 2018).
10.29*	Amendment No. 1 to Employment Agreement with Michael J. Cavanagh, dated as of December 16, 2019.
10.30*	Employment Agreement dated as of April 2, 2018 between Comcast Corporation and David N. Watson (incorporated by reference to Exhibit 10.4 to Comcast's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.31*	Amendment No. 1 to Employment Agreement with David N. Watson, dated as of December 16, 2019.
10.32*	Form of Non-Qualified Stock Option under the Comcast Corporation 2003 Stock Option Plan (incorporated by reference to Exhibit 10.40 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2008).
10.33*	Form of Non-Qualified Stock Option under the Comcast Corporation 2003 Stock Option Plan (incorporated by reference to Exhibit 10.2 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016).
10.34*	Form of Non-Qualified Stock Option under the Comcast Corporation 2003 Stock Option Plan (incorporated by reference to Exhibit 10.42 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2016).

10.35*	Form of Non-Qualified Stock Option under the Comcast Corporation 2003 Stock Option Plan (incorporated by reference to Exhibit 10.1 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018).
10.36*	Form of Restricted Stock Unit Award under the Comcast Corporation 2002 Restricted Stock Plan (incorporated by reference to Exhibit 10.6 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013).
10.37*	Form of Restricted Stock Unit Award under the Comcast Corporation 2002 Restricted Stock Plan (incorporated by reference to Exhibit 10.1 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016).
10.38*	Form of Restricted Stock Unit Award and Long-Term Incentive Awards Summary Schedule under the Comcast Corporation 2002 Restricted Stock Plan (incorporated by reference to Exhibit 10.2 to Comcast's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015).
10.39*	Form of Restricted Stock Unit Award and Long-Term Incentive Awards Summary Schedule under the Comcast Corporation 2002 Restricted Stock Plan (incorporated by reference to Exhibit 10.2 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017).
10.40*	Form of Restricted Stock Unit Award and Long-Term Incentive Awards Summary Schedule under the Comcast Corporation 2002 Restricted Stock Plan (incorporated by reference to Exhibit 10.5 to Comcast's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018).
10.41*	Form of Restricted Stock Unit Award and Long-Term Incentive Awards Summary Schedule under the Comcast Corporation 2002 Restricted Stock Plan (incorporated by reference to Exhibit 10.1 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019).
10.42*	Form of Restricted Stock Unit Award under the Comcast Corporation 2002 Restricted Stock Plan (incorporated by reference to Exhibit 10.2 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018).
10.43*	Form of Long-Term Incentive Awards Summary Schedule (incorporated by reference to Exhibit 10.3 to Comcast's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018).
10.44*	Form of Airplane Time Sharing Agreement (incorporated by reference to Exhibit 10.60 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2014).
10.45*	Form of Director Indemnification Agreement (incorporated by reference to Exhibit 10.3 to Comcast's Quarterly Report on Form 10-Q for the quarter ended June 30, 2009).
10.46	Second Amended and Restated Shareholders Agreement, dated as of January 10, 2019, among Atairos Group, Inc., Comcast AG Holdings, LLC, Comcast Spectacor Ventures, LLC, Atairos Partners, L.P., Atairos Management, L.P. and Comcast Corporation (incorporated by reference to Exhibit 10.64 to Comcast's Annual Report on Form 10-K for the year ended December 31, 2018).
10.47	Consultant Agreement, dated as of January 20, 1987, between Steven Spielberg and Universal City Florida Partners (incorporated by reference to Exhibit 10.49 to the Registration Statement on Form S-4 of Universal City Development Partners, Ltd. and UCDP Finance, Inc. filed on January 20, 2010 (File No. 333-164431)).
10.48	Amendment dated February 5, 2001 to the Consultant Agreement dated as of January 20, 1987, between the Consultant and Universal City Florida Partners (incorporated by reference to Exhibit 10.50 to the Registration Statement on Form S-4 of Universal City Development Partners, Ltd. and UCDP Finance, Inc. filed on January 20, 2010 (File No. 333-164431)).
10.49	Amendment to the Consultant Agreement, dated as of October 18, 2009, between Steven Spielberg, Diamond Lane Productions, Inc. and Universal City Development Partners, Ltd. (incorporated by reference to Exhibit 10.52 to the Registration Statement on Form S-4 of Universal City Development Partners, Ltd. and UCDP Finance, Inc. filed on January 20, 2010 (File No. 333-164431)).
10.50	Letter Agreement dated July 15, 2003, among Diamond Lane Productions, Vivendi Universal Entertainment LLLP and Universal City Development Partners, Ltd. (incorporated by reference to Exhibit 10.51 to the Registration Statement on Form S-4 of Universal City Development Partners, Ltd. and UCDP Finance, Inc. filed on January 20, 2010 (File No. 333-164431)).
21.1	List of subsidiaries.
23.1	Consent of Deloitte & Touche LLP.
31.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

32.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following financial statements from Comcast Corporation’s Annual Report on Form 10-K for the year ended December 31, 2019, filed with the Securities and Exchange Commission on January 30, 2020, formatted in XBRL (eXtensible Business Reporting Language): (1) the Consolidated Statement of Income; (2) the Consolidated Statement of Comprehensive Income; (3) the Consolidated Statement of Cash Flows; (4) the Consolidated Balance Sheet; (5) the Consolidated Statement of Changes in Equity; and (6) the Notes to Consolidated Financial Statements.
*	Constitutes a management contract or compensatory plan or arrangement.

NBCUniversal

(a) NBCUniversal’s consolidated financial statements are filed as a part of this report on Form 10-K and a list of the consolidated financial statements are found on page 123 of this report. Schedule II - Valuation and Qualifying Accounts is found on page 151 of this report; all other financial statement schedules are omitted because the required information is not applicable, or because the information required is included in the consolidated financial statements and notes thereto.

(b) Exhibits required to be filed by Item 601 of Regulation S-K:

3.1	Certificate of Formation of NBCUniversal Media, LLC (incorporated by reference to Exhibit 3.1 to NBCUniversal’s Registration Statement on Form S-4 filed on May 13, 2011).
3.2	Certificate of Amendment to Certificate of Formation of NBCUniversal Media, LLC (incorporated by reference to Exhibit 3.2 to NBCUniversal’s Registration Statement on Form S-4 filed on August 25, 2011).
3.3	Limited Liability Company Agreement of NBCUniversal Media, LLC (incorporated by reference to Exhibit 3.2 to Amendment No. 2 to NBCUniversal’s Registration Statement on Form S-4 filed on July 12, 2011).
3.4	First Amendment to Limited Liability Company Agreement of NBCUniversal Media, LLC (incorporated by reference to Exhibit 3.4 to NBCUniversal’s Annual Report on Form 10-K for the year ended December 31, 2018).
3.5	Second Amendment to Limited Liability Company Agreement of NBCUniversal Media, LLC
4.1	Indenture, dated as of April 30, 2010 between NBC Universal, Inc. (n/k/a NBCUniversal Media, LLC) and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4 to NBCUniversal’s Registration Statement on Form S-4 filed on May 13, 2011).
4.2	First Supplemental Indenture, dated March 27, 2013, to the Indenture between NBCUniversal Media, LLC (f/k/a NBC Universal, Inc.) and The Bank of New York Mellon, as trustee, dated April 30, 2010 (incorporated by reference to Exhibit 4.3 of the Quarterly Report on Form 10-Q of Comcast Corporation for the quarter ended March 31, 2013).
4.3	Second Supplemental Indenture, dated October 1, 2015, to the Indenture dated April 30, 2010 between NBC Universal, Inc. (n/k/a NBCUniversal Media, LLC) and The Bank of New York Mellon, as trustee, as supplemented by a First Supplemental Indenture dated March 27, 2013 (incorporated by reference to Exhibit 4.2 of the Quarterly Report on Form 10-Q of Comcast Corporation for the quarter ended September 30, 2015).
4.4	Indenture, dated January 7, 2003, between Comcast Corporation, the subsidiary guarantor party thereto, and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee (incorporated by reference to Exhibit 4.4 to the Annual Report on Form 10-K of Comcast Corporation for the year ended December 31, 2008).
4.5	First Supplemental Indenture, dated March 25, 2003, to the Indenture between Comcast Corporation, the subsidiary guarantors party thereto, and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee, dated January 7, 2003 (incorporated by reference to Exhibit 4.5 to the Annual Report on Form 10-K of Comcast Corporation for the year ended December 31, 2008).
4.6	Second Supplemental Indenture, dated August 31, 2009, to the Indenture between Comcast Corporation, the subsidiary guarantors party thereto, and The Bank of New York Mellon, as Trustee, dated January 7, 2003, as supplemented by a First Supplemental Indenture dated March 25, 2003 (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of Comcast Corporation filed on September 2, 2009).
4.7	Third Supplemental Indenture, dated March 27, 2013, to the Indenture between Comcast Corporation, the subsidiary guarantors party thereto, and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee, dated January 7, 2003, as supplemented by a First Supplemental Indenture dated March 25, 2003 and a Second Supplemental Indenture dated August 31, 2009 (incorporated by reference to Exhibit 4.4 of the Quarterly Report on Form 10-Q of Comcast Corporation for the quarter ended March 31, 2013).
4.8	Fourth Supplemental Indenture, dated October 1, 2015, to the Indenture dated January 7, 2003 between Comcast Corporation, the subsidiary guarantors party thereto, and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee, as supplemented by a First Supplemental Indenture dated March 25, 2003, a second Supplemental Indenture dated August 31, 2009 and a Third Supplemental Indenture dated March 27, 2013 (incorporated by reference to Exhibit 4.1 of the Quarterly Report on Form 10-Q of Comcast Corporation for the quarter ended September 30, 2015).
4.9	Senior Indenture dated September 18, 2013, among Comcast Corporation, the guarantors party thereto and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.3 to Comcast’s Registration Statement on Form S-3 filed September 18, 2013).

4.10	First Supplemental Indenture dated as of November 17, 2015, to the Senior Indenture dated September 18, 2013, among Comcast Corporation, the guarantors party thereto, and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.4 to Post Effective Amendment No. 2 to Comcast's Registration Statement on Form S-3 filed November 23, 2015).
10.1	Second Amended and Restated Limited Liability Company Agreement of NBCUniversal, LLC, dated March 19, 2013 (incorporated by reference to Exhibit 10.2 of the Quarterly Report on Form 10-Q of Comcast Corporation for the quarter ended March 31, 2013).
10.2	Credit Agreement dated as of May 26, 2016, among Comcast Corporation, the financial institutions party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Citibank, N.A., as syndication agent, Morgan Stanley MUFG Partners, LLC, Wells Fargo Bank, National Association and Mizuho Bank, Ltd., as co-documentation agents (incorporated by reference to Exhibit 10.1 to Comcast's Current Report on Form 8-K filed on May 31, 2016).
10.3	Amendment No. 1 dated April 27, 2018, to Credit Agreement dated as of May 26, 2016, among Comcast Corporation, the financial institutions party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Citibank, N.A., as syndication agent, Morgan Stanley MUFG Partners, LLC, Wells Fargo Bank, National Association and Mizuho Bank, Ltd., as co-documentation agents (incorporated by reference to Exhibit 10.1 to NBCUniversal's Current Report on Form 8-K filed on April 30, 2018).
10.4	Amendment No. 2 dated June 18, 2019, to Credit Agreement dated as of May 26, 2016, among Comcast Corporation, the financial institutions party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Citibank, N.A., as syndication agent, Morgan Stanley MUFG Partners, LLC, Wells Fargo Bank, National Association and Mizuho Bank, Ltd., as co-documentation agents (incorporated by reference to Exhibit 10.1 to Comcast's Current Report on Form 8-K filed on June 20, 2019).
10.5	Consultant Agreement, dated as of January 20, 1987, between Steven Spielberg and Universal City Florida Partners (incorporated by reference to Exhibit 10.49 to the Registration Statement on Form S-4 of Universal City Development Partners, Ltd. and UCDP Finance, Inc. filed on January 20, 2010 (File No. 333-164431)).
10.6	Amendment dated February 5, 2001 to the Consultant Agreement dated as of January 20, 1987, between the Consultant and Universal City Florida Partners (incorporated by reference to Exhibit 10.50 to the Registration Statement on Form S-4 of Universal City Development Partners, Ltd. and UCDP Finance, Inc. filed on January 20, 2010 (File No. 333-164431)).
10.7	Amendment to the Consultant Agreement, dated as of October 18, 2009, between Steven Spielberg, Diamond Lane Productions, Inc. and Universal City Development Partners, Ltd. (incorporated by reference to Exhibit 10.52 to the Registration Statement on Form S-4 of Universal City Development Partners, Ltd. and UCDP Finance, Inc. filed on January 20, 2010 (File No. 333-164431)).
10.8	Letter Agreement dated July 15, 2003, among Diamond Lane Productions, Vivendi Universal Entertainment LLLP and Universal City Development Partners, Ltd. (incorporated by reference to Exhibit 10.51 to the Registration Statement on Form S-4 of Universal City Development Partners, Ltd. and UCDP Finance, Inc. filed on January 20, 2010 (File No. 333-164431)).
10.9	Loan Agreement dated as of May 1, 2017, among USJ Co., Ltd., the financial institutions party thereto (the "lenders") and Sumitomo Mitsui Banking Corporation, as agent (incorporated by reference to Exhibit 10.1 to NBCUniversal's Current Report on Form 8-K filed on May 3, 2017).
10.10	Term Loan Credit Agreement among Comcast, the financial institutions party thereto, Bank of America, N.A., as administrative agent, Wells Fargo Bank, National Association, as syndication agent, and Merrill Lynch, Pierce, Fenner & Smith Incorporated and Wells Fargo Securities LLC, as joint lead arrangers and joint bookrunners, dated April 25, 2018 (incorporated by reference to Exhibit 10.1 to NBCUniversal's Current Report on Form 8-K filed on April 25, 2018).
10.11	Amendment No. 1 dated September 23, 2018, to Term Loan Credit Agreement, dated April 25, 2018 (incorporated by reference to Exhibit 10.3 to NBCUniversal's Current Report on Form 8-K filed on September 24, 2018).
10.12	Comcast Revolving Credit Agreement Increased Revolving Commitment Activation Notice, dated September 21, 2018 (incorporated by reference to Exhibit 10.1 to NBCUniversal's Current Report on Form 8-K filed on September 24, 2018).
10.13	Comcast Revolving Credit Agreement New Lender Supplement, dated September 21, 2018 (incorporated by reference to Exhibit 10.2 to NBCUniversal's Current Report on Form 8-K filed on September 24, 2018).
23.2	Consent of Deloitte & Touche LLP.
31.2	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

32.2	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following financial statements from NBCUniversal Media, LLC's Annual Report on Form 10-K for the year ended December 31, 2019, filed with the Securities and Exchange Commission on January 30, 2020, formatted in XBRL (eXtensible Business Reporting Language): (1) the Consolidated Statement of Income; (2) the Consolidated Statement of Comprehensive Income; (3) the Consolidated Statement of Cash Flows; (4) the Consolidated Balance Sheet; (5) the Consolidated Statement of Changes in Equity; and (6) the Notes to Consolidated Financial Statements.

Item 16: Form 10-K Summary

None.

Signatures

Comcast

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized in Philadelphia, Pennsylvania on January 30, 2020.

By: /s/ BRIAN L. ROBERTS
Brian L. Roberts
Chairman and Chief Executive Officer

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

Signature	Title	Date
/s/ BRIAN L. ROBERTS Brian L. Roberts	Chairman and Chief Executive Officer; Director (Principal Executive Officer)	January 30, 2020
/s/ MICHAEL J. CAVANAGH Michael J. Cavanagh	Senior Executive Vice President and Chief Financial Officer (Principal Financial Officer)	January 30, 2020
/s/ DANIEL C. MURDOCK Daniel C. Murdock	Senior Vice President, Chief Accounting Officer and Controller (Principal Accounting Officer)	January 30, 2020
/s/ KENNETH J. BACON Kenneth J. Bacon	Director	January 30, 2020
/s/ MADELINE S. BELL Madeline S. Bell	Director	January 30, 2020
/s/ SHELDON M. BONOVITZ Sheldon M. Bonovitz	Director	January 30, 2020
/s/ EDWARD D. BREEN Edward D. Breen	Director	January 30, 2020
/s/ GERALD L. HASSELL Gerald L. Hassell	Director	January 30, 2020
/s/ JEFFREY A. HONICKMAN Jeffrey A. Honickman	Director	January 30, 2020
/s/ MARITZA G. MONTIEL Maritza G. Montiel	Director	January 30, 2020
/s/ ASUKA NAKAHARA Asuka Nakahara	Director	January 30, 2020
/s/ DAVID C. NOVAK David C. Novak	Director	January 30, 2020

NBCUniversal

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized in Philadelphia, Pennsylvania on January 30, 2020.

NBCUNIVERSAL MEDIA, LLC
By: NBCUNIVERSAL, LLC, its sole member

By: /s/ STEPHEN B. BURKE
Stephen B. Burke
Chairman

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

Signature	Title	Date
/s/ BRIAN L. ROBERTS Brian L. Roberts	Principal Executive Officer of NBCUniversal Media, LLC	January 30, 2020
/s/ MICHAEL J. CAVANAGH Michael J. Cavanagh	Principal Financial Officer of NBCUniversal Media, LLC; Director of NBCUniversal, LLC	January 30, 2020
/s/ THOMAS J. REID Thomas J. Reid	Director of NBCUniversal, LLC	January 30, 2020
/s/ DAVID L. COHEN David L. Cohen	Director of NBCUniversal, LLC	January 30, 2020
/s/ DANIEL C. MURDOCK Daniel C. Murdock	Principal Accounting Officer of NBCUniversal Media, LLC	January 30, 2020

NBCUniversal Media, LLC Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Member of NBCUniversal Media, LLC
New York, New York

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of NBCUniversal Media, LLC and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, cash flows and changes in equity for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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 financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Deloitte & Touche LLP
New York, New York
January 30, 2020

We have served as the Company's auditor since 2011.

NBCUniversal Media, LLC
Consolidated Statement of Income

Year ended December 31 (in millions)		2019		2018		2017
Revenue	**$**	**34,021**	$	35,895	$	32,950
Costs and Expenses:						
Programming and production		**14,462**		16,330		14,276
Other operating and administrative		**8,123**		7,980		7,687
Advertising, marketing and promotion		**2,681**		2,952		2,806
Depreciation		**1,023**		1,001		994
Amortization		**1,106**		1,107		1,047
Other operating gains		**—**		(141)		(337)
Total costs and expenses		**27,395**		29,229		26,473
Operating income		**6,626**		6,666		6,477
Interest expense		**(738)**		(489)		(727)
Investment and other income (loss), net		**396**		(521)		(144)
Income before income taxes		**6,284**		5,656		5,606
Income tax expense		**(320)**		(351)		(392)
Net income		**5,964**		5,305		5,214
Less: Net income attributable to noncontrolling interests		**180**		68		134
Net income attributable to NBCUniversal	**$**	**5,784**	$	5,237	$	5,080

See accompanying notes to consolidated financial statements.

NBCUniversal Media, LLC

Consolidated Statement of Comprehensive Income

Year ended December 31 (in millions)		2019		2018		2017
Net income	$	**5,964**	$	5,305	$	5,214
Unrealized gains (losses) on marketable securities, net		**—**		—		(233)
Deferred gains (losses) on cash flow hedges, net		**(5)**		3		(13)
Employee benefit obligations, net		**(53)**		14		112
Currency translation adjustments, net		**6**		(16)		189
Comprehensive income		**5,912**		5,306		5,269
Less: Net income attributable to noncontrolling interests		**180**		68		134
Less: Other comprehensive income (loss) attributable to noncontrolling interests		**(12)**		(41)		81
Comprehensive income attributable to NBCUniversal	**$**	**5,744**	$	5,279	$	5,054

See accompanying notes to consolidated financial statements.

NBCUniversal Media, LLC

Consolidated Statement of Cash Flows

Year ended December 31 (in millions)	2019	2018	2017
Operating Activities			
Net income	**$ 5,964**	$ 5,305	$ 5,214
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation, amortization and other operating gains	**2,129**	1,967	1,704
Net (gain) loss on investment activity and other	**120**	689	428
Deferred income taxes	**(42)**	(39)	2
Changes in operating assets and liabilities, net of effects of acquisitions and divestitures:			
Current and noncurrent receivables, net	**43**	(452)	(594)
Film and television costs, net	**(911)**	35	(199)
Accounts payable and accrued expenses related to trade creditors	**(27)**	57	(43)
Other operating assets and liabilities	**(58)**	341	564
Net cash provided by operating activities	**7,218**	7,903	7,076
Investing Activities			
Capital expenditures	**(2,072)**	(1,730)	(1,502)
Cash paid for intangible assets	**(285)**	(448)	(295)
Note receivable from Comcast	**(2,900)**	(2,054)	—
Construction of Universal Beijing Resort	**(1,116)**	(460)	(71)
Acquisitions, net of cash acquired	**(211)**	(80)	(140)
Proceeds from sales of businesses and investments	**464**	70	45
Purchases of investments	**(1,024)**	(587)	(490)
Other	**16**	(51)	586
Net cash provided by (used in) investing activities	**(7,128)**	(5,340)	(1,867)
Financing Activities			
Proceeds from borrowings	**791**	692	3,948
Proceeds from collateralized obligation	**5,175**	—	—
Repurchases and repayments of debt	**(3,778)**	(438)	(3,498)
Proceeds from (repayments of) borrowings from Comcast, net	**(70)**	(1,777)	(872)
Distributions to member	**(2,113)**	(1,627)	(1,968)
Distributions to noncontrolling interests	**(242)**	(205)	(209)
Purchase of Universal Studios Japan noncontrolling interests	**—**	—	(2,299)
Other	**127**	(121)	79
Net cash provided by (used in) financing activities	**(110)**	(3,476)	(4,819)
Increase (decrease) in cash, cash equivalents and restricted cash	**(20)**	(913)	390
Cash, cash equivalents and restricted cash, beginning of year	**1,464**	2,377	1,987
Cash, cash equivalents and restricted cash, end of year	**$ 1,444**	$ 1,464	$ 2,377

See accompanying notes to consolidated financial statements.

NBCUniversal Media, LLC
Consolidated Balance Sheet

December 31 (in millions)		2019		2018
Assets				
Current Assets:				
Cash and cash equivalents	$	1,424	$	1,444
Receivables, net		7,236		7,293
Programming rights		1,545		1,323
Notes receivable from Comcast		3,886		2,054
Other current assets		1,274		1,133
Total current assets		15,365		13,247
Film and television costs		7,956		7,292
Investments		1,560		1,680
Investment securing collateralized obligation		694		—
Note receivable from Comcast		1,069		—
Property and equipment, net		15,751		13,189
Goodwill		24,240		24,118
Intangible assets, net		12,940		13,666
Other noncurrent assets, net		3,473		1,822
Total assets	$	83,048	$	75,014
Liabilities and Equity				
Current Liabilities:				
Accounts payable and accrued expenses related to trade creditors	$	2,209	$	1,933
Accrued participations and residuals		1,736		1,808
Program obligations		917		965
Deferred revenue		1,655		1,118
Accrued expenses and other current liabilities		2,300		2,195
Notes payable to Comcast		99		54
Current portion of long-term debt		301		151
Total current liabilities		9,217		8,224
Long-term debt, less current portion		9,709		12,731
Collateralized obligation		5,166		—
Accrued participations, residuals and program obligations		1,570		1,712
Other noncurrent liabilities		6,548		5,177
Commitments and contingencies (Note 14)				
Redeemable noncontrolling interests		452		389
Equity:				
Member's capital		49,040		45,618
Accumulated other comprehensive income (loss)		214		254
Total NBCUniversal member's equity		49,254		45,872
Noncontrolling interests		1,132		909
Total equity		50,386		46,781
Total liabilities and equity	$	83,048	$	75,014

See accompanying notes to consolidated financial statements.

NBCUniversal Media, LLC
Consolidated Statement of Changes in Equity

(in millions)		2019		2018		2017
Redeemable Noncontrolling Interests						
Balance, beginning of year	**$**	**389**	$	409	$	530
Contributions from (distributions to) noncontrolling interests, net		**(59)**		(52)		(65)
Other		**4**		(4)		(84)
Net income (loss)		**118**		36		28
Balance, end of year	**$**	**452**	$	389	$	409
Member's Capital						
Balance, beginning of year	**$**	**45,618**	$	42,148	$	38,894
Cumulative effects of adoption of accounting standards		**—**		(232)		—
Distributions to member		**(2,362)**		(1,627)		(1,968)
Contributions from member		**—**		—		662
Purchase of Universal Studios Japan noncontrolling interests		**—**		—		(704)
Other		**—**		92		184
Net income (loss)		**5,784**		5,237		5,080
Balance, end of year	**$**	**49,040**	$	45,618	$	42,148
Accumulated Other Comprehensive Income (Loss)						
Balance, beginning of year	**$**	**254**	$	(20)	$	(135)
Cumulative effects of adoption of accounting standards		**—**		232		—
Other comprehensive income (loss)		**(40)**		42		(26)
Purchase of Universal Studios Japan noncontrolling interests		**—**		—		141
Balance, end of year	**$**	**214**	$	254	$	(20)
Noncontrolling Interests						
Balance, beginning of year	**$**	**909**	$	913	$	2,116
Contributions from (distributions to) noncontrolling interests, net		**189**		299		(120)
Other comprehensive income (loss)		**(12)**		(41)		81
Purchase of Universal Studios Japan noncontrolling interests		**—**		—		(1,736)
Other		**(16)**		(294)		466
Net income (loss)		**62**		32		106
Balance, end of year	**$**	**1,132**	$	909	$	913
Total equity	**$**	**50,386**	$	46,781	$	43,041

See accompanying notes to consolidated financial statements.

Note 1: Basis of Presentation and Summary of Significant Accounting Policies

Unless indicated otherwise, throughout these notes to the consolidated financial statements, we refer to NBCUniversal and its consolidated subsidiaries as “we,” “us” and “our.” We are one of the world’s leading media and entertainment companies that develops, produces and distributes entertainment, news and information, sports, and other content for global audiences, and owns and operates theme parks worldwide.

We present our operations as the following four reportable business segments: Cable Networks, Broadcast Television, Filmed Entertainment and Theme Parks. See Note 2 for additional information on our reportable business segments.

Basis of Presentation

The accompanying consolidated financial statements include all entities in which we have a controlling voting interest and variable interest entities (“VIEs”) required to be consolidated in accordance with generally accepted accounting principles in the United States (“GAAP”). Transactions between NBCUniversal and both Comcast and Comcast’s consolidated subsidiaries are reflected in these consolidated financial statements and disclosed as related party transactions when material.

We translate assets and liabilities of our foreign operations where the functional currency is the local currency, primarily the Japanese yen, euro, British pound and Chinese renminbi, into U.S. dollars at the exchange rate as of the balance sheet date and translate revenue and expenses using average monthly exchange rates. The related translation adjustments are recorded as a component of accumulated other comprehensive income (loss) in our consolidated balance sheet. Any foreign currency transaction gains or losses are included in our consolidated statement of income.

Accounting Policies

Our consolidated financial statements are prepared in accordance with GAAP, which require us to select accounting policies, including in certain cases industry-specific policies, and make estimates that affect the reported amount of assets, liabilities, revenue and expenses, and the related disclosure of contingent assets and contingent liabilities. Actual results could differ from these estimates. We believe that the judgments and related estimates for the following items are critical in the preparation of our consolidated financial statements:

- film and television costs (see Note 4)
- valuation and impairment testing of goodwill and intangible assets (see Note 11)

In addition, the following accounting policy is specific to the industries in which we operate:

- capitalization and amortization of film and television costs (see Note 4)

Information on other accounting policies and methods that we use in the preparation of our consolidated financial statements are included, where applicable, in their respective footnotes that follow. The collateralized obligation related to our investment in Hulu, LLC (“Hulu”) is discussed in Note 9 and our other long-term debt is discussed in Note 6. Below is a discussion of accounting policies and methods used in our consolidated financial statements that are not presented within other footnotes.

Advertising Expenses

Advertising costs are expensed as incurred.

Derivative Financial Instruments

We use derivative financial instruments to manage our exposure to the risks associated with fluctuations in foreign exchange rates and interest rates. Our objective is to manage the financial and operational exposure arising from these risks by offsetting gains and losses on the underlying exposures with gains and losses on the derivatives used to economically hedge them.

Our derivative financial instruments are recorded in our consolidated balance sheet at fair value. The impact of our derivative financial instruments on our consolidated financial statements was not material in any of the periods presented.

Fair Value Measurements

The accounting guidance related to fair value measurements establishes a hierarchy based on the types of inputs used for the various valuation techniques. The levels of the hierarchy are described below.

- Level 1: Values are determined using quoted market prices for identical financial instruments in an active market
- Level 2: Values are determined using quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets
- Level 3: Values are determined using models that use significant inputs that are primarily unobservable, discounted cash flow methodologies or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment or estimation

We use these levels of hierarchy to measure the fair value of certain financial instruments on a recurring basis, such as for investments; on a non-recurring basis, such as for acquisitions and impairment testing; for disclosure purposes, such as for long-term debt; and for other applications, as discussed in their respective footnotes. Our assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation and classification within the fair value hierarchy.

Note 2: Segment Information

Cable Networks consists primarily of our national cable networks that provide a variety of entertainment, news and information, and sports content; our regional sports and news networks; our international cable networks; our cable television studio production operations; and various digital properties.

Broadcast Television consists primarily of the NBC and Telemundo broadcast networks, our NBC and Telemundo owned local broadcast television stations, the NBC Universo national cable network, our broadcast television studio production operations, and various digital properties.

Filmed Entertainment consists primarily of the operations of Universal Pictures, which produces, acquires, markets and distributes filmed entertainment worldwide; our films are also produced under the Illumination, DreamWorks Animation and Focus Features names.

Theme Parks consists primarily of our Universal theme parks in Orlando, Florida; Hollywood, California; and Osaka, Japan. In addition, we are developing a theme park in Beijing, China along with a consortium of Chinese state-owned companies, and an additional theme park in Orlando, Florida.

We use Adjusted EBITDA to evaluate the profitability of our operating segments and the components of net income attributable to NBCUniversal excluded from Adjusted EBITDA are not separately evaluated. We do not present a measure of total assets for our reportable business segments as this information is not used by management to allocate resources and capital. Our financial data by business segment is presented in the tables below.

(in millions)	Revenue	Adjusted EBITDA[c]	Depreciation and Amortization	Capital Expenditures	Cash Paid for Intangible Assets
2019					
Cable Networks	$ 11,513	$ 4,444	$ 735	$ 41	$ 17
Broadcast Television	10,261	1,730	157	161	15
Filmed Entertainment	6,493	833	79	21	22
Theme Parks	5,933	2,455	696	1,605	60
Headquarters and Other[a]	142	(706)	462	244	171
Eliminations[b]	(321)	(1)	—	—	—
Total	**$ 34,021**	**$ 8,755**	**$ 2,129**	**$ 2,072**	**$ 285**

(in millions)		Revenue		Adjusted EBITDA[c]		Depreciation and Amortization		Capital Expenditures		Cash Paid for Intangible Assets
2018										
Cable Networks[d]	$	11,773	$	4,428	$	738	$	42	$	23
Broadcast Television[d]		11,439		1,657		146		204		81
Filmed Entertainment		7,152		734		145		35		25
Theme Parks		5,683		2,455		660		1,143		173
Headquarters and Other[a]		212		(645)		419		306		146
Eliminations[b][d]		(364)		4		—		—		—
Total	$	35,895	$	8,633	$	2,108	$	1,730	$	448

(in millions)		Revenue		Adjusted EBITDA[c]		Depreciation and Amortization		Capital Expenditures		Cash Paid for Intangible Assets
2017										
Cable Networks	$	10,497	$	4,053	$	755	$	33	$	19
Broadcast Television		9,563		1,251		133		180		22
Filmed Entertainment		7,595		1,276		109		58		23
Theme Parks		5,443		2,384		648		960		78
Headquarters and Other[a]		179		(779)		396		271		153
Eliminations[b]		(327)		(4)		—		—		—
Total	$	32,950	$	8,181	$	2,041	$	1,502	$	295

(a) Headquarters and Other activities include costs associated with overhead, allocations, personnel costs and headquarter initiatives.

(b) Included in Eliminations are transactions that our segments enter into with one another, which consisted primarily of the licensing of film and television content from Filmed Entertainment and Broadcast Television to Cable Networks; for segment reporting, this revenue is recognized as the programming rights asset for the licensed content is amortized based on third-party revenue.

(c) We use Adjusted EBITDA as the measure of profit or loss for our operating segments. Adjusted EBITDA is defined as net income attributable to NBCUniversal before net income (loss) attributable to noncontrolling interests, investment and other income (loss), net, interest expense, depreciation and amortization expense, and other operating gains and losses (such as impairment charges related to fixed and intangible assets and gains or losses on the sale of long-lived assets), if any. From time to time we may exclude from Adjusted EBITDA the impact of certain events, gains, losses or other charges (such as significant legal settlements) that affect the period-to-period comparability of our operating performance. Our reconciliation of the aggregate amount of Adjusted EBITDA for our reportable segments to consolidated income before income taxes is presented in the table below.

Year ended December 31 (in millions)		2019		2018		2017
Adjusted EBITDA	$	8,755	$	8,633	$	8,181
Depreciation		(1,023)		(1,001)		(994)
Amortization		(1,106)		(1,107)		(1,047)
Other operating gains		—		141		337
Interest expense		(738)		(489)		(727)
Investment and other income (loss), net		396		(521)		(144)
Income before income taxes	$	6,284	$	5,656	$	5,606

(d) The revenue and operating costs and expenses associated with our broadcast of the 2018 PyeongChang Olympics were reported in Cable Networks and Broadcast Television. The revenue and operating costs and expenses associated with our broadcast of the 2018 Super Bowl were reported in Broadcast Television. Included in Eliminations are transactions relating to these events that Broadcast Television and Cable Networks enter into with other segments.

Note 3: Revenue

Year ended December 31 (in millions)		2019		2018		2017
Distribution	$	**6,790**	$	6,826	$	6,081
Advertising		**3,478**		3,587		3,359
Content licensing and other		**1,245**		1,360		1,057
Total Cable Networks		**11,513**		11,773		10,497
Advertising		**5,712**		7,010		5,654
Content licensing		**2,157**		2,182		2,114
Distribution and other		**2,392**		2,247		1,795
Total Broadcast Television		**10,261**		11,439		9,563
Theatrical		**1,469**		2,111		2,192
Content licensing		**3,045**		2,899		2,956
Home entertainment		**957**		1,048		1,287
Other		**1,022**		1,094		1,160
Total Filmed Entertainment		**6,493**		7,152		7,595
Total Theme Parks		**5,933**		5,683		5,443
Headquarters and Other		**142**		212		179
Eliminations[(a)]		**(321)**		(364)		(327)
Total NBCUniversal	**$**	**34,021**	$	35,895	$	32,950

(a) Included in Eliminations are transactions that our segments enter into with one another. See Note 2 for a description of these transactions.

We operate primarily in the United States, but also in select international markets primarily in Europe and Asia. The table below summarizes revenue by geographic location.

Year ended December 31 (in millions)		2019		2018		2017
United States	$	**27,002**	$	28,309	$	25,303
Foreign		**7,019**		7,586		7,647
Total revenue	**$**	**34,021**	$	35,895	$	32,950

Distribution

Cable Networks generates revenue from the distribution of our cable network programming to traditional and virtual multichannel video providers. Broadcast Television generates revenue from the fees received under retransmission consent agreements and associated fees received from NBC-affiliated local broadcast television stations.

These arrangements are accounted for as licenses of functional intellectual property and revenue is recognized as programming is provided on a monthly basis, generally under multiyear agreements. Monthly fees received under distribution agreements with multichannel video providers are generally based on the number of subscribers. Payment terms and conditions vary by contract type, although terms generally include payment within 60 days.

Advertising

Cable Networks and Broadcast Television generate revenue from the sale of advertising on our cable and broadcast networks, our owned local broadcast television stations and various digital properties.

We enter into advertising arrangements with customers and have determined that a contract exists once all terms and conditions are agreed upon, typically when the number of advertising units is specifically identified and the timing of airing is scheduled. Advertisements are generally aired or viewed within one year once all terms are agreed upon. Revenue is recognized, net of agency commissions, in the period in which advertisements are aired or viewed and payment occurs thereafter, with payment generally required within 30 days. In some instances, we guarantee audience ratings for the advertisements. To the extent there is a shortfall in contracts where the ratings were guaranteed, a portion of the revenue is deferred until the shortfall is settled, typically by providing additional advertising units generally within one year of the original airing.

Theatrical

Filmed Entertainment generates revenue from the worldwide theatrical release of produced and acquired films for exhibition in movie theaters. Theatrical revenue is affected by the timing, nature and number of films released in movie theaters and their acceptance by audiences. It is also affected by the number of exhibition screens, ticket prices, the percentage of ticket sale retention by the exhibitors and the popularity of competing films at the time when films are released. We recognize revenue as the films are viewed and exhibited in theaters and payment generally occurs within 30 days after exhibition.

Content Licensing

Cable Networks, Broadcast Television and Filmed Entertainment generate revenue from the licensing of our owned film and television content in the United States and internationally to cable, broadcast and premium networks and subscription video on demand services. Our agreements generally include fixed pricing and span multiple years. For example, following a film's theatrical release, Filmed Entertainment may license the exhibition rights of a film to different customers over multiple successive distribution windows.

We recognize revenue when the content is delivered and available for use by the licensee. When the term of an existing agreement is renewed or extended, we recognize revenue at the later of when the content is available or when the renewal or extension period begins. Payment terms and conditions vary by contract type, although payments are generally collected over the license term. The amount of future revenue to be earned related to fixed pricing under existing agreements at any given time equals approximately 1 to 2 years of annual Filmed Entertainment content licensing revenue, which is the segment with the largest portion of this future revenue. The majority of this revenue will be recognized within 2 years. This amount may fluctuate from period to period depending on the timing of the releases and the availability of content under existing agreements and may not represent the total revenue expected to be recognized as it does not include revenue from future agreements or from variable pricing or optional purchases under existing agreements.

For our agreements that include variable pricing, such as pricing based on the number of subscribers to a subscription video on demand service sold by our customers, we generally recognize revenue as our customers sell to their subscribers.

Home Entertainment

Filmed Entertainment generates revenue from the sale of our produced and acquired films on standard-definition digital video discs and Blu-ray discs (together, "DVDs") and through digital distribution services. Cable Networks and Broadcast Television also generate revenue from the sale of owned programming on DVDs and through digital distribution services, which is reported in other revenue. We generally recognize revenue from DVD sales, net of estimated returns and customer incentives, on the date that DVDs are delivered to and made available for sale by retailers. Payment terms generally include payment within 60 to 90 days from delivery to the retailer.

Theme Parks

Theme Parks generates revenue primarily from guest spending at our Universal theme parks in Orlando, Florida; Hollywood, California; and Osaka, Japan. Guest spending includes ticket sales and in-park spending on food, beverages and merchandise. We recognize revenue from ticket sales when the tickets are used, generally within a year from the date of purchase. For annual passes, we generally recognize revenue on a straight-line basis over the period the pass is available to be used. We recognize revenue from in-park spending at the point of sale.

Consolidated Balance Sheet

The following tables summarize our accounts receivable and other balances that are not separately presented in our consolidated balance sheet that relate to the recognition of revenue and collection of the related cash.

December 31 (in millions)	**2019**	2018
Receivables, gross	**$ 7,336**	$ 7,392
Less: Allowance for doubtful accounts	**100**	99
Receivables, net	**$ 7,236**	$ 7,293

December 31 (in millions)	**2019**	2018
Noncurrent receivables (included in other noncurrent assets, net)	**$ 1,146**	$ 1,180
Noncurrent deferred revenue (included in other noncurrent liabilities)	**$ 394**	$ 481

Note 4: Film and Television Costs

December 31 (in millions)		2019		2018
Film Costs:				
Released, less amortization	$	**1,546**	$	1,600
Completed, not released		**187**		144
In production and in development		**1,314**		1,063
		3,047		2,807
Television Costs:				
Released, less amortization		**2,706**		2,161
In production and in development		**1,162**		953
		3,868		3,114
Programming rights, less amortization		**2,586**		2,694
		9,501		8,615
Less: Current portion of programming rights		**1,545**		1,323
Film and television costs	$	**7,956**	$	7,292

Based on our current estimates of the total remaining revenue from all sources ("ultimate revenue"), in 2020 we expect to amortize approximately $1.9 billion of film and television costs associated with our original film and television productions that have been released, or are completed and have not been released. Through 2022, we expect to amortize approximately 88% of unamortized film and television costs for our released productions, excluding amounts allocated to acquired libraries.

As of December 31, 2019, acquired film and television libraries, which are included within the "released, less amortization" captions in the table above, had remaining unamortized costs of $328 million. These costs are generally amortized over a period not to exceed 20 years, and approximately 47% of these costs are expected to be amortized through 2022.

Capitalization of Film and Television Costs

We capitalize film and television production costs, including direct costs, production overhead, print costs, development costs and interest. We amortize capitalized film and television production costs, including acquired libraries, and accrue costs associated with participation and residual payments to programming and production expenses. We generally record the amortization and the accrued costs using the individual film forecast computation method, which amortizes the costs in the same ratio as the associated ultimate revenue. Estimates of ultimate revenue and total costs are based on anticipated release patterns, public acceptance and historical results for similar productions. Unamortized film and television production costs, including acquired libraries, are stated at the lower of unamortized cost or fair value. We do not capitalize costs related to the distribution of a film in movie theaters or the licensing or sale of a film or television production, which primarily include costs associated with marketing and distribution.

In determining the method of amortization and estimated life of an acquired film or television library, we generally use the method and the life that most closely follow the undiscounted cash flows over the estimated life of the asset.

When an event or a change in circumstance occurs that was known or knowable as of the balance sheet date and that indicates the fair value of a film is less than its unamortized costs, we determine the fair value of the film and record an impairment charge for the amount by which the unamortized capitalized costs exceed the film's fair value. The estimated fair value of a production is based on level 3 inputs that primarily use an analysis of future expected cash flows. Adjustments to capitalized film production costs were not material in any of the periods presented.

We may enter into cofinancing arrangements with third parties to jointly finance or distribute certain of our film productions. Cofinancing arrangements can take various forms, but in most cases involve the grant of an economic interest in a film to an investor. The number of investors and the terms of these arrangements can vary, although investors generally assume the full risks and rewards for the portion of the film acquired in these arrangements. We account for the proceeds received from a third-party investor under these arrangements as a reduction to our capitalized film costs. Under these arrangements, the investor owns an undivided copyright interest in the film, and therefore in each period we record either a charge or a benefit to programming and production expenses to reflect the estimate of the third-party investor's interest in the profit or loss of the film. The estimate of the third-party investor's interest in the profit or loss of a film is determined using the ratio of actual revenue earned to date to the ultimate revenue expected to be recognized over the film's useful life.

We capitalize the costs of programming rights for content that we license but do not own at the earlier of when payments are made for the programming or when the license period begins and the content is made available for use. We amortize capitalized programming costs as the associated programs are broadcast. We recognize the costs of multiyear, live-event sports programming rights as the rights are utilized over the contract term based on estimated relative value. Estimated relative value is generally based on the ratio of the current period revenue to the estimated ultimate revenue or the terms of the contract. Advance payments for rights to multiyear, live-event sports programming are included in programming rights.

Programming costs are recorded at the lower of unamortized cost or net realizable value on a program by program, package, channel or daypart basis. A daypart is an aggregation of programs broadcast during a particular time of day or programs of a similar type. Programming acquired by Cable Networks is primarily tested on a channel basis for impairment, whereas programming acquired by Broadcast Television is tested on a daypart basis. If we determine that the estimates of future cash flows are insufficient or if there is no plan to broadcast certain programming, we recognize an impairment charge to programming and production expenses.

Note 5: Income Taxes

Components of Income Tax Expense

Year ended December 31 (in millions)	**2019**	2018	2017
Foreign			
Current income tax expense	**$ (184)**	$ (230)	$ (201)
Deferred income tax expense	**44**	31	7
Withholding tax expense	**(145)**	(163)	(187)
U.S. domestic tax expense	**(35)**	11	(11)
Income tax expense	**$ (320)**	$ (351)	$ (392)

We are a limited liability company and are disregarded for U.S. federal income tax purposes as an entity separate from NBCUniversal Holdings, a tax partnership. For U.S. federal and state income tax purposes, our income is included in tax returns filed by Comcast and its subsidiaries, and therefore we are not expected to incur any significant current or deferred U.S. domestic income taxes. Our tax liability is comprised primarily of withholding tax on foreign licensing activity and income taxes on foreign earnings. As a result of our tax status, the deferred tax assets and liabilities included in our consolidated balance sheet at December 31, 2019 and 2018 were not material.

In jurisdictions in which we are subject to income taxes, we base our provision for income taxes on our current period income, changes in our deferred income tax assets and liabilities, income tax rates, changes in estimates of our uncertain tax positions, and tax planning opportunities available in the jurisdictions in which we operate. We recognize deferred tax assets and liabilities when there are temporary differences between the financial reporting basis and tax basis of our assets and liabilities and for the expected benefits of using net operating loss carryforwards. When a change in the tax rate or tax law has an impact on deferred taxes, we apply the change based on the years in which the temporary differences are expected to reverse. We record the change in our consolidated financial statements in the period of enactment.

The liabilities for uncertain tax positions included in our consolidated balance sheet were not material as of December 31, 2019 and 2018. Various domestic and foreign tax authorities are examining our tax returns through tax year 2017. The majority of the periods under examination relate to tax years 2010 and forward.

Note 6: Long-Term Debt

Long-Term Debt Outstanding

December 31 (in millions)	Weighted-Average Interest Rate as of December 31, 2019		2019[a]		2018[a]
Term loans	2.04%	$	**3,740**	$	4,122
Senior notes with maturities of 5 years or less, at face value	3.88%		**3,000**		5,000
Senior notes with maturities between 5 and 10 years, at face value	—		**—**		—
Senior notes with maturities greater than 10 years, at face value	5.50%		**2,759**		2,759
Notes due 2049 to Comcast	—		**—**		610
Other, including capital lease obligations	—		**544**		427
Debt issuance costs, premiums and discounts, net	—		**(33)**		(36)
Total debt	3.59%		**10,010**		12,882
Less: Current portion			**301**		151
Long-term debt		**$**	**9,709**	$	12,731

(a) As of December 31, 2019, included in our outstanding debt were foreign currency denominated borrowings with principal amounts of ¥284 billion and ¥9 billion RMB. As of December 31, 2018, included in our outstanding debt were foreign currency denominated borrowings with principal amounts of ¥400 billion and ¥4 billion RMB.

As of December 31, 2019 and 2018, our debt, excluding our revolving credit agreement with Comcast, had an estimated fair value of $11.0 billion and $13.2 billion, respectively. The estimated fair value of our publicly traded debt was primarily based on level 1 inputs that use quoted market value for the debt. The estimated fair value of debt for which there are no quoted market prices was based on level 2 inputs that use interest rates available to us for debt with similar terms and remaining maturities.

Principal Maturities of Debt

(in millions)		
2020	$	303
2021	$	2,383
2022	$	2,031
2023	$	1,021
2024	$	15
Thereafter	$	4,290

Guarantee Structure

We, Comcast and a 100% owned cable holding company subsidiary of Comcast (“CCCL Parent”) fully and unconditionally guarantee each other’s debt securities, including the $7.6 billion Comcast revolving credit facility due 2022. As of December 31, 2019, $82.5 billion principal amount of outstanding debt securities of Comcast and CCCL Parent were subject to the cross-guarantee structure.

We do not, however, guarantee the obligations of NBCUniversal Enterprise with respect to its $1.5 billion outstanding debt securities, including its senior notes, revolving credit facility, commercial paper program nor its $725 million liquidation preference of Series A cumulative preferred stock.

The Universal Studios Japan term loans are not subject to the cross-guarantee structure, however they have a separate guarantee from Comcast.

The Universal Beijing Resort term loan is not guaranteed.

Note 7: Significant Transactions

2018

Universal Beijing Resort

In 2018, we entered into an agreement with a consortium of Chinese state-owned companies to build and operate a Universal theme park and resort in Beijing, China (“Universal Beijing Resort”). We own a 30% interest in Universal Beijing Resort and the construction is being funded through a combination of debt financing and equity contributions from the investors in accordance with their equity interests. The debt financing, which is being provided by a syndicate of Chinese financial institutions, contains certain financial and operating covenants and a maximum borrowing limit of ¥26.6 billion RMB (approximately $3.8 billion). The debt financing is secured by the assets of Universal Beijing Resort and the equity interests of the investors. As of December 31, 2019, Universal Beijing Resort had $1.3 billion principal amount of a term loan outstanding under the debt financing agreement.

We have concluded that Universal Beijing Resort is a variable interest entity based on its governance structure, and we consolidate it because we have the power to direct activities that most significantly impact its economic performance. There are no liquidity arrangements, guarantees or other financial commitments between us and Universal Beijing Resort, and therefore our maximum risk of financial loss is our 30% interest. Universal Beijing Resort’s results of operations are reported in our Theme Parks segment. Our consolidated statement of cash flows includes the costs of construction and related borrowings in the “construction of Universal Beijing Resort” and “proceeds from borrowings” captions, respectively, and equity contributions from the noncontrolling interests are included in other financing activities.

In March 2018, Universal Beijing Resort received initial equity investments through a combination of cash and noncash contributions from the investors. As of December 31, 2019, our consolidated balance sheet included assets, primarily property and equipment, and liabilities, including the term loan, of Universal Beijing Resort totaling $3.0 billion and $2.1 billion, respectively.

2017

FCC Spectrum Auction

On April 13, 2017, the Federal Communications Commission announced the results of its spectrum auction. In the auction, we relinquished our spectrum rights in the New York, Philadelphia and Chicago designated market areas (“DMAs”) where NBC and Telemundo had overlapping spectrum. We received proceeds of $482 million in July 2017, which were recorded in other investing activities in our consolidated statement of cash flows. We recognized a pretax gain of $337 million in other operating gains in 2017. NBC and Telemundo stations share broadcast signals in these DMAs.

Universal Studios Japan

On April 6, 2017, we acquired the remaining interests in Universal Studios Japan that we did not already own for $2.3 billion. The acquisition was funded through borrowings under our revolving credit agreement with Comcast. Because we maintained control of Universal Studios Japan, the difference between the consideration transferred and the recorded value of the noncontrolling interests, as well as the related accumulated other comprehensive income impacts, were recorded to additional paid-in capital.

Note 8: Recent Accounting Pronouncements

Leases

In February 2016, the FASB updated the accounting guidance related to leases. The most significant change in the updated accounting guidance requires lessees to recognize lease assets and liabilities on the balance sheet for all operating leases with the exception of short-term leases. The standard also expands the disclosures regarding the amount, timing and uncertainty of cash flows arising from leases. For a lessee, the recognition, measurement and presentation of expenses and cash flows arising from a lease did not significantly change from previous guidance. We adopted the updated guidance on January 1, 2019 on a prospective basis and as a result, prior period amounts were not adjusted to reflect the impacts of the updated guidance. In addition, as permitted under the transition guidance within the new standard, prior scoping and classification conclusions were carried forward for leases existing as of the adoption date.

Upon adoption, we recorded $1.7 billion and $1.8 billion for operating lease assets and liabilities, respectively, which includes the impact of fair value adjustments, prepaid and deferred rent and lease incentives. The adoption of the updated accounting guidance did not significantly impact our recognition of finance leases, which were previously described as capital leases. As of the date of adoption, our liabilities for finance leases were $332 million which were recorded in long-term debt, and the related assets were recorded in property and equipment, net. Our finance leases were not considered material for further disclosure. The adoption of the new accounting guidance did not have a material impact on our consolidated results of operations or cash flows. See Note 14 for further information.

Film and Television Costs

In March 2019, the FASB updated the accounting guidance related to film and television costs. The updated guidance aligns the accounting for production costs of episodic television series with those of films, allowing for costs to be capitalized in excess of amounts of revenue contracted for each episode. The updated guidance also updates certain presentation and disclosure requirements for capitalized film and television costs and requires impairment testing to be performed at a group level for capitalized film and television costs when the content is predominantly monetized with other owned or licensed content. We will adopt the updated accounting guidance prospectively in the first quarter of 2020. Following adoption, we will present all film and television costs, including capitalized costs of acquired programming rights, as noncurrent assets in the consolidated balance sheet. We do not expect the updated accounting guidance to have a material impact on our consolidated results of operations or financial position.

Credit Losses

In June 2016, the FASB updated the accounting guidance related to the measurement of credit losses on financial instruments, including trade receivables and loans. The updated guidance requires the recognition of credit losses on financial instruments based on an estimate of expected losses, replacing the incurred loss model in the prior guidance. We will adopt the updated accounting guidance prospectively in the first quarter of 2020. We do not expect the updated accounting guidance to have a material impact on our consolidated results of operations or financial position.

Note 9: Investments

Investment and Other Income (Loss), Net

Year ended December 31 (in millions)		2019		2018		2017
Equity in net income (losses) of investees, net	**$**	**(402)**	$	(371)	$	(201)
Realized and unrealized gains (losses) on equity securities, net		**466**		(217)		—
Other income (loss), net		**332**		67		57
Investment and other income (loss), net	**$**	**396**	$	(521)	$	(144)

Investments

December 31 (in millions)		2019		2018
Equity method	**$**	**1,156**	$	707
Marketable equity securities		**295**		162
Nonmarketable equity securities		**804**		811
Total investments		**2,255**		1,680
Less: Current investments		**1**		—
Less: Investment securing collateralized obligation		**694**		—
Noncurrent investments	**$**	**1,560**	$	1,680

Equity Method

We use the equity method to account for investments in which we have the ability to exercise significant influence over the investee's operating and financial policies, or in which we hold a partnership or limited liability company interest in an entity with specific ownership accounts, unless we have virtually no influence over the investee's operating and financial policies. Equity method investments are recorded at cost and are adjusted to recognize (1) our share, based on percentage ownership or other contractual basis, of the investee's net income or loss after the date of investment, (2) amortization of the recorded investment that exceeds our share of the book value of the investee's net assets, (3) additional contributions made and dividends received, and (4) impairments resulting from other-than-temporary declines in fair value. For some investments, we record our share of the investee's net income or loss one quarter in arrears due to the timing of our receipt of such information. Gains or losses on the sale of equity method investments are recorded to other income (loss), net. If an equity method investee were to issue additional securities that would change our proportionate share of the entity, we would recognize the change, if any, as a gain or loss to other income (loss), net.

Hulu and Collateralized Obligation

In May 2019, we entered into a series of agreements (the "Hulu Transaction") with The Walt Disney Company and certain of its subsidiaries ("Disney"), whereby we relinquished our board seats and substantially all voting rights associated with our investment in Hulu, and Disney assumed full operational control. We also acquired our proportionate share of the approximate 10% interest in Hulu previously held by AT&T Inc. ("AT&T") for approximately $477 million, increasing our ownership interest to approximately 33% from approximately 30%.

Following the Hulu Transaction, future capital calls are limited to $1.5 billion in the aggregate each year, with any excess funding requirements funded with member loans. We have the right, but not the obligation, to fund our proportionate share of these capital calls, and if we elect not to fund our share of future equity capital calls, our ownership interest will be diluted, subject to an ownership floor of 21%. The Hulu Transaction agreements include put and call provisions regarding our ownership interest in Hulu, pursuant to which, as early as January 2024, we can require Disney to buy, and Disney can require us to sell our interest, in either case, for fair value at that future time subject to a minimum equity value of $27.5 billion for 100% of the equity of Hulu. The minimum total equity value and ownership floor guarantee minimum proceeds of approximately $5.8 billion upon exercise of the put or call.

In connection with the Hulu Transaction, we agreed to extend certain licenses of NBCUniversal content until late 2024. We can terminate most of our content license agreements with Hulu beginning in 2022, and beginning in 2020, we have the right to modify certain content licenses that are currently exclusive to Hulu, so that we can exhibit the content on our platforms in return for reducing the license fee.

In August 2019, we entered into a financing arrangement with a syndicate of banks whereby we received proceeds of $5.2 billion under a term loan facility due March 2024. The principal amount of the term loan is secured by the proceeds guaranteed by Disney under the put/call provisions related to our investment in Hulu. The proceeds from the put/call provisions are available only for the repayment of the term loan and are not available to us unless and until the bank lenders are fully paid under the term loan provisions. The bank lenders have no rights to proceeds from the put/call provisions in excess of amounts owed under the term loan. As a result of this transaction, we now present our investment in Hulu and the term loan separately in our consolidated balance sheet in the captions “investment securing collateralized obligation” and “collateralized obligation”, respectively. The recorded value of our investment reflects our historical cost in applying the equity method, and as a result, is less than its fair value. As of December 31, 2019, our collateralized obligation had a carrying value of $5.2 billion and an estimated fair value of $5.2 billion. The estimated fair value was based on level 2 inputs that use interest rates for debt with similar terms and remaining maturities.

We account for our investment using the equity method. In 2019, 2018 and 2017, we recognized losses of $473 million, $454 million and $276 million, respectively, in equity in net income (losses) of investees, net. In 2019, 2018 and 2017, we made cash capital contributions totaling $903 million, inclusive of the funding for the acquisition of the AT&T interest, $454 million and $300 million, respectively, to Hulu. As of December 31, 2019 and 2018, our investment was $694 million and $248 million, respectively.

In August 2016, Time Warner Inc., which was acquired by AT&T in 2018, acquired a 10% interest in Hulu, diluting our interest at that time from approximately 33% to approximately 30%. Given the contingent nature of put and call options related to that interest, we recorded a deferred gain as a result of the dilution. In the first quarter of 2019, the put and call options expired unexercised and we recognized the previously deferred gain of $159 million in other income (loss), net.

Marketable Equity Securities

We classify investments with readily determinable fair values that are not accounted for under the equity method as marketable equity securities. Marketable equity securities are recorded at cost and adjusted to fair value at each reporting period. The changes in fair value between measurement dates are recorded in realized and unrealized gains (losses) on equity securities, net. The fair values of our marketable equity securities are based on level 1 inputs that use quoted market prices.

Snap

In March 2017, Comcast acquired an interest in Snap Inc. as part of its initial public offering. On March 31, 2017, Comcast contributed its investment in Snap to us as an equity contribution of $662 million, which was recorded in our consolidated statement of equity based on the fair value of the investment as of March 31, 2017 and was classified as a marketable equity security. We sold our investment in 2019. We recognized gains of $293 million and losses of $268 million in 2019 and 2018, respectively. As of December 31, 2018, our investment was $162 million.

Peloton

In 2019, we recognized unrealized gains of $184 million which included unrealized gains as a result of Peloton’s initial public offering in September 2019. Following the initial public offering, we now present our investment in marketable equity securities, which was previously presented in non-marketable equity securities. As of December 31, 2019 and 2018, our investment was $294 million and $110 million, respectively.

Nonmarketable Equity Securities

We classify investments without readily determinable fair values that are not accounted for under the equity method as nonmarketable equity securities. The accounting guidance requires nonmarketable equity securities to be recorded at cost and adjusted to fair value at each reporting period. However, the guidance allows for a measurement alternative, which is to record the investments at cost, less impairment, if any, and subsequently adjust for observable price changes of identical or similar investments of the same issuer. We apply this measurement alternative to our nonmarketable equity securities. When an observable event occurs, we estimate the fair values of our nonmarketable equity securities based on level 2 inputs that are derived from observable price changes of similar securities adjusted for insignificant differences in rights and obligations. The changes in value are recorded in realized and unrealized gains (losses) on equity securities, net.

Impairment Testing of Investments

We review our investment portfolio, other than our marketable equity securities, each reporting period to determine whether there are identified events or circumstances that would indicate there is a decline in the fair value. For our nonpublic investments, if there are no identified events or circumstances that would have a significant adverse effect on the fair value of the investment, then the fair value is not estimated. For our equity method investments and held to maturity investments, if an investment is deemed to have experienced an other-than-temporary decline below its cost basis, we reduce the carrying amount of the investment to its quoted or estimated fair value, as applicable, and establish a new cost basis for the investment. For our nonmarketable equity securities, we record the impairment to realized and unrealized gains (losses) on equity securities, net. For our equity method investments and our held to maturity investments, we record the impairment to other income (loss), net.

Note 10: Property and Equipment

December 31 (in millions)	Weighted-Average Original Useful Life as of December 31, 2019		**2019**		2018
Buildings and leasehold improvements	31 years	**$**	**9,438**	$	8,877
Furniture, fixtures and equipment	12 years		**6,049**		5,501
Construction in process	N/A		**4,884**		2,676
Land	N/A		**1,179**		1,129
Property and equipment, at cost			**21,550**		18,183
Less: Accumulated depreciation			**5,799**		4,994
Property and equipment, net		**$**	**15,751**	$	13,189

Property and equipment are stated at cost. We capitalize improvements that extend asset lives and expense repairs and maintenance costs as incurred. We record depreciation using the straight-line method over the asset's estimated useful life. For assets that are sold or retired, we remove the applicable cost and accumulated depreciation and, unless the gain or loss on disposition is presented separately, we recognize it as a component of depreciation expense. Capital expenditures for the construction of Universal Beijing Resort are presented separately in our consolidated statement of cash flows.

We evaluate the recoverability of our property and equipment whenever events or substantive changes in circumstances indicate that the carrying amount may not be recoverable. The evaluation is based on the cash flows generated by the underlying asset groups, including estimated future operating results, trends or other determinants of fair value. If the total of the expected future undiscounted cash flows were less than the carrying amount of the asset group, we would recognize an impairment charge to the extent the carrying amount of the asset group exceeded its estimated fair value. Unless presented separately, the impairment charge is included as a component of depreciation expense.

Note 11: Goodwill and Intangible Assets

Goodwill

(in millions)	Cable Networks	Broadcast Television	Filmed Entertainment	Theme Parks	Total
Balance, December 31, 2017	$ 13,427	$ 806	$ 3,212	$ 6,544	$ 23,989
Acquisitions	—	36	—	—	36
Dispositions	—	—	(8)	—	(8)
Adjustments	(13)	1	(9)	—	(21)
Foreign currency translation	(7)	—	(11)	140	122
Balance, December 31, 2018	13,407	843	3,184	6,684	24,118
Acquisitions	**162**	**14**	**—**	**—**	**176**
Dispositions	**—**	**—**	**—**	**—**	**—**
Adjustments	**(105)**	**—**	**1**	**—**	**(104)**
Foreign currency translation	**(2)**	**—**	**(3)**	**55**	**50**
Balance, December 31, 2019	**$ 13,462**	**$ 857**	**$ 3,182**	**$ 6,739**	**$ 24,240**

Goodwill is calculated as the excess of the consideration transferred over the identifiable net assets acquired in a business combination and represents the future economic benefits expected to arise from anticipated synergies and intangible assets acquired that do not qualify for separate recognition, including assembled workforce, noncontractual relationships and other agreements. We assess the recoverability of our goodwill annually, or more frequently whenever events or substantive changes in circumstances indicate that the carrying amount of a reporting unit may exceed its fair value. We test goodwill for impairment at the reporting unit level. To determine our reporting units, we evaluate the components one level below the segment level and we aggregate the components if they have similar economic characteristics. As a result of this assessment, our reporting units are generally the same as our four reportable segments. We evaluate the determination of our reporting units used to test for impairment periodically or whenever events or substantive changes in circumstances occur. The assessment of recoverability may first consider qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. A quantitative assessment is performed if the qualitative assessment results in a more-likely-than-not determination or if a qualitative assessment is not performed. The quantitative assessment considers whether the carrying amount of a reporting unit exceeds its fair value, in which case an impairment charge is recorded to the extent the reporting unit's carrying value exceeds its fair value. Unless presented separately, the impairment charge is included as a component of amortization expense. We did not recognize any impairment charges in any of the periods presented.

Intangible Assets

		2019		2018	
December 31 (in millions)	Weighted-Average Original Useful Life as of December 31, 2019	**Gross Carrying Amount**	**Accumulated Amortization**	Gross Carrying Amount	Accumulated Amortization
Finite-Lived Intangible Assets:					
Customer relationships	19 years	**$ 13,261**	**$ (6,929)**	$ 13,269	$ (6,283)
Software	5 years	**2,088**	**(1,205)**	1,779	(932)
Other	19 years	**3,711**	**(1,525)**	3,619	(1,375)
Indefinite-Lived Intangible Assets:					
Trade names	N/A	**2,927**		2,981	
FCC licenses	N/A	**612**		608	
Total		**$ 22,599**	**$ (9,659)**	$ 22,256	$ (8,590)

Indefinite-Lived Intangible Assets

Indefinite-lived intangible assets consist of trade names and FCC licenses. We assess the recoverability of our indefinite-lived intangible assets annually, or more frequently whenever events or substantive changes in circumstances indicate that the assets might be impaired. We evaluate the unit of account used to test for impairment of our indefinite-lived intangible assets periodically or whenever events or substantive changes in circumstances occur to ensure impairment testing is performed at an appropriate level. The assessment of recoverability may first consider qualitative factors to determine whether it is more likely than not that the fair value of an indefinite-lived intangible asset is less than its carrying amount. A quantitative assessment is performed if the qualitative assessment results in a more-likely-than-not determination or if a qualitative assessment is not performed. When performing a quantitative assessment, we estimate the fair value of our indefinite-lived intangible assets primarily based on a discounted cash flow analysis that involves significant judgment. When analyzing the fair values indicated under the discounted cash flow models, we also consider multiples of Adjusted EBITDA generated by the underlying assets, current market transactions and profitability information. If the fair value of our indefinite-lived intangible assets were less than the carrying amount, we would recognize an impairment charge for the difference between the estimated fair value and the carrying value of the assets. Unless presented separately, the impairment charge is included as a component of amortization expense. We did not recognize any material impairment charges in any of the periods presented.

Finite-Lived Intangible Assets

Estimated Amortization Expense of Finite-Lived Intangible Assets

(in millions)		
2020	$	1,099
2021	$	1,006
2022	$	914
2023	$	876
2024	$	847

Finite-lived intangible assets are subject to amortization and consist primarily of customer relationships acquired in business combinations, software and intellectual property rights. Our finite-lived intangible assets are amortized primarily on a straight-line basis over their estimated useful life or the term of the associated agreement.

We capitalize direct development costs associated with internal-use software, including external direct costs of material and services and payroll costs for employees devoting time to these software projects. We also capitalize costs associated with the purchase of software licenses. We generally amortize them on a straight-line basis over a period not to exceed five years. We expense maintenance and training costs, as well as costs incurred during the preliminary stage of a project, as they are incurred. We capitalize initial operating system software costs and amortize them over the life of the associated hardware.

We evaluate the recoverability of our finite-lived intangible assets whenever events or substantive changes in circumstances indicate that the carrying amount may not be recoverable. The evaluation is based on the cash flows generated by the underlying asset groups, including estimated future operating results, trends or other determinants of fair value. If the total of the expected future undiscounted cash flows were less than the carrying amount of the asset group, we would recognize an impairment charge to the extent the carrying amount of the asset group exceeded its estimated fair value. Unless presented separately, the impairment charge is included as a component of amortization expense.

Note 12: Employee Benefit Plans

Deferred Compensation Plans

Year ended December 31 (in millions)		**2019**		2018		2017
Benefit obligation	**$**	**858**	$	719	$	621
Interest expense	**$**	**99**	$	58	$	64

Certain members of management participate in Comcast’s unfunded, nonqualified deferred compensation plans as well as similar plans sponsored by us. The amount of compensation deferred by each participant is based on participant elections. Participant accounts are credited with income primarily based on a fixed annual rate. Participants are eligible to receive distributions from their account based on elected deferral periods that are consistent with the plans and applicable tax law.

Pension and Postretirement Benefit Plans

We sponsor several defined contribution retirement plans, including 401(k) plans, that allow eligible employees to contribute a portion of their compensation through payroll deductions in accordance with specified plan guidelines. We make contributions to the plans that include matching a percentage of the employees' contributions up to certain limits. In 2019, 2018 and 2017, expenses related to these plans totaled $229 million, $213 million and $201 million, respectively.

We provide postretirement benefits to eligible employees through a retiree health and welfare benefits plan. The plan provides credit to employees for length of service provided before Comcast's acquisition of NBCUniversal. The plan provides eligible employees who retire with an annual stipend for reimbursement of certain eligible healthcare costs. The amount of the stipend for an eligible retiree is fixed at a predetermined amount based on the retiree's years of service and whether the retiree is eligible for Medicare. We sponsor various nonqualified defined benefit pension plans for domestic employees. The future benefits for these plans have been frozen since the beginning of 2013. In addition to the defined benefit plans we sponsor, we are also obligated to reimburse The General Electric Company ("GE") for future benefit payments to those participants who were vested in the supplemental pension plan sponsored by GE at the time of Comcast's acquisition of NBCUniversal. These plans are all unfunded and not material.

We participate in various multiemployer benefit plans, including pension and postretirement benefit plans, that cover some of our employees and temporary employees who are represented by labor unions. We also participate in other multiemployer benefit plans that provide health and welfare and retirement savings benefits to active and retired participants. If we cease to be obligated to make contributions or were to otherwise withdraw from participation in any of these plans, applicable law would require us to fund our allocable share of the unfunded vested benefits, which is known as a withdrawal liability. In addition, actions taken by other participating employers may lead to adverse changes in the financial condition of one of these plans, which could result in an increase in our withdrawal liability. In 2019, 2018 and 2017, the total contributions we made to multiemployer benefit plans were not material.

Severance Benefits

We provide severance benefits to certain former employees. A liability is recorded when payment is probable, the amount is reasonably estimable, and the obligation relates to rights that have vested or accumulated. In 2019, 2018 and 2017, we recorded severance costs of $125 million, $146 million and $108 million, respectively.

Note 13: Supplemental Financial Information

Cash Payments for Interest and Income Taxes

Year ended December 31 (in millions)	**2019**	2018	2017
Interest	**$ 440**	$ 408	$ 517
Income taxes	**$ 356**	$ 430	$ 282

Noncash Activities

During 2019:

- we acquired $866 million of property and equipment and intangible assets that were accrued but unpaid

During 2018:

- we acquired $1.4 billion of property and equipment and intangible assets that were accrued but unpaid
- we received noncash contributions from noncontrolling interests totaling $391 million related to Universal Beijing Resort (see Note 7)

During 2017:

- we acquired $325 million of property and equipment and intangible assets that were accrued but unpaid
- Comcast contributed its investment in Snap to us at its fair value, which was a noncash transaction (see Note 9)
- we and Comcast completed a senior notes exchange in the fourth quarter of 2017 (see Note 15)

Cash, Cash Equivalents and Restricted Cash

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported in the consolidated balance sheet to the total of the amounts reported in our consolidated statement of cash flows.

December 31 (in millions)		2019		2018
Cash and cash equivalents	**$**	**1,424**	$	1,444
Restricted cash included in other noncurrent assets, net		**20**		20
Cash, cash equivalents and restricted cash, end of year	**$**	**1,444**	$	1,464

The carrying amounts of our cash equivalents approximate their fair values. Our cash equivalents consist primarily of money market funds and U.S. government obligations, as well as commercial paper and certificates of deposit with maturities of three months or less when purchased.

Accumulated Other Comprehensive Income (Loss)

December 31 (in millions)		2019		2018
Deferred gains (losses) on cash flow hedges	**$**	**7**	$	12
Unrecognized gains (losses) on employee benefit obligations		**87**		140
Cumulative translation adjustments		**120**		102
Accumulated other comprehensive income (loss)	**$**	**214**	$	254

Note 14: Commitments and Contingencies

Programming and Talent Commitments

We enter into long-term commitments with third parties in the ordinary course of our business, including commitments to acquire film and television programming, obligations under various creative talent agreements, and various other television-related commitments. Some of our employees, including writers, directors, actors, technical and production personnel, and others, as well as some of our on-air and creative talent, are covered by collective bargaining agreements or works councils. As of December 31, 2019, the total number of employees covered by collective bargaining agreements was 9,400 full-time equivalent employees. Approximately, 12% of these full-time equivalent employees were covered by collective bargaining agreements that have expired or are scheduled to expire during 2020.

The table below summarizes our minimum annual programming and talent commitments. Programming and talent commitments include acquired film and television programming, broadcast rights to sporting events, such as the Olympics, and other programming commitments, as well as various contracts with creative talent.

As of December 31, 2019 (in millions)		Programming and Talent Commitments
2020	$	7,179
2021	$	4,655
2022	$	4,813
2023	$	2,609
2024	$	3,555
Thereafter	$	13,317

Leases

Our leases consist primarily of real estate, vehicles and other equipment. We determine if an arrangement is a lease at inception. Lease assets and liabilities are recognized upon commencement of the lease based on the present value of the future minimum lease payments over the lease term. The lease term includes options to extend the lease when it is reasonably certain that we will exercise that option. We generally utilize our incremental borrowing rate based on information available at the commencement of the lease in determining the present value of future payments. The lease asset also includes any lease payments made and initial direct costs incurred and excludes lease incentives. Lease assets and liabilities are not recorded for leases with an initial term of one year or less. Lease expense for operating leases recorded in the balance sheet is included in operating costs and expenses and is based on the future minimum lease payments recognized on a straight-line basis over the term of the lease plus any variable lease costs. Operating lease expenses, inclusive of short-term and variable lease expenses, recognized in our consolidated statement of income for the period ended December 31, 2019 was $443 million. This amount does not include lease costs associated with production activities or other amounts capitalized in our consolidated balance sheet, which are not material.

The table below summarizes the operating lease assets and liabilities recorded in our consolidated balance sheet.

Consolidated Balance Sheet

(in millions)		December 31, 2019
Other noncurrent assets, net	$	1,551
Accrued expenses and other current liabilities	$	189
Other noncurrent liabilities	$	1,481

The table below summarizes our future minimum lease commitments for operating leases as of December 31, 2019 applying the new guidance.

(in millions)		December 31, 2019
2020	$	256
2021		224
2022		186
2023		161
2024		146
Thereafter		1,335
Total future minimum lease payments		2,308
Less: imputed interest		638
Total liability	$	1,670

The weighted average remaining lease term for operating leases and the weighted average discount rate used to calculate our operating lease liabilities as of December 31, 2019 were 15 years and 4.06%, respectively.

In 2019, cash payments for operating leases recorded in the consolidated balance sheet were $271 million. Leases that have not yet commenced and lease assets and liabilities associated with leases entered into during the year were not material.

The tables below summarize our future minimum rental commitments for operating leases as of December 31, 2018 and rent expense for operating leases using the accounting guidance in effect at that time.

(in millions)		December 31, 2018
2019	$	248
2020	$	232
2021	$	199
2022	$	168
2023	$	144
Thereafter	$	1,380

Year ended December 31 (in millions)		2018		2017
Rental expense	$	286	$	274

Contractual Obligation

We are party to a contractual obligation that involves an interest held by a third party in the revenue of certain theme parks. The arrangement provides the counterparty with the right to periodic payments associated with current period revenue which are recorded as an operating expense, and beginning in June 2017, the option to require NBCUniversal to purchase the interest for cash in an amount based on a contractual formula. The contractual formula is based on an average of specified historical theme park revenue at the time of exercise, which amount could be significantly higher than our carrying value. As of December 31, 2019, our carrying value was $1.1 billion, and the estimated value of the contractual obligation was $1.8 billion based on inputs to the contractual formula as of that date.

Note 15: Related Party Transactions

In the ordinary course of our business, we enter into transactions with Comcast.

We generate revenue from Comcast primarily from the distribution of our cable network programming, the fees received under retransmission consent agreements in our Broadcast Television segment and, to a lesser extent, the sale of advertising and our owned programming, and we incur expenses primarily related to advertising and various support services provided by Comcast to us.

As part of the Comcast cash management process, we and Comcast have a revolving credit agreement with a maturity date of 2026 that allows us to borrow from Comcast and for Comcast to borrow from us up to $5 billion. Depending on the receivable or payable position, amounts owed by us to Comcast or to us by Comcast under the revolving credit agreements are presented under the captions “notes payable to Comcast” and “notes receivable from Comcast,” respectively, in our consolidated balance sheet and are presented as current since the amounts include daily borrowings and repayments throughout the year based on our working capital needs.

In 2019, using a portion of the proceeds from a collateralized obligation, we issued $1.3 billion of non-interest bearing notes due 2024 to Comcast, repaid $1.0 billion under our revolving credit agreement with Comcast, and repaid the $610 million 4.00% notes due 2049 to Comcast. The early redemption of the notes due to Comcast were accounted for as a debt extinguishment, resulting in a charge of $178 million to interest expense in the third quarter of 2019.

In October 2017, we and Comcast completed a debt exchange transaction. Comcast issued new senior notes in exchange for $3.9 billion aggregate principal amount of certain series of outstanding senior notes issued by Comcast and us, including $442 million of our 6.40% senior notes due 2040. In connection with the exchange transaction, we issued $610 million of 4.00% notes due 2049 to Comcast. The debt exchange transaction was accounted for as a debt extinguishment, and therefore we recorded a charge of $157 million to interest expense upon retirement of the old notes.

Comcast is also the counterparty to one of our contractual obligations. As of both December 31, 2019 and 2018, the carrying value of the liability associated with this contractual obligation was $383 million.

The following tables present transactions with Comcast and its consolidated subsidiaries that are included in our consolidated financial statements.

Consolidated Statement of Income

Year ended December 31 (in millions)		**2019**		2018		2017
Transactions with Comcast and Consolidated Subsidiaries						
Revenue	**$**	**2,398**	$	2,156	$	1,837
Total costs and expenses	**$**	**(287)**	$	(245)	$	(214)
Interest expense and investment and other income (loss), net	**$**	**(133)**	$	(54)	$	(250)

Consolidated Balance Sheet

December 31 (in millions)		**2019**		2018
Transactions with Comcast and Consolidated Subsidiaries				
Receivables, net	**$**	**492**	$	464
Other current assets	**$**	**46**	$	—
Notes receivable from Comcast, current	**$**	**3,886**	$	2,054
Film and television costs	**$**	**26**	$	27
Note receivable from Comcast, noncurrent	**$**	**1,069**	$	—
Other noncurrent assets, net	**$**	**70**	$	—
Accounts payable and accrued expenses related to trade creditors	**$**	**84**	$	78
Accrued expenses and other current liabilities	**$**	**108**	$	32
Notes payable to Comcast	**$**	**99**	$	54
Long-term debt (See Note 6)	**$**	**156**	$	701
Other noncurrent liabilities	**$**	**454**	$	410

Distributions to NBCUniversal Holdings

In addition to the transaction amounts presented in the table above, we make distributions to NBCUniversal Holdings on a periodic basis to enable its owners to meet their obligations to pay taxes on taxable income generated by our businesses. We also make quarterly distributions to NBCUniversal Holdings to enable it to make its required quarterly payments to NBCUniversal Enterprise at an initial annual rate of 8.25% on the $9.4 billion aggregate liquidation preference of its preferred units. On March 1, 2023, and thereafter on every fifth anniversary of such date, this rate will reset to 7.44% plus the yield on actively traded United States Treasury securities having a 5 year maturity. These distributions are presented under the caption “distributions to member” in our consolidated statement of cash flows.

Share-Based Compensation

Comcast maintains share-based compensation plans that consist primarily of awards of restricted share units (“RSUs”) and stock options to certain employees and directors as part of its approach to long-term incentive compensation. Additionally, through its employee stock purchase plans, employees are able to purchase shares of Comcast common stock at a discount through payroll deductions. The cost associated with Comcast’s share-based compensation is based on an award’s estimated fair value at the date of grant and is recognized over the period in which any related services are provided. RSUs are valued based on the closing price of Comcast common stock on the date of grant and are discounted for the lack of dividends, if any, during the vesting period. Stock options are valued using the Black-Scholes option pricing model. Certain of our employees participate in these plans and the expense associated with their participation is settled in cash with Comcast. In 2019, 2018 and 2017, we recognized share-based compensation expense of $188 million, $151 million and $133 million, respectively. As of December 31, 2019, we had unrecognized pretax compensation expense of $308 million related to nonvested Comcast RSUs and unrecognized pretax compensation expense of $13 million related to nonvested Comcast stock options that will be recognized over a weighted-average period of approximately 1.5 years and 0.7 years, respectively.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of
Comcast Corporation
Philadelphia, Pennsylvania

Opinion on the Consolidated Financial Statement Schedule

We have audited the consolidated financial statements of Comcast Corporation and subsidiaries (the “Company”) as of December 31, 2019 and 2018, and for each of the three years in the period ended December 31, 2019, and the Company’s internal control over financial reporting as of December 31, 2019, and have issued our report thereon dated January 30, 2020; such consolidated financial statements and report are included elsewhere in this Form 10-K. Our audits also included the consolidated financial statement schedule of the Company listed in the Index at Item 15. This consolidated financial statement schedule is the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statement schedule based on our audits. In our opinion, such consolidated financial statement schedule, when considered in relation to the consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

/s/ Deloitte & Touche LLP
Philadelphia, Pennsylvania
January 30, 2020

Report of Independent Registered Public Accounting Firm

To the Member of NBCUniversal Media, LLC
New York, New York

Opinion on the Consolidated Financial Statement Schedule

We have audited the consolidated financial statements of NBCUniversal Media, LLC and subsidiaries (the “Company”) as of December 31, 2019 and 2018, and for each of the three years in the period ended December 31, 2019, and have issued our report thereon dated January 30, 2020; such consolidated financial statements and report are included elsewhere in this Form 10-K. Our audits also included the consolidated financial statement schedule of the Company listed in the Index at Item 15. This consolidated financial statement schedule is the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statement schedule based on our audits. In our opinion, such consolidated financial statement schedule, when considered in relation to the consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

/s/ Deloitte & Touche LLP
New York, New York
January 30, 2020

Comcast Corporation
Schedule II – Valuation and Qualifying Accounts
Year ended December 31, 2019, 2018 and 2017

Year ended December 31 (in millions)	Balance at Beginning of Year	Additions Charged to Costs and Expenses	Deductions from Reserves	Balance at End of Year
2019				
Allowance for doubtful accounts	$ 352	$ 769	$ 702	$ 419
Valuation allowance on deferred tax assets	632	1,403	129	1,906
2018				
Allowance for doubtful accounts	$ 288	$ 616	$ 552	$ 352
Valuation allowance on deferred tax assets	377	367	112	632
2017				
Allowance for doubtful accounts	$ 250	$ 554	$ 516	$ 288
Valuation allowance on deferred tax assets	266	111	—	377

NBCUniversal Media, LLC
Schedule II – Valuation and Qualifying Accounts
Year ended December 31, 2019, 2018 and 2017

Year ended December 31 (in millions)	Balance at Beginning of Year	Additions Charged to Costs and Expenses	Deductions from Reserves	Balance at End of Year
2019				
Allowance for doubtful accounts	$ 99	$ 48	$ 47	$ 100
Valuation allowance on deferred tax assets	73	36	15	94
2018				
Allowance for doubtful accounts	$ 88	$ 32	$ 21	$ 99
Valuation allowance on deferred tax assets	87	13	27	73
2017				
Allowance for doubtful accounts	$ 84	$ 23	$ 19	$ 88
Valuation allowance on deferred tax assets	72	15	—	87

Exhibit 3.5

SECOND AMENDMENT
TO
AMENDED AND RESTATED LIMITED LIABILITY COMPANY AGREEMENT
OF
NBCUNIVERSAL MEDIA, LLC

This Second Amendment to the Amended and Restated Limited Liability Company Agreement ("Amendment") amends the NBCUniversal Media, LLC Amended and Restated Limited Liability Company Agreement (the "LLC Agreement") of NBCUniversal Media, LLC (the "LLC") and is entered into by the undersigned with reference to the following fact:

WHEREAS, the Member desires to amend Article I, Section 6 of the LLC Agreement to change the registered agent and registered office.

NOW, THEREFORE, the Member hereby agrees that the LLC Agreement shall be amended as follows:

1. Article I, Section 6 of the LLC Agreement is hereby deleted in its entirety and replaced by the following:

"Section 6. Registered Agent; Registered Office. The name and address of the LLC's registered agent and registered office in the State of Delaware is Enterprise Corporate Services, 1201 N. Market Street, Suite 1000, in the City of Wilmington, County of New Castle, Delaware 19801."

2. All other provisions of the LLC Agreement not modified herein shall remain in full force and effect.

IN WITNESS WHEREOF, this Second Amendment was executed as of January 1, 2015.

NBCUniversal, LLC
Member

By: /s/ Gabriela Kornzweig
Name: Gabriela Kornzweig
Title: Assistant Secretary

Exhibit 4.15

DESCRIPTION OF COMCAST CORPORATION'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

As of December 31, 2019, Comcast Corporation ("Comcast," the "Company," "we," "us" or "our") had four classes of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): (1) our common stock, (2) our 2.0% Exchangeable Subordinated Debentures due 2029, (3) our 5.50% Notes due 2029 and (4) our 9.455% Guaranteed Notes due 2022.

(1) DESCRIPTION OF OUR COMMON STOCK

In the following summary, references to the "Company," "we," "us" and "our" refer only to Comcast and not any of its subsidiaries. The statements made under this caption include summaries of certain provisions contained in our articles of incorporation and by-laws. This summary does not purport to be complete and is qualified in its entirety by reference to such articles of incorporation and by-laws.

We have two classes of common stock outstanding: Class A common stock, $0.01 par value per share, and Class B common stock, $0.01 par value per share. There are currently authorized 7.5 billion shares of Class A common stock, 75 million shares of Class B common stock and 20 million shares of preferred stock. Our Board of Directors (the "Board") may issue preferred stock, in one or more series, without par value, with full, limited, multiple, fractional, or no voting rights, and with such designations, preferences, qualifications, privileges, limitations, restrictions, options, conversion rights and other special rights as our Board shall determine.

Dividends

Subject to the preferential rights of any preferred stock then outstanding, holders of our Class A common stock and Class B common stock are entitled to receive, from time to time, when, as and if declared, in the discretion of our Board, such cash dividends as our Board may from time to time determine, out of such funds as are legally available therefor, in proportion to the number of shares held by them, respectively, without regard to class.

Holders of our Class A common stock and Class B common stock will also be entitled to receive, from time to time, when, as and if declared by our Board, such dividends of our stock or other property as our Board may determine, out of such funds as are legally available therefor. However, stock dividends on, or stock splits of, any class of common stock will not be paid or issued unless paid or issued on all classes of our common stock, in which case they will be paid or issued only in shares of that class; provided, however, that stock dividends on, or stock splits of, our Class B common stock may also be paid or issued in shares of our Class A common stock.

Voting Rights

As a general matter, on all matters submitted for a vote to holders of all classes of our voting stock, holders of our Class A common stock in the aggregate hold 66 2/3% of the aggregate voting power of our capital stock, and holders of our Class B common stock in the aggregate hold a non-dilutable 33 1/3% of the combined voting power of our capital stock. This nondilutable voting power is subject to proportional decrease to the extent the number of shares of Class B common stock is reduced below 9,444,375, subject to adjustment in specified situations. Stock dividends payable on the Class B common stock in the form of Class B common stock do not decrease the nondilutable voting power of the Class B common stock.

Approval Rights

Except as required by law, holders of Class A common stock have no specific approval rights over any corporate actions. Holders of our Class B common stock have an approval right over (1) any merger of us with another company or any other transaction, in each case that requires our shareholders' approval under applicable law, or any other transaction that would result in any person or group owning shares representing in excess of 10% of the aggregate voting power of the resulting or surviving corporation, or any issuance of securities (other than pursuant to director or officer stock option or purchase plans) requiring our shareholders' approval under the rules and regulations of any stock exchange or quotation system; (2) any issuance of our Class B common stock or any securities exercisable or exchangeable for or convertible into our Class B common stock; and (3) articles of incorporation or by-law amendments (such as an amendment to the articles of incorporation to opt in to any of the Pennsylvania antitakeover statutes) and other actions (such as the adoption, amendment or redemption of a shareholder rights plan) that limit the rights of holders of our Class B common stock or any subsequent transferee of our Class B common stock to transfer, vote or otherwise exercise rights with respect to our capital stock.

Conversion of Class B Common Stock

The Class B common stock is convertible share for share into Class A common stock, subject to certain restrictions.

Preference on Liquidation

In the event of our liquidation, dissolution or winding up, either voluntary or involuntary, the holders of Class A common stock and Class B common stock are entitled to receive, subject to any liquidation preference of any preferred stock then outstanding, our remaining assets, if any, in proportion to the number of shares held by them without regard to class.

Mergers, Consolidations, Etc.

Our articles of incorporation provide that if in a transaction such as a merger, consolidation, share exchange or recapitalization, holders of each class of our common stock outstanding do not receive the same consideration for each of their shares of our common stock (i.e., the same amount of cash or the same number of shares of each class of stock issued in the transaction in proportion to the number of shares of our common stock held by them, respectively, without regard to class), holders of each such class of our common stock will receive "mirror" securities (i.e., shares of a class of stock having substantially equivalent rights as the applicable class of our common stock).

Miscellaneous

The holders of Class A common stock and Class B common stock do not have any preemptive rights. All shares of Class A common stock and Class B common stock presently outstanding are, and all shares of the Class A common stock offered hereby, or issuable upon conversion, exchange or exercise of securities offered hereby, will, when issued, be, fully paid and nonassessable.

(2) DESCRIPTION OF OUR 2.0% EXCHANGEABLE SUBORDINATED DEBENTURES DUE 2029

The following summary of our 2.0% Exchangeable Subordinated Debentures due 2029 (the "ZONES") is based on the indenture dated as of June 15, 1999 between Comcast Holdings Corporation

(“Comcast Holdings” or the “Issuer”) and Deutsche Bank Trust Company Americas (formerly known as Bankers Trust Company), as Trustee (the “Trustee”) (the “Base Indenture”), as amended by the first supplemental indenture dated as of September 12, 2005 among Comcast Holdings, the Trustee and Comcast (together with the Base Indenture, the “Indenture”). This summary does not purport to be complete and is qualified in its entirety by reference to such Indenture. For the purposes of this summary, references to “we” and “our” refer only to Comcast Holdings.

General

The ZONES are unsecured, subordinated obligations of Comcast Holdings and will mature on November 15, 2029.

Principal, premium, if any, and interest on the ZONES are payable at the office or agency we maintain for such purpose within the City and State of New York or, at our option, payment of interest may be made by check mailed to the holders of the ZONES at their respective addresses set forth in the register of holders of the ZONES, provided that all payments with respect to ZONES, the holders of which have given wire transfer instructions, on or prior to the relevant record date, to the paying agent, are made by wire transfer of immediately available funds to the accounts specified by the holders. Until we otherwise designate, our office or agency in New York will be the office of the trustee maintained for that purpose. The ZONES are issued in denominations of one ZONES and integral multiples thereof.

Interest

We make quarterly interest payments in an amount equal to $0.4082 per ZONES, or 2.0% per year of the original principal amount, plus the amount of any quarterly cash dividend paid on the reference shares attributable to each ZONES. Holders of the ZONES are not expected to receive interest attributable to any cash dividend on the reference shares for this payment period because Sprint has never paid a cash dividend on its Sprint PCS stock.

Interest on the ZONES accrues from the issue date of the ZONES. We pay this interest quarterly in arrears on February 15, May 15, August 15 and November 15 of each year, beginning February 15, 2000, but subject to our right to defer quarterly payments of interest.

We also distribute, as additional interest on the ZONES, any property, including cash (other than any quarterly cash dividend), distributed on or with respect to the reference shares (other than publicly traded equity securities, which will themselves become reference shares). If the additional interest on the reference shares includes publicly traded securities (other than equity securities), we will distribute those securities. We will not, however, distribute fractional units of securities. We will pay cash instead of distributing the fractional units. Otherwise, we will distribute the fair market value of any property comprising additional interest as determined in good faith by our board of directors. We will distribute any additional interest to holders of the ZONES on the 20th business day after it is distributed on the reference shares. The record date for any distribution of additional interest is the 10th business day after the date any cash or property is distributed on the reference shares.

If extraordinary dividends on the reference shares are paid, the contingent principal amount will be reduced on a quarterly basis to the extent necessary so that the yield to the date of computation (including all interest payments other than those attributable to regular periodic cash dividends) does not exceed 2.0%. In no event will the contingent principal amount be less than zero. Changes in the contingent principal amount will not affect the amount of the quarterly interest payments.

If interest or additional interest is payable on a date that is not a business day (as defined at the end of this paragraph), payment will be made on the next business day (and without any interest or other payment in respect of this delay). However, if the next business day is in the next calendar year, payment of interest will be made on the preceding business day. A "business day" means each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in The City of New York are authorized or obligated by law or regulation to close.

Deferral of interest payments

If no event of default has occurred and is continuing under the ZONES, we can, on one or more occasions, defer quarterly interest payments on the ZONES for up to 20 consecutive quarterly periods. If we terminate a deferral period and subsequently elect to defer quarterly interest payments, we will again be subject to the 20 consecutive quarterly period limitation.

We will not, however, be subject to the 20 consecutive quarterly period limitation on deferral if, as a result of a tender offer, an exchange offer, a business combination or otherwise, all reference shares cease to be outstanding, and we subsequently elect to defer quarterly payments of interest on the ZONES.

Any deferral of interest payments cannot extend, however, beyond the maturity date of the ZONES. We can never defer distributions of additional interest.

If we defer quarterly payments of interest, the contingent principal amount of the ZONES will increase by the amount of the deferred quarterly payments of interest, plus accrued interest thereon at an annual rate of 2.0%, compounded quarterly, and the early exchange ratio will be 100% for the quarter following each deferral of a payment of quarterly interest. Once we have paid all deferred quarterly interest, plus accrued interest thereon, together with the quarterly interest payment for the current quarterly interest payment period, the contingent principal amount will reduce by the amount of that payment of deferred quarterly interest plus accrued interest thereon, the early exchange ratio will decrease to 95% and we can again defer quarterly interest payments as described above. Instead of accruing cash interest on the ZONES during a quarterly deferral period, so long as the current market value of the reference shares exceeds the original principal amount of the ZONES, we may at our option, but are not obligated to, increase the number of reference shares attributable to each ZONES by an annual rate of 2.0%. If we elect to make this increase, we will be deemed current on that quarterly payment of interest and will not increase the contingent principal amount, although the early exchange ratio will remain at 100% only for the five business days immediately following the scheduled quarterly interest payment date related to the deferral. After that five day period, the early exchange ratio will decrease to 95%. At the time we give notice that we intend to defer a quarterly payment of interest, we must elect to either accrue cash interest on the ZONES for that quarterly interest period or increase the number of reference shares attributable to the ZONES, each as described above.

If we elect to defer interest on the ZONES in any particular quarter, we will give the trustee notice. We will also prepare a press release and provide it to DTC for dissemination through the DTC broadcast facility. We will give this notice one business day before the earlier of:

- the record date for the next date that interest on the ZONES is payable; or
- the date we are required to give notice to the NYSE (or any other applicable self-regulatory organization) or to holders of the ZONES of the record date or the date any quarterly interest payment is payable.

We refer to the last date on which we can give notice that we intend to defer the payment of interest in respect of a quarterly payment of interest as a deferral notice date. When applicable, we will state in any deferral notice that we are not subject to the 20 consecutive period limitation on deferrals and may continue to defer the payment of quarterly interest until maturity or earlier redemption.

Principal amount

The original principal amount per ZONES is equal to its initial purchase price, or $81.6325. The minimum amount payable upon redemption or maturity of a ZONES (which we refer to as the contingent principal amount) will initially be equal to the original principal amount. If an "extraordinary dividend" is ever paid on the reference shares, the contingent principal amount will be reduced on a quarterly basis to the extent necessary so that the yield to the date of computation (including all quarterly interest payments other than those attributable to regular periodic cash dividends) does not exceed a 2.0% annual yield. In no event will the contingent principal amount be less than zero.

An "extraordinary dividend" means a dividend or distribution consisting of cash or any other property (other than additional reference shares), except for regular periodic cash dividends.

If all of the reference shares cease to be outstanding as a result of a tender offer, an exchange offer, a business combination or otherwise, the maturity of the ZONES will not be accelerated and the ZONES will continue to remain outstanding until the maturity date unless earlier redeemed by us.

At maturity, holders will be entitled to receive the higher of (a) the contingent principal amount of the ZONES or (b) the sum of the current market value of the reference shares on the maturity date plus any deferred quarterly payments of interest (including any accrued interest thereon), plus, in each case, the final period distribution.

A "***final period distribution***" means, in respect of (a) the maturity date, a distribution determined in accordance with clauses (2), (3) and (4) below, and (b) the redemption date, a distribution determined in accordance with clauses (1), (2), (3) and (4) below. If the redemption date is in connection with a rollover offering, the distribution determined in accordance with clause (4) shall be all dividends and distributions on or in respect of the reference shares which a holder of reference shares on the pricing date (defined below) would be entitled to receive.

(1) Unless (a) the scheduled redemption date of the ZONES is also a scheduled quarterly interest payment date or (b) quarterly interest has been deferred for the then current quarterly dividend period, an amount equal to an annual rate of 2.0% on the original principal amount of the ZONES from the most recent scheduled interest payment date to the date of redemption, plus

(2) all dividends and distributions on or in respect of the reference shares declared by the applicable reference company and for which the ex- date for the dividend or distribution falls during the period from the date of original issuance of the ZONES to the most recent scheduled interest payment date and which have not been distributed to holders of reference shares prior to the most recent scheduled interest payment date, plus

(3) all dividends and distributions on or in respect of the reference shares which a holder of reference shares during the period from the most recent scheduled quarterly interest payment date to the date immediately preceding the first trading day of the averaging

period is entitled to receive, plus

(4) a distribution equal to the sum of, for each successive day in the averaging period that is anticipated on the first day of the averaging period to be a trading day, the amounts determined in accordance with the following formula:

$$E \times (1 - 0.05n)$$

where:

E = all dividends and distributions on or in respect of the reference shares which a holder of reference shares on the applicable day would be entitled to receive, provided that an ex- date that occurs on a day that is not a scheduled trading day shall be deemed to have occurred on the immediately preceding scheduled trading day; and

n = the number of scheduled trading days that have elapsed in the averaging period with the first trading day of the averaging period being counted as zero.

A holder of the ZONES is only entitled to receive distributions determined in accordance with clauses (2), (3) or (4) to the extent actually distributed by the applicable reference company. Amounts calculated with respect to cash amounts paid by the applicable reference company on reference shares as described in clauses (2), (3) or (4) before the redemption date or the maturity date, as the case may be, will be paid on the redemption date or the maturity date, as the case may be. Amounts calculated with respect to all other property distributed, or the cash value of the property, will be distributed within 20 business days after it is distributed on the reference shares.

Exchange option

At any time or from time to time, holders of the ZONES may exchange the ZONES for an amount of cash equal to 95% (which we refer to as the early exchange ratio) of the exchange market value of the reference shares attributable to each ZONES. The early exchange ratio will be equal to (a) 95% of the exchange market value of the reference shares attributable to each ZONES or (b) during a deferral of the quarterly interest payments on the ZONES or, if we so elect, during the pendency of any tender or exchange offer for any of the reference shares, 100% of the exchange market value of the reference shares attributable to each ZONES.

We will pay the amount due upon exchange as soon as reasonably practicable after delivery of an exchange notice to the trustee, but in no event earlier than three trading days after the date of the notice or later than ten trading days after the date of the notice.

The "exchange market value" means the closing price (as defined below) on the trading day (as defined below) following the date of delivery of an exchange notice to the trustee, unless more than 500,000 ZONES have been delivered for exchange on that date. If more than 500,000 ZONES have been delivered for exchange, then the exchange market value shall be the average closing price on the five trading days following that date.

If more than 500,000 ZONES are delivered for exchange on any one day, we will give the trustee notice. We will also issue a press release prior to 9:00 a.m., New York City time, on the next trading day, and provide it to DTC for dissemination through the DTC broadcast facility. Our failure to provide these notices, however, will not affect the determination of exchange market value as described above.

So long as the ZONES are held through DTC, a holder may exercise his or her exchange right through the relevant direct participant in the DTC ATOP system. If the ZONES are held in certificated form, such holder may exercise his or her exchange right as follows:

- complete and manually sign an exchange notice in the form available from the trustee and deliver this notice to the trustee at the office maintained by the trustee for this purpose;
- surrender the ZONES to the trustee;
- if required, furnish appropriate endorsement and transfer documents; and
- if required, pay all transfer or similar taxes.

Pursuant to the Indenture, the date on which all of the foregoing requirements have been satisfied is the redemption date with respect to the ZONES delivered for exchange.

Redemption

We may redeem at any time all but not some of the ZONES at a redemption price equal to the sum of the higher of the contingent principal amount of the ZONES or the sum of the current market value of the reference shares plus any deferred quarterly payments of interest, plus, in either case, the final period distribution.

The "***current market value***" (other than in the case of a rollover offering, which is described below) is defined as the average closing price per reference share on the 20 trading days (which we refer to as the averaging period) immediately prior to (but not including) the fifth business day preceding the redemption date; provided, however, that for purposes of determining the payment required upon redemption in connection with a rollover offering, "current market value" means the closing price per reference share on the trading day immediately preceding the date that the rollover offering is priced (which we refer to as the pricing date) or, if the rollover offering is priced after 4:00 p.m., New York City time, on the pricing date, the closing price per share on the pricing date, except that if there is not a trading day immediately preceding the pricing date or (where pricing occurs after 4:00 p.m., New York City time, on the pricing date) if the pricing date is not a trading day, "current market value" means the market value per reference share as of the redemption date as determined by a nationally recognized independent investment banking firm retained by us.

A "***rollover offering***" means a refinancing by us of the ZONES by way of either (a) a sale of the reference shares or (b) a sale of securities that are priced by reference to the reference shares, in either case, by means of a completed public offering or offerings by us (which may include one or more exchange offers) and which is expected to yield net proceeds which are sufficient to pay the redemption amount for all of the ZONES. The trustee will notify holders if we elect to redeem their ZONES in connection with a rollover offering not less than 30 nor more than 60 business days prior to the redemption date. We will also issue a press release prior to 4:00 p.m., New York City time, on the business day immediately before the day on which the closing price of the reference shares is to be measured for the purpose of determining the current market value in connection with a rollover offering. The notice will state we are firmly committed to price the rollover offering, will specify the date on which the rollover offering is to be priced (including whether the rollover offering will be priced during trading on the pricing date or after the close of trading on the pricing date) and consequently, whether the closing price for the reference shares by which the current market value will be measured will be the closing price on the trading date immediately preceding the pricing date or the closing price on the pricing date. We will provide that press release to DTC for dissemination through the DTC broadcast facility.

The "***closing price***" of any security on any date of determination means the closing sale price (or, if no closing sale price is reported, the last reported sale price) of that security (regular way) on the NYSE on that date or, if that security is not listed for trading on the NYSE on that date, as reported in the composite transactions for the principal United States securities exchange on which that security is so listed, or if that security is not so listed on a United States national or regional securities exchange, as reported by the Nasdaq National Market, or if that security is not so reported, the last quoted bid price for that security in the over-the-counter market as reported by the National Quotation Bureau or similar organization. In the event that no such quotation is available for any day, our board of directors will be entitled to determine the closing price on the basis of those quotations that it in good faith considers appropriate. To the extent that trading of reference shares regular way continues past 4:00 p.m., New York City time, "closing price" shall be deemed to refer to the price at the time that is then customary for determining the trading day's index levels for stocks traded on the primary national securities exchange or automated quotation system on which the reference shares are then traded or quoted. All references to 4:00 p.m., New York City time, in the definition of "current market value" shall thereafter be deemed to refer to the then customary determination time.

A "***trading day***" is defined as a day on which the security, the closing price of which is being determined, (a) is not suspended from trading on any national or regional securities exchange or association or over-the-counter market at the close of business and (b) has traded at least once on the national or regional securities exchange or association or over-the-counter market that is the primary market for the trading of that security.

In addition, if at any time on or prior to January 30, 2000, a "***tax event***" shall occur and be continuing, we will have the right exercisable within 180 days after such "tax event", upon not less than 15 business days' notice, to redeem the ZONES, in whole, at a redemption price equal to the higher of the contingent principal amount of the ZONES or the sum of the current market value of the reference shares, determined by reference to an averaging period of 5 rather than 20 trading days, plus, in either case, the final period distribution (computed by accounting for the 5-day averaging period), plus any deferred quarterly payments of interest.

A "***tax event***" means that the trustee shall have received an opinion of nationally recognized independent tax counsel experienced in such matters to the effect that as a result of (a) any amendment to, clarification of, or change (including any announced prospective change) in the laws, or any regulations thereunder, of the United States or any political subdivision or taxing authority thereof or therein, or (b) any judicial decision, official administrative pronouncement, ruling, regulatory procedure, notice or announcement, including any notice or announcement of intent to adopt such procedures or regulations, in each case, on or after the date of this prospectus supplement (a "change in tax law"), there is the creation by such change in tax law of a substantial risk that, as a result of entrance into the ZONES, we will be treated for purposes of Section 1259 of the Internal Revenue Code as having constructively sold some or all of our Sprint PCS Stock.

We will give holders 30 business days' notice before the redemption of the ZONES (in the case of a redemption not pursuant to a "tax event") and will irrevocably deposit with the trustee sufficient funds to pay the redemption amount. Distributions to be paid on or before the redemption date of the ZONES will be payable to the holders on the record dates for the related dates of distribution.

Once notice of redemption is given and funds are irrevocably deposited, interest on the ZONES will cease to accrue on and after the date of redemption and all rights of the holders of the ZONES will cease, except for the right of the holders to receive the redemption amount (but without interest on that redemption amount), including, if applicable, the final period distribution.

If the redemption date is not a business day, then the redemption amount will be payable on the next business day (and without any interest or other payment in respect of that delay). However, if the next business day is in the next calendar year, the redemption amount will be payable on the preceding business day.

If we improperly withhold or refuse to pay the redemption amount for the ZONES, interest on the ZONES will continue to accrue at an annual rate of 2.0% from the original redemption date to the actual date of payment. In this case, the actual payment date will be considered the redemption date for purposes of calculating the redemption amount. The final period distribution will be deemed paid on the original redemption date scheduled to the extent paid as set forth in the definition of final period distribution above.

In compliance with applicable law (including the United States federal securities laws), we and our affiliates may, at any time, purchase outstanding ZONES by tender, in the open market or by private agreement.

Subordination

The ZONES are unsecured and junior in right of payment to all senior indebtedness (as we define below). This means that no payment of principal, premium (if any) or interest on the ZONES may be made if:

- any of our senior indebtedness is not paid when due, any applicable grace period with respect to any default for non-payment of principal, premium, interest or any other payment due on any senior indebtedness has ended and that default has not been cured or waived or ceased to exist; or

- the maturity of any senior indebtedness has been accelerated because of a default.

On any distribution of our assets to creditors upon any dissolution, winding-up, liquidation or reorganization, whether voluntary or involuntary or in bankruptcy, insolvency, receivership, reorganization or other similar proceedings, all principal of, premium, if any, interest and any other amounts due or to become due on, all senior indebtedness must be paid in full before the holders of the ZONES are entitled to receive or retain any payment. Because of this subordination, if we dissolve or otherwise liquidate, holders of senior indebtedness may receive more, ratably, and holders of subordinated debt, including the ZONES, may receive less, ratably, than our other creditors. Upon payment in full of the senior indebtedness, the holders of the ZONES will assume rights similar to the holders of senior indebtedness to receive any remaining payments or distributions applicable to senior indebtedness until all amounts owing on the ZONES are paid in full. The ZONES are intended to rank equally with all other existing and future subordinated debt and trade obligations of Comcast Holdings.

"***Senior indebtedness***" means the principal of, premium, if any, interest on, and any other payment due pursuant to any of the following, whether outstanding today or incurred by us in the future:

- all of our indebtedness for money borrowed, including any indebtedness secured by a mortgage or other lien which is (1) given to secure all or part of the purchase price of property subject to the mortgage or lien, whether given to the vendor of that property or to another lender, or (2) existing on property at the time we acquire it;

- all of our indebtedness evidenced by notes, debentures, bonds or other securities sold by us for money;

- all of our lease obligations which are capitalized on our books in accordance with generally accepted accounting principles;

- all indebtedness of others of the kinds described in the first two bullet points above and all lease obligations of others of the kind described in the third bullet point above that we, in any manner, assume or guarantee or that we in effect guarantee through an agreement to purchase, whether that agreement is contingent or otherwise; and

- all renewals, extensions or refundings of indebtedness of the kinds described in the first, second or fourth bullet point above and all renewals or extensions of leases of the kinds described in the third or fourth bullet point above;

unless, in the case of any particular indebtedness, lease, renewal, extension or refunding, the instrument or lease creating or evidencing it or the assumption or guarantee relating to it expressly provides that such indebtedness, lease, renewal, extension or refunding is not superior in right of payment to subordinated debt securities. Our senior debt securities, and any indebtedness outstanding under our senior subordinated debentures indenture dated as of October 17, 1991 between us and Harris Trust and Savings Bank as successor trustee to Morgan Guaranty Trust Company of New York, constitute senior indebtedness for purposes of the Indenture. Senior Indebtedness does not include any indebtedness that is by its terms junior or equal with the ZONES.

The ZONES do not limit our ability or that of our subsidiaries to incur additional indebtedness, including indebtedness that ranks senior in priority of payment to the ZONES.

Amount payable upon bankruptcy

Upon dissolution, winding-up, liquidation or reorganization, whether voluntary or involuntary or in bankruptcy, insolvency, receivership or other similar proceedings in respect of Comcast Holdings, holders of the ZONES should be entitled to a claim against us in an amount equal to the higher of (a) the contingent principal amount of the ZONES or (b) the sum of the current market value (without giving effect to the provisions relating to rollover offerings) of the reference shares plus any deferred quarterly payments of interest (including any accrued interest thereon), plus, in either case, the final period distribution determined as if the date of such event was the maturity date of the ZONES.

Because of the subordination provisions contained in the Indenture, the amount holders actually receive is likely to be substantially less than the amount of their claim.

Dilution adjustments

For purposes of this document, “reference company” means Sprint and any other issuer of a reference share.

A “***reference share***” means, collectively:

- initially, one share of Sprint PCS stock; and

- after the issuance of the ZONES, each share or fraction of a share of publicly traded equity securities received by a holder of a reference share in respect of that reference share, and, to the extent the reference share remains outstanding after any of the following events but without duplication, including the reference share, in each case directly or as the result of successive applications of this paragraph upon any of the following events:

- ◦ the distribution on or in respect of a reference share in reference shares;
- ◦ the combination of reference shares into a smaller number of shares or other units;
- ◦ the subdivision of outstanding shares or other units of reference shares;
- ◦ the conversion or reclassification of reference shares by issuance or exchange of other securities;
- ◦ any consolidation or merger of a reference company, or any surviving entity or subsequent surviving entity of a reference company (which we refer to as a reference company successor), with or into another entity (other than a merger or consolidation in which the reference company is the continuing corporation and in which the reference company common stock outstanding immediately prior to the merger or consolidation is not exchanged for cash, securities or other property of the reference company or another corporation);
- ◦ any statutory exchange of securities of the reference company or any reference company successor with another corporation (other than in connection with a merger or acquisition and other than a statutory exchange of securities in which the reference company is the continuing corporation and in which the reference company common stock outstanding immediately prior to the statutory exchange is not exchanged for cash, securities or other property of the reference company or another corporation); and
- ◦ any liquidation, dissolution or winding up of the reference company or any reference company successor.

For purposes of the foregoing:

- a conversion or redemption by Sprint of all shares of Sprint PCS stock pursuant to Article Sixth, Section 7.1 of its Articles of Incorporation shall be deemed a consolidation or merger, with the Sprint PCS Group deemed to be the reference company, with Sprint deemed to be the reference company successor if Sprint FON stock or any other common stock of Sprint is issued in exchange for the Sprint PCS stock or with the relevant acquiror of the Sprint PCS Group assets deemed to be the reference company successor if common stock other than Sprint FON stock is issued in exchange for the Sprint PCS stock; and
- a redemption by Sprint pursuant to Article Sixth, Section 7.2 of its Articles of Incorporation of all of the outstanding shares of Sprint PCS stock in exchange for common stock of one or more wholly-owned subsidiaries that collectively hold all of the assets and liabilities attributed to its PCS Group shall be deemed an exchange of shares of Sprint PCS stock for shares of common stock of the relevant subsidiary or subsidiaries.

As described above under “Interest,” we will pay as additional interest to holders of the ZONES any property received in distribution on a reference share, unless it is also a reference share, in which case it shall become part of a reference share. Upon any distribution of fractional shares or units of securities, other than fractional reference shares, we will pay the holders cash in lieu of distribution of such fractional shares or other units.

A “***reference share offer***” means any tender offer or exchange offer made for all or a portion of a class of reference shares of a reference company. A “reference share offer” shall include a conversion or redemption by Sprint of less than all shares of Sprint PCS stock pursuant to Article Sixth, Section 7.1 of its Articles of Incorporation.

If a reference share offer is made, we may, at our option, either:

- during the pendency of the offer, increase the early exchange ratio to 100%; or
- make a reference share offer adjustment.

A “***reference share offer adjustment***” means including as part of a reference share each share of publicly traded equity securities, if any, deemed to be distributed on or in respect of a reference share as average transaction consideration less the reference share proportionate reduction (as defined below).

The average transaction consideration deemed to be received by a holder of one reference share in a reference share offer will be equal to (a) the aggregate consideration actually paid or distributed to all holders of reference shares in the reference share offer, divided by (b) the total number of reference shares outstanding immediately prior to the expiration of the reference share offer and entitled to participate in that reference share offer.

The “***reference share proportionate reduction***” means a proportionate reduction in the number of reference shares which are the subject of the applicable reference share offer and attributable to one ZONES calculated in accordance with the following formula:

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where:

$R = X / N$

R = the fraction by which the number of reference shares of the class of reference shares subject to the reference share offer and attributable to one ZONES will be reduced.

X = the aggregate number of reference shares of the class of reference shares subject to the reference share offer accepted in the reference share offer.

N = the aggregate number of reference shares of the class of reference shares subject to the reference share offer outstanding immediately prior to the expiration of the reference share offer.

If we elect to make a reference share offer adjustment, we will distribute as additional interest on each ZONES the average transaction consideration deemed to be received on the reference shares of the class subject to the reference share offer and attributable to each ZONES immediately prior to giving effect to the reference share proportionate reduction relating to that reference share offer (other than average transaction consideration that is publicly traded equity securities which will themselves become reference shares as a result of a reference share offer adjustment).

If we elect to make a reference share offer adjustment, and during the pendency of the reference share offer another reference share offer is commenced in relation to the reference shares the subject of the then existing reference share offer, we can change our original election by electing to increase the early exchange ratio to 100% during the pendency of the new reference share offer, or we can continue to elect to make a reference share offer adjustment. We will similarly be entitled to change our election for each further reference share offer made during the pendency of any reference share offer for the same class of reference shares. For the purposes of these adjustments, a material change to the terms of an existing reference share offer will be deemed to be a new reference share offer.

If we elect to increase the early exchange ratio to 100% in connection with a reference share offer, no reference share offer adjustment will be made and we cannot change our election if any further reference share offer is made.

We will give the trustee notice of our election in the event of any reference share offer. We will also prepare a press release and provide it to DTC for dissemination through the DTC broadcast facility. We will give this notice no later than 10 business days before the scheduled expiration of the reference share offer.

Calculations in respect of the ZONES

We will be responsible for making all calculations called for under the ZONES. These calculations include, but are not limited to, determination of:

- the contingent principal amount of the ZONES;
- the current market value of the reference shares;
- the exchange market value of the reference shares;
- the final period distribution on the ZONES;
- the cash value of any property distributed on the reference shares;
- the average transaction consideration in a reference share offer;
- the composition of a reference share; and
- the amount of accrued interest payable upon redemption or at maturity of the ZONES.

We will make all these calculations in good faith and, absent manifest error, our calculations are final and binding on holders of the ZONES. We will provide a schedule of our calculations to the trustee and the trustee is entitled to rely upon the accuracy of our calculations without independent verification.

Modification and Waiver

Comcast Holdings, when authorized by a resolution of its Board certified to the Trustee, and the Trustee, without consent of holders, may from time to time and at any time enter into an indenture or indentures supplemental hereto for one or more of the following purposes:

(a) to evidence the succession of another corporation to the Issuer, or successive successions, and the assumption by the successor corporation of the covenants, agreements and obligations of the Issuer;

(b) to cure any ambiguity or to correct or supplement any provision contained herein or in any supplemental indenture which may be defective or inconsistent with any other provision contained herein or in any supplemental indenture; or to make such other provisions in regard to matters or questions arising under the Indenture or under any supplemental indenture as the Board may deem necessary or desirable and which shall not adversely affect the interests of the holders of the ZONES in any material respect;

(c) to establish the form or terms of securities of any series as permitted by Sections 2.01 and 2.03 to the Base Indenture;

(d) to evidence and provide for the acceptance of appointment hereunder by a successor trustee with respect to the ZONES and to add to or change any of the provisions of the Base Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one trustee, pursuant to the requirements of Section 5.10 to the Base Indenture;

(e) to comply with any requirements in connection with the qualification of the Indenture under the Trust Indenture Act of 1939;

(f) to provide for uncertificated or unregistered securities and to make all appropriate changes for such purpose;

(g) to make any change that does not adversely affect the rights of any holder;

(h) as provided by or pursuant to a board resolution or indenture supplemental hereto establishing the terms of one or more series of ZONES;

(i) to add to the covenants of the Issuer such new covenants, restrictions, conditions or provisions as its Board shall consider to be for the protection of the holders of ZONES, and with respect to which the Trustee has received an opinion of counsel to a similar effect, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an Event of Default; provided, that in respect of any such additional covenant, restriction, condition or provision such supplemental indenture may provide for a particular period of grace after default (which period may be shorter or longer than that allowed in the case of other defaults) or may provide for an immediate enforcement upon such an Event of Default or may limit the remedies available to the Trustee upon such an Event of Default or may limit the right of the holders of a majority in aggregate principal amount of the ZONES to waive such an Event of Default; or

(j) to make any change so long as no ZONES are outstanding.

With the consent of the holders of not less than a majority in aggregate principal amount of the ZONES at the time outstanding of all series affected by such supplemental indenture (voting as one class), the Issuer, when authorized by a resolution of its Board, and the Trustee may, from time to time and at any time, enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of the Indenture or of any supplemental indenture or of modifying in any manner the rights of the holders of the ZONES; provided, that no such supplemental indenture shall without the consent of each holder affected thereby:

(a) change the stated maturity of the principal of, or any sinking fund obligation or any installment of interest on the ZONES;

(b) reduce the principal thereof or the rate of interest thereon, or any premium payable with respect thereto;

(c) change any place of payment where, or the currency in which, any ZONES or any premium or the interest thereon is payable;

(d) change the provisions for calculating the optional redemption price, including the definitions relating thereto; make any change to Section 4.07 or 4.10 to the Base Indenture;

(e) reduce the percentage in principal amount of outstanding ZONES the consent of whose holders is required for any such supplemental indenture, for any waiver of compliance with any provisions of the Indenture or any defaults and their consequences provided for in the Base Indenture;

(f) alter or impair the right to convert any ZONES at the rate and upon the terms provided in Article 13 to the Base Indenture;

(g) waive a default in the payment of principal of or interest on any ZONES;

(h) adversely affect the rights of such holder under any mandatory redemption or repurchase provision or any right of redemption or repurchase at the option of such holder;

(i) modify any of the provisions of Section 7.02 to the Base Indenture, except to increase any such percentage or to provide that certain other provisions of the Indenture cannot be modified or waived without the consent of the holder of ZONES affected thereby; or

(j) change or waive any provision that, pursuant to a board resolution or indenture supplemental hereto establishing the terms of the ZONES, is prohibited to be so changed or waived.

Events of Default

"Event of Default" means each one of the following events which shall have occurred and be continuing:

(a) default in the payment of any installment of interest upon any ZONES as and when the same shall become due and payable, and continuance of such default for a period of 30 days;

(b) default in the payment of all or any part of the principal on any ZONES as and when the same shall become due and payable either at maturity, upon redemption, by declaration or otherwise;

(c) default in the performance, or breach, of any covenant or warranty of the Issuer in respect of the ZONES (other than a covenant or warranty in respect of the ZONES a default in whose performance or whose breach is elsewhere in this section specifically dealt with), and continuance of such default or breach for a period of 90 days after there has been given, by registered or certified mail, to the Issuer by the Trustee or to the Issuer and the Trustee by the holders of at least 25% in principal amount of the outstanding ZONES affected thereby, a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a "Notice of Default" pursuant to the Indenture;

(d) a court having jurisdiction in the premises shall enter a decree or order for relief in respect of the Issuer in an involuntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or appointing a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or for any substantial part of its property or ordering the winding up or liquidation of its affairs, and such decree or order shall remain unstayed and in effect for a period of 180 consecutive days;

(e) the Issuer shall commence a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or consent to the entry of an order for relief in an involuntary case under any such law, or consent to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or for any substantial part of its property, or make any general assignment for the benefit of creditors; or

(f) any other Event of Default provided in the supplemental indenture or resolution of the Board under which such ZONES are issued or in the form of security for such series.

If an Event of Default described in clauses (a), (b), (c), or (f) above occurs and is continuing, then, and in each and every such case, unless the principal of all ZONES shall have already become due and payable, either the Trustee or the holders of not less than 25% in aggregate principal amount of the ZONES then outstanding hereunder (each such series voting as a separate class) by notice in writing to the Issuer (and to the Trustee if given by holders), may declare the entire principal of all ZONES and the interest accrued thereon, if any, to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable. If an Event of Default described in clauses (d) or (e) occurs and is continuing, then the principal amount of all ZONES then outstanding and interest accrued thereon, if any, shall be and become immediately due and payable, without any notice or other action by any holder or the Trustee, to the full extent permitted by applicable law.

(3) DESCRIPTION OF OUR 9.455% GUARANTEED NOTES DUE 2022

The following summary of our 9.455% Guaranteed Notes due 2022 (the “2022 Notes”) is based on the indenture dated as of November 14, 2002 between AT&T Broadband Corp., certain guarantors named therein and the Bank of New York (the “Base Indenture”), as amended by the first supplemental indenture dated as of August 31, 2009, the second supplemental indenture dated as of March 27, 2013 and the third supplemental indenture dated as of October 1, 2015 among Comcast Cable Communications, LLC as the obligor (as successor issuer to AT&T Broadband Corp., the “Issuer”), Comcast, NBCUniversal Media, LLC (together with Comcast, the “Guarantors”), and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee (the “Trustee”) (collectively with the Base Indenture, the “Indenture”). This summary does not purport to be complete and is qualified in its entirety by reference to such Indenture. For the purposes of this summary, references to “we” and “our” refer to Comcast Cable Communications, LLC.

The 2022 Notes are the Issuer’s direct unsecured and unsubordinated obligations and are fully and unconditionally guaranteed by the Guarantors.

Interest Payments

The 2029 Notes bears interest at a rate of 9.455% per annum and the Issuer will pay interest semi-annually in arrears on each May 15 and November 15, commencing May 15, 2003. Interest for the 2022 Notes is computed on the basis of a 360-day year consisting of twelve 30-day months. Interest on the

2022 Notes will accrue from the date of original issuance, or from the most recent interest payment date to which interest has been paid and will be payable semiannually on interest payment dates described of each year.

Guarantees

The guarantees will rank equally with all other general unsecured and unsubordinated obligations of the Guarantors.

The guarantees will not contain any restrictions on the ability of any of Guarantor to (i) pay dividends or distributions on, or redeem, purchase, acquire, or make a liquidation payment with respect to, any of that Guarantor's capital stock or (ii) make any payment of principal, interest or premium, if any, on or repay, repurchase or redeem any debt securities of that guarantor.

No Optional Redemption

The 2022 Notes will not be subject to optional redemption by the Issuer.

No Mandatory Redemption or Sinking Fund

There is no mandatory redemption prior to maturity or sinking fund payments for the 2022 Notes.

Additional Debt

The Indenture does not limit the amount of debt the Issuer may issue under the Indenture or otherwise.

Certain Covenants

The Issuer and the Guarantors are subject to some restrictions on their activities for the benefit of holders of all series of debt securities issued under the Indenture. The restrictive covenants summarized below apply, unless the covenants are waived or amended, so long as any of the debt securities are outstanding.

The Indenture does not contain any financial covenants other than those summarized below and does not restrict the Issuer or its subsidiaries from paying dividends or incurring additional debt. In addition, the Indenture does not protect holders of notes issued under it in the event of a highly leveraged transaction or a change in control.

Limitation on Liens Securing Indebtedness

Neither Issuer nor any Guarantor shall create, incur or assume any Lien (other than any Permitted Lien) on such person's assets, including the Capital Stock of its wholly owned subsidiaries to secure the payment of Indebtedness of the Issuer or any Guarantor, unless the Issuer secures the outstanding 2022 Notes equally and ratably with (or prior to) all Indebtedness secured by such Lien, so long as such Indebtedness shall be so secured.

Limitation on Sale and Leaseback Transactions

Neither the Issuer nor any Guarantor shall enter into any Sale and Leaseback Transaction involving any of such person's assets, including the Capital Stock of its wholly owned subsidiaries.

The restriction in the foregoing paragraph shall not apply to any Sale and Leaseback Transaction if:

- the lease is for a period of not in excess of three years, including renewal of rights;
- the lease secures or relates to industrial revenue or similar financing;
- the transaction is solely between the Issuer and a Guarantor or between or among Guarantors; or
- the Issuer or such Guarantor, within 270 days after the sale is completed, applies an amount equal to or greater than (a) the net proceeds of the sale of the assets or part thereof leased or (b) the fair market value of the assets or part thereof leased (as determined in good faith by the Issuer's Board of Directors) either to:
  - the retirement (or open market purchase) of notes, other long-term Indebtedness of the Issuer ranking on a parity with or senior to the 2022 Notes or long-term Indebtedness of a Guarantor; or
  - the purchase by the Issuer or any Guarantor of other property, plant or equipment related to the business of the Issuer or any Guarantor having a value at least equal to the value of the assets or part thereof leased.

"***Capitalized Lease***" means, as applied to any person, any lease of any property (whether real, personal, or mixed) of which the discounted present value of the rental obligations of such person as lessee, in conformity with GAAP, is required to be capitalized on the balance sheet of such person; and "Capitalized Lease Obligation" is defined to mean the rental obligations, as aforesaid, under such lease.

"***Capital Stock***" means, with respect to any person, any and all shares, interests, participations, or other equivalents (however designated, whether voting or non-voting) of such person's capital stock or other ownership interests, whether now outstanding or issued after the date of the Indenture, including, without limitation, all common stock and preferred stock.

"***Currency Agreement***" means any foreign exchange contract, currency swap agreement, or other similar agreement or arrangement designed to protect against the fluctuation in currency values.

"***GAAP***" means generally accepted accounting principles in the United States of America as in effect as of the date of determination, including, without limitation, those set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as approved by a significant segment of the accounting profession. All ratios and computations contained in the Indenture shall be computed in conformity with GAAP applied on a consistent basis.

"***Guarantee***" means any obligation, contingent or otherwise, of any person directly or indirectly guaranteeing any Indebtedness or other obligation of any other person and, without limiting the generality of the foregoing, any obligation, direct or indirect, contingent or otherwise, of such person:

- to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other obligation of such other person (whether arising by virtue of partnership arrangements, or by agreement to keep-well, to purchase assets, goods, securities, or services, to take-or-pay, or to maintain financial statement conditions or otherwise); or

- entered into for purposes of assuring in any other manner the obligee of such Indebtedness or other obligation of the payment thereof or to protect such obligee against loss in respect thereof (in whole or in part);

provided that the term “Guarantee” shall not include endorsements for collection or deposit in the ordinary course of business. The term “Guarantee” used as a verb has a corresponding meaning.

“***Indebtedness***” means, with respect to any person at any date of determination (without duplication):

- all indebtedness of such person for borrowed money;
- all obligations of such person evidenced by bonds, debentures, notes, or other similar instruments;
- all obligations of such person in respect of letters of credit or other similar instruments (including reimbursement obligations with respect thereto);
- all obligations of such person to pay the deferred and unpaid purchase price of property or services (but excluding trade accounts payable or accrued liabilities arising in the ordinary course of business);
- all obligations of such person as lessee under Capitalized Leases;
- all Indebtedness of other persons secured by a Lien on any asset of such person, whether or not such Indebtedness is assumed by such person; provided that the amount of such Indebtedness shall be the lesser of:
  - the fair market value of such asset at such date of determination; and
  - the amount of such Indebtedness;
- all Indebtedness of other persons Guaranteed by such person to the extent such Indebtedness is Guaranteed by such person; and
- to the extent not otherwise included in this definition, obligations under Currency Agreements and Interest Rate Agreements.

The amount of Indebtedness of any person at any date shall be the outstanding balance at such date of all unconditional obligations as described above and, with respect to contingent obligations, the maximum liability upon the occurrence of the contingency giving rise to the obligation; provided:

- that the amount outstanding at any time of any Indebtedness issued with original issue discount is the face amount of such Indebtedness less the remaining unamortized portion of the original issue discount of such Indebtedness at such time as determined in conformity with GAAP; and
- that Indebtedness shall not include any liability for federal, state, local, or other taxes.

“***Interest Rate Agreements***” means any obligations of any person pursuant to any interest rate swaps, caps, collars, and similar arrangements providing protection against fluctuations in interest rates. For purposes of the indenture, the amount of such obligations shall be the amount determined in respect thereof as of the end of the then most recently ended fiscal quarter of such person, based on the assumption that such obligation had terminated at the end of such fiscal quarter, and in making such determination, if any agreement relating to such obligation provides for the netting of amounts payable by and to such person thereunder or if any such agreement provides for the simultaneous payment of amounts by and to such person, then in each such case, the amount of such obligations shall be the net amount so determined, plus any premium due upon default by such person.

“***Lien***” means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind, or any other type of preferential arrangement that has the practical effect of creating a security interest, in respect of such asset. For the purposes of the Indenture, the Issuer or any Guarantor shall be deemed to own subject to a Lien any asset that it has acquired or holds subject to the interest of a vendor or lessor under any conditional sale agreement, capital lease or other title retention agreement relating to such asset.

“***Permitted Liens***” means:

- any Lien on any asset incurred prior to the date of the Indenture;

- any Lien on any assets acquired after the date of the Indenture (including by way of merger or consolidation) by the Issuer or any Guarantor, which Lien is created, incurred or assumed contemporaneously with such acquisition, or within 270 days thereafter, to secure or provide for the payment or financing of any part of the purchase price thereof, or any Lien upon any assets acquired after the date of the Indenture existing at the time of such acquisition (whether or not assumed by the Issuer or any Guarantor), provided that any such Lien shall attach only to the assets so acquired;

- any Lien on any assets in favor of the Issuer or any Guarantor;

- any Lien on assets incurred in connection with the issuance of tax-exempt governmental obligations (including, without limitation, industrial revenue bonds and similar financing);

- any Lien granted by any Guarantor on assets to the extent limitations on the incurrence of such Liens are prohibited by any agreement to which such Guarantor is subject as of the date of the Indenture; and

- any renewal of or substitution for any Lien permitted by any of the preceding bullet points, including any Lien securing reborrowing of amounts previously secured within 270 days of the repayment thereof, provided that no such renewal or substitution shall extend to any assets other than the assets covered by the Lien being renewed or substituted.

“***Sale and Leaseback Transaction***” means any direct or indirect arrangement with any person or to which any such person is a party, providing for the leasing to the Issuer or a Guarantor of any property, whether owned by the Issuer or such Guarantor at the date of the original issuance of the 2022 Notes or later acquired, which has been or is to be sold or transferred by the Issuer or such Guarantor to such person or to any other person by whom funds have been or are to be advanced on the security of such property.

Consolidation, Merger and Sale of Assets

The Indenture restricts the Issuer’s ability to consolidate with, merge with or into, or sell, convey, transfer, lease, or otherwise dispose of all or substantially all of its property and assets as an entirety or substantially an entirety in one transaction or a series of related transactions to any person (other than a consolidation with or merger with or into or a sale, conveyance, transfer, lease or other disposition to a wholly-owned subsidiary with a positive net worth; provided that, in connection with any merger of the Issuer and a wholly-owned subsidiary, no consideration other than common stock in the surviving person shall be issued or distributed to the Issuer's stockholders) or permit any person to merge with or into such party unless:

- the Issuer is the continuing person or the person formed by such consolidation or into which such party is merged or that acquired or leased such property and assets shall be a corporation or limited liability company organized and validly existing under the laws of the United States of America or any jurisdiction thereof and shall expressly assume, by a supplemental indenture, executed and delivered to the Trustee, all of the Issuer's obligations on all of the 2022 Notes and under the Indenture;

- immediately after giving effect to such transaction, no default or event of default shall have occurred and be continuing; and

- the Issuer delivers to the Trustee an officers' certificate and opinion of counsel, in each case stating that such consolidation, merger, or transfer and such supplemental indenture complies with this provision and that all conditions precedent provided for in the Indenture and notes relating to such transaction have been complied with;

provided, however, that the foregoing limitations will not apply if, in the good faith determination of the Issuer's board of directors, whose determination must be set forth in a board resolution, the principal purpose of such transaction is to change the state of incorporation of such party; and provided further that any such transaction shall not have as one of its purposes the evasion of the foregoing limitations.

Upon any express assumption of the Issuer's obligations as described above, the Issuer shall be released and discharged from all obligations and covenants under the Indenture and all the 2022 Notes.

The Indenture and the guarantees do not limit the ability of any guarantor to consolidate with or merge into or sell all or substantially all its assets. Upon the sale or disposition of any guarantor (by merger, consolidation, the sale of its capital stock or the sale of all or substantially all of its assets) to any person, that guarantor will be deemed released from all its obligations under the Indenture and its guarantee.

Modification and Waiver

The Issuer and the Trustee may amend or supplement the Indenture or the 2022 Notes without notice to or the consent of any holder:

- to cure any ambiguity, defect, or inconsistency in the Indenture; provided that such amendments or supplements shall not adversely affect the interests of the holders in any material respect;

- to comply with the provisions described under "-Certain Covenants-Consolidation, Merger and Sale of Assets;"

- to comply with any requirements of the SEC in connection with the qualification of the Indenture under the Trust Indenture Act;

- to evidence and provide for the acceptance of appointment hereunder by a successor Trustee;

- to establish the form or forms or terms of the 2022 Notes as permitted by the Indenture;

- to provide for uncertificated notes and to make all appropriate changes for such purpose;

- to make any change that does not adversely affect the rights of any holder;

- to add to its covenants such new covenants, restrictions, conditions or provisions for the protection of the holders, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default; or

- to make any change so long as no 2022 Notes are outstanding.

Subject to certain conditions, without prior notice to any holder of 2022 Notes, modifications and amendments of the Indenture may be made by the Issuer and the Trustee with respect to any series of 2022 Notes with the written consent of the holders of a majority in principal amount of the affected series of 2022 Notes, and compliance by the Issuer with any provision of the Indenture with respect to any series of 2022 Notes may be waived by written notice to the Trustee by the holders of a majority in principal amount of the affected series of 2022 Notes outstanding; provided, however, that each affected holder must consent to any modification, amendment or waiver that:

- changes the stated maturity of the principal of, or any installment of interest on, the 2022 Notes of the affected series;

- reduces the principal amount of, or premium, if any, or interest on, the 2022 Notes of the affected series;

- changes the place or currency of payment of principal of, or premium, if any, or interest on, the 2022 Notes of the affected series;

- changes the provisions for calculating the optional redemption price, including the definitions relating thereto;

- changes the provisions relating to the waiver of past defaults or changes or impairs the right of holders to receive payment or to institute suit for the enforcement of any payment of the 2022 Notes of the affected series on or after the due date therefor;

- reduces the above-stated percentage of outstanding 2022 Notes of the affected series the consent of whose holders is necessary to modify or amend or to waive certain provisions of or defaults under the Indenture;

- waives a default in the payment of principal of, premium, if any, or interest on the 2022 Notes; or

- modifies any of the provisions of this paragraph, except to increase any required percentage or to provide that certain other provisions cannot be modified or waived without the consent of the holder of each 2022 Note of the series affected by the modification.

It is not necessary for the consent of the holders under the Indenture to approve the particular form of any note amendment, supplement or waiver, but it shall be sufficient if such consent approves the substance thereof. After an amendment, supplement or waiver under the Indenture becomes effective, notice must be given to the holders affected thereby briefly describing the amendment, supplement, or waiver. Supplemental indentures will be mailed to holders upon request. Any failure to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture or waiver.

Events of Default

For purposes of this section, the term “Obligor” shall mean each of the Issuer and Guarantors, in each case excluding such entities’ subsidiaries.

An event of default for a series of 2022 Notes is defined under the Indenture as being:

(1) a default by any Obligor in the payment of principal or premium on the 2022 Notes of such series when the same becomes due and payable whether at maturity, upon acceleration, redemption or otherwise;

(2) a default by any Obligor in the payment of interest on the 2022 Notes of such series when the same becomes due and payable, if that default continues for a period of 30 days;

(3) default by any Obligor in the performance of or breach by any Obligor of any of its other covenants or agreements in the Indenture applicable to all the 2022 Notes or applicable to the 2022 Notes of any series and that default or breach continues for a period of 30 consecutive days after written notice is received from the Trustee or from the holders of 25% or more in aggregate principal amount of the 2022 Notes of all affected series;

(4) any guarantee is not in full force and effect;

(5) a court having jurisdiction enters a decree or order for:

- relief in respect of any Obligor in an involuntary case under any applicable bankruptcy, insolvency, or other similar law now or hereafter in effect;
- appointment of a receiver, liquidator, assignee, custodian, Trustee, sequestrator or similar official of any Obligor for any substantial part of such party’s property and assets; or
- the winding up or liquidation of any Obligor’s affairs and such decree or order shall remain unstayed and in effect for a period of 180 consecutive days; or

(6) any Obligor:

- commences a voluntary case under any applicable bankruptcy, insolvency, or other similar law now or hereafter in effect, or consent to the entry of an order for relief in an involuntary case under any such law;
- consents to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator, or similar official of such party or for any substantial part of such party’s property; or
- effects any general assignment for the benefit of creditors.

A default under any Obligor’s other indebtedness is not a default under the Indenture.

If an event of default other than an event of default specified in clauses (5) and (6) above occurs with respect to an issue of 2022 Notes and is continuing under the Indenture, then, and in each and every such case, either the Trustee or the holders of not less than 25% in aggregate principal amount of such 2022 Notes then outstanding under the Indenture by written notice to the Issuer and to the Trustee, if such notice is given by the holders, may, and the Trustee at the request of such holders shall, declare the principal amount of and accrued interest, if any, on such 2022 Notes to be immediately due and payable. The amount due upon acceleration shall include only the original issue price of the 2022 Notes and accrued to the date of acceleration and accrued interest, if any. Upon a declaration of acceleration, such principal amount of and accrued interest, if any, on such 2022 Notes shall be immediately due and payable. If an event of default specified in clauses (5) and (6) above occurs with respect to any Obligor, the principal amount of and accrued interest, if any, on each issue of 2022 Notes then outstanding shall be and become immediately due and payable without any notice or other action on the part of the Trustee or any holder.

Upon certain conditions such declarations may be rescinded and annulled and past defaults may be waived by the holders of a majority in aggregate principal amount of an issue of 2022 Notes that has been accelerated. Furthermore, subject to various provisions in the Indenture, the holders of at least a majority in aggregate principal amount of an issue of 2022 Notes by notice to the Trustee may waive an existing default or event of default with respect to such 2022 Notes and its consequences, except a default in the payment of principal of or interest on such 2022 Notes or in respect of a covenant or provision of the Indenture which cannot be modified or amended without the consent of the holders of each such 2022 Notes. Upon any such waiver, such default shall cease to exist, and any event of default with respect to such 2022 Notes shall be deemed to have been cured, for every purpose of the Indenture; but no such waiver shall extend to any subsequent or other default or event of default or impair any right consequent thereto. For information as to the waiver of defaults, see "-- Modification and Waiver."

The holders of at least a majority in aggregate principal amount of an issue of 2022 Notes may direct the time, method, and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee with respect to such 2022 Notes. However, the Trustee may refuse to follow any direction that conflicts with law or the Indenture, that may involve the Trustee in personal liability, or that the Trustee determines in good faith may be unduly prejudicial to the rights of holders of such issue of 2022 Notes not joining in the giving of such direction and may take any other action it deems proper that is not inconsistent with any such direction received from holders of such issue of 2022 Notes. A holder may not pursue any remedy with respect to the Indenture or any series of 2022 Notes unless:

- the holder gives the Trustee written notice of a continuing event of default;
- the holders of at least 25% in aggregate principal amount of such series of 2022 Notes make a written request to the Trustee to pursue the remedy in respect of such event of default;
- the requesting holder or holders offer the Trustee indemnity satisfactory to the Trustee against any costs, liability, or expense;
- the Trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and
- during such 60-day period, the holders of a majority in aggregate principal amount of such series of 2022 Notes do not give the Trustee a direction that is inconsistent with the request.

These limitations, however, do not apply to the right of any holder of the 2022 Note to receive payment of the principal of, premium, if any, or interest on such the 2022 Note, or to bring suit for the enforcement of any such payment, on or after the due date for the 2022 Notes, which right shall not be impaired or affected without the consent of the holder.

The Indenture will require certain of officers of the Issuer to certify, on or before a date not more than 120 days after the end of each fiscal year, as to their knowledge of the Issuer's compliance with all conditions and covenants under the Indenture, such compliance to be determined without regard to any period of grace or requirement of notice provided under the Indenture.

(4) DESCRIPTION OF OUR 5.50% NOTES DUE 2029

The following summary of our 5.50% Notes due 2029 (the "2029 Notes") is based on the indenture dated as of January 7, 2003 among Comcast as the issuer (the "Issuer"), certain guarantors named therein and the Bank of New York (the "Base Indenture"), as amended by the first supplemental indenture dated as of March 25, 2003, the second supplemental indenture dated as of August 31, 2009, the third supplemental indenture dated as of March 27, 2013 and the fourth supplemental indenture dated as of October 1, 2015 among Comcast, Comcast Cable Communications, LLC, NBCUniversal Media, LLC (together with Comcast Cable Communications, LLC, the "Guarantors"), and The Bank of New York Mellon (f/k/a The Bank of New York), as trustee (the "Trustee") (collectively with the Base Indenture, the "Indenture"). This summary does not purport to be complete and is qualified in its entirety by reference to such Indenture.

Interest Payments

The 2029 Notes bears interest at a rate of 5.50% per annum and we will pay interest on the 2029 Notes on November 23 of each year, beginning November 23, 2011. Interest on the 2029 Notes is computed on the basis of the actual number of days in the period for which interest is being calculated and the actual number of days from and including the date from which interest begins to accrue for the period (or November 23, 2010 if no interest has been paid on the 2029 Notes), to but excluding the next scheduled interest payment date. If the scheduled interest payment date is not a business day, then interest will be paid on the first business day following the scheduled interest payment date. Interest periods are unadjusted. The day count convention is ACTUAL/ACTUAL (ICMA).

Guarantees

Our obligations under the 2029 Notes and the Indenture, including the payment of principal, premium, if any, and interest, are fully and unconditionally guaranteed by each of the Guarantors

The guarantees will not contain any restrictions on the ability of any Guarantor to (i) pay dividends or distributions on, or redeem, purchase, acquire, or make a liquidation payment with respect to, any of that Guarantor's capital stock or (ii) make any payment of principal, interest or premium, if any, on or repay, repurchase or redeem any debt securities of that Guarantor.

Optional Redemption

We have the right at our option to redeem any of the 2029 Notes in whole or in part, at any time or from time to time prior to their maturity, on at least 30 days, but not more than 60 days, prior notice mailed to the registered address of each holder of notes, at a redemption price equal to the greater of (i) 100% of the principal amount of such notes and (ii) the sum of the present values of the remaining scheduled payments of principal and interest thereon (exclusive of interest accrued to the date of redemption) discounted to the redemption date on an annual basis (actual/actual (ICMA)) at the Comparable Government Bond Rate plus 28 basis points (the “Make-Whole Amount”) plus, in each case, accrued and unpaid interest thereon to the date of redemption.

“***Comparable Government Bond Rate***” means the price, expressed as a percentage (rounded to three decimal places, 0.0005 being rounded upwards), at which the gross redemption yield (as calculated by the trustee) on the 2029 Notes, if they were to be purchased at such price on the third business day prior to the date fixed for redemption, would be equal to the gross redemption yield on such business day of the Comparable Government Bond (as defined below) on the basis of the middle market price of the Comparable Government Bond prevailing at 11:00 a.m. (London time) on such business day as determined by an independent investment bank selected by us.

“***Comparable Government Bond***” means, in relation to any Comparable Government Bond Rate calculation, at the discretion of an independent investment bank selected by us, a United Kingdom government bond whose maturity is closest to the maturity of the 2029 Notes, or if such independent investment bank in its discretion considers that such similar bond is not in issue, such other United Kingdom government bond as such independent investment bank may, with the advice of three brokers of, and/or market makers in, United Kingdom government bonds selected by such independent investment bank, determine to be appropriate for determining the Comparable Government Bond Rate.

On and after the redemption date, interest will cease to accrue on the 2029 Notes or any portion of the 2029 Notes called for redemption (unless we default in the payment of the redemption price and accrued interest). On or before the redemption date, we will deposit with the trustee money sufficient to pay the redemption price of and (unless the redemption date shall be an interest payment date) accrued and unpaid interest to the redemption date on the 2029 Notes to be redeemed on such date. If less than all of the 2029 Notes of any series are to be redeemed, the 2029 Notes to be redeemed shall be selected by the trustee by such method as the trustee shall deem fair and appropriate. Additionally, we may at any time repurchase notes in the open market and may hold or surrender such notes to the trustee for cancellation.

The 2029 Notes are also subject to redemption prior to maturity if certain events occur involving United States taxation. If any of these special tax events do occur, the 2029 Notes will be redeemed at a redemption price of 100% of their principal amount plus accrued and unpaid interest to the date fixed for redemption. See “-Redemption for Tax Reasons.”

Payment of Additional Amounts

We are required, subject to the exceptions and limitations set forth below, to pay as additional interest on the 2029 Notes such additional amounts as are necessary in order that the net payment by us or a paying agent of the principal of and interest on the 2029 Notes to a holder who is not a United States person (as defined below), after withholding or deduction for any present or future tax, assessment or other governmental charge imposed by the United States or a taxing authority in the United States will not be less than the amount provided in the 2029 Notes to be then due and payable; provided, however, that the foregoing obligation to pay additional amounts shall not apply:

(1) to any tax, assessment or other governmental charge that would not have been imposed but for the holder, or a fiduciary, settlor, beneficiary, member or shareholder of the holder if the holder is an estate, trust, partnership or corporation, or a person holding a power over an estate or trust administered by a fiduciary holder, being considered as:

(a) being or having been engaged in a trade or business in the United States or having or having had a permanent establishment in the United States;

(b) having a current or former connection with the United States (other than a connection arising solely as a result of the ownership of the 2029 Notes, the receipt of any payment or the enforcement of any rights hereunder), including being or having been a citizen or resident of the United States;

(c) being or having been a personal holding company, a passive foreign investment company or a controlled foreign corporation with respect to the United States or a corporation that has accumulated earnings to avoid United States federal income tax;

(d) being or having been a "10-percent shareholder" of Comcast as defined in section 871(h)(3) of the United States Internal Revenue Code of 1986, as amended (the "Code") or any successor provision; or

(e) being a bank receiving payments on an extension of credit made pursuant to a loan agreement entered into the ordinary course of its trade or business;

(2) to any holder that is not the sole beneficial owner of the 2029 Notes, or a portion of the 2029 Notes, or that is a fiduciary, partnership or limited liability company, but only to the extent that a beneficiary or settlor with respect to the fiduciary, a beneficial owner or member of the partnership or limited liability company would not have been entitled to the payment of an additional amount had the beneficiary, settlor, beneficial owner or member received directly its beneficial or distributive share of the payment;

(3) to any tax, assessment or other governmental charge that would not have been imposed but for the failure of the holder or any other person to comply with certification, identification or information reporting requirements concerning the nationality, residence, identity or connection with the United States of the holder or beneficial owner of the 2029 Notes, if compliance is required by statute, by regulation of the United States or any taxing authority therein or by an applicable income tax treaty to which the United States is a party as a precondition to exemption from such tax, assessment or other governmental charge;

(4) to any tax, assessment or other governmental charge that is imposed otherwise than by withholding by us or a paying agent from the payment;

(5) to any tax, assessment or other governmental charge that would not have been imposed but for a change in law, regulation, or administrative or judicial interpretation that becomes effective more than 15 days after the payment becomes due or is duly provided for, whichever occurs later;

(6) to any estate, inheritance, gift, sales, excise, transfer, wealth, capital gains or personal property tax or similar tax, assessment or other governmental charge;

(7) to any withholding or deduction that is imposed on a payment to an individual and that is required to be made pursuant to any law implementing or complying with, or introduced in order to conform to, any European Union Directive on the taxation of savings;

(8) to any tax, assessment or other governmental charge required to be withheld by any paying agent from any payment of principal of or interest on any note, if such payment can be made

without such withholding by at least one other paying agent;

(9) to any tax, assessment or other governmental charge that would not have been imposed but for the presentation by the holder of any note, where presentation is required, for payment on a date more than 30 days after the date on which payment became due and payable or the date on which payment thereof is duly provided for, whichever occurs later; or

(10) in the case of any combination of items (1), (2), (3), (4), (5), (6), (7), (8), and (9).

The 2029 Notes are subject in all cases to any tax, fiscal or other law or regulation or administrative or judicial interpretation applicable to the 2029 Notes. Except as specifically provided under this heading "-Payments of Additional Amounts," we will not be required to make any payment for any tax, assessment or other governmental charge imposed by any government or a political subdivision or taxing authority of or in any government or political subdivision.

As used under this heading "-Payments of Additional Amounts" and under the heading "-Redemption for Tax Reasons", the term "United States" means the United States of America (including the states and the District of Columbia and any political subdivision thereof), and the term "United States person" means any individual who is a citizen or resident of the United States for U.S. federal income tax purposes, a corporation, partnership or other entity created or organized in or under the laws of the United States, any state of the United States or the District of Columbia (other than a partnership that is not treated as a United States person under any applicable Treasury regulations), or any estate or trust the income of which is subject to United States federal income taxation regardless of its source.

Redemption for Tax Reasons

If, as a result of any change in, or amendment to, the laws (or any regulations or rulings promulgated under the laws) of the United States (or any taxing authority in the United States), or any change in, or amendments to, an official position regarding the application or interpretation of such laws, regulations or rulings, which change or amendment is announced or becomes effective on or after the date of this prospectus supplement, we become or, based upon a written opinion of independent counsel selected by us, will become obligated to pay additional amounts as described herein under the heading "-Payment of Additional Amounts" with respect to the 2029 Notes, then we may at any time at our option redeem, in whole, but not in part, the 2029 Notes on not less than 30 nor more than 60 days prior notice, at a redemption price equal to 100% of their principal amount, together with interest accrued but unpaid on those notes to the date fixed for redemption.

No Mandatory Redemption or Sinking Fund

There is no mandatory redemption prior to maturity or sinking fund payments for the 2029 Notes.

Additional Debt

The indenture does not limit the amount of debt we may issue under the indenture or otherwise.

Certain Covenants

The Issuer and the Guarantors are subject to some restrictions on their activities for the benefit of holders of all series of debt securities issued under the Indenture. The restrictive covenants summarized below apply, unless the covenants are waived or amended, so long as any of the debt securities are outstanding.

The Indenture does not contain any financial covenants other than those summarized below and does not restrict the Issuer or its subsidiaries from paying dividends or incurring additional debt. In addition, the Indenture will not protect holders of notes issued under it in the event of a highly leveraged transaction or a change in control.

Limitation on Liens Securing Indebtedness

Neither Issuer nor any Guarantor shall create, incur or assume any Lien (other than any Permitted Lien) on such person's assets, including the Capital Stock of its wholly owned subsidiaries to secure the payment of Indebtedness of the Issuer or any Guarantor, unless the Issuer secures the outstanding 2029 Notes equally and ratably with (or prior to) all Indebtedness secured by such Lien, so long as such Indebtedness shall be so secured.

Limitation on Sale and Leaseback Transactions

Neither the Issuer nor any Guarantor shall enter into any Sale and Leaseback Transaction involving any of such person's assets, including the Capital Stock of its wholly owned subsidiaries.

The restriction in the foregoing paragraph shall not apply to any Sale and Leaseback Transaction if:

- the lease is for a period of not in excess of three years, including renewal of rights;
- the lease secures or relates to industrial revenue or similar financing;
- the transaction is solely between the Issuer and a Guarantor or between or among Guarantors; or
- the Issuer or such Guarantor, within 270 days after the sale is completed, applies an amount equal to or greater than (a) the net proceeds of the sale of the assets or part thereof leased or (b) the fair market value of the assets or part thereof leased (as determined in good faith by the Issuer's Board of Directors) either to:
  - the retirement (or open market purchase) of notes, other long-term Indebtedness of the Issuer ranking on a parity with or senior to the 2029 Notes or long-term Indebtedness of a Guarantor; or
  - the purchase by the Issuer or any Guarantor of other property, plant or equipment related to the business of the Issuer or any Guarantor having a value at least equal to the value of the assets or part thereof leased.

"***Capitalized Lease***" means, as applied to any person, any lease of any property (whether real, personal, or mixed) of which the discounted present value of the rental obligations of such person as lessee, in conformity with GAAP, is required to be capitalized on the balance sheet of such person; and "Capitalized Lease Obligation" is defined to mean the rental obligations, as aforesaid, under such lease.

"***Capital Stock***" means, with respect to any person, any and all shares, interests, participations, or other equivalents (however designated, whether voting or non-voting) of such person's capital stock or other ownership interests, whether now outstanding or issued after the date of the Indenture, including, without limitation, all common stock and preferred stock.

“***Currency Agreement***” means any foreign exchange contract, currency swap agreement, or other similar agreement or arrangement designed to protect against the fluctuation in currency values.

“***GAAP***” means generally accepted accounting principles in the United States of America as in effect as of the date of determination, including, without limitation, those set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as approved by a significant segment of the accounting profession. All ratios and computations contained in the Indenture shall be computed in conformity with GAAP applied on a consistent basis.

“***Guarantee***” means any obligation, contingent or otherwise, of any person directly or indirectly guaranteeing any Indebtedness or other obligation of any other person and, without limiting the generality of the foregoing, any obligation, direct or indirect, contingent or otherwise, of such person:

- to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other obligation of such other person (whether arising by virtue of partnership arrangements, or by agreement to keep-well, to purchase assets, goods, securities, or services, to take-or-pay, or to maintain financial statement conditions or otherwise); or

- entered into for purposes of assuring in any other manner the obligee of such Indebtedness or other obligation of the payment thereof or to protect such obligee against loss in respect thereof (in whole or in part);

provided that the term “Guarantee” shall not include endorsements for collection or deposit in the ordinary course of business. The term “Guarantee” used as a verb has a corresponding meaning.

“***Indebtedness***” means, with respect to any person at any date of determination (without duplication):

- all indebtedness of such person for borrowed money;

- all obligations of such person evidenced by bonds, debentures, notes, or other similar instruments;

- all obligations of such person in respect of letters of credit or other similar instruments (including reimbursement obligations with respect thereto);

- all obligations of such person to pay the deferred and unpaid purchase price of property or services (but excluding trade accounts payable or accrued liabilities arising in the ordinary course of business);

- all obligations of such person as lessee under Capitalized Leases;

- all Indebtedness of other persons secured by a Lien on any asset of such person, whether or not such Indebtedness is assumed by such person; provided that the amount of such Indebtedness shall be the lesser of:

    - the fair market value of such asset at such date of determination; and

    - the amount of such Indebtedness;

- all Indebtedness of other persons Guaranteed by such person to the extent such Indebtedness is Guaranteed by such person; and

- to the extent not otherwise included in this definition, obligations under Currency Agreements and Interest Rate Agreements.

The amount of Indebtedness of any person at any date shall be the outstanding balance at such date of all unconditional obligations as described above and, with respect to contingent obligations, the maximum liability upon the occurrence of the contingency giving rise to the obligation; provided:

- that the amount outstanding at any time of any Indebtedness issued with original issue discount is the face amount of such Indebtedness less the remaining unamortized portion of the original issue discount of such Indebtedness at such time as determined in conformity with GAAP; and

- that Indebtedness shall not include any liability for federal, state, local, or other taxes.

"***Interest Rate Agreements***" means any obligations of any person pursuant to any interest rate swaps, caps, collars, and similar arrangements providing protection against fluctuations in interest rates. For purposes of the indenture, the amount of such obligations shall be the amount determined in respect thereof as of the end of the then most recently ended fiscal quarter of such person, based on the assumption that such obligation had terminated at the end of such fiscal quarter, and in making such determination, if any agreement relating to such obligation provides for the netting of amounts payable by and to such person thereunder or if any such agreement provides for the simultaneous payment of amounts by and to such person, then in each such case, the amount of such obligations shall be the net amount so determined, plus any premium due upon default by such person.

"***Lien***" means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind, or any other type of preferential arrangement that has the practical effect of creating a security interest, in respect of such asset. For the purposes of the Indenture, the Issuer or any Guarantor shall be deemed to own subject to a Lien any asset that it has acquired or holds subject to the interest of a vendor or lessor under any conditional sale agreement, capital lease or other title retention agreement relating to such asset.

"***Permitted Liens***" means:

- any Lien on any asset incurred prior to the date of the Indenture;

- any Lien on any assets acquired after the date of the Indenture (including by way of merger or consolidation) by the Issuer or any Guarantor, which Lien is created, incurred or assumed contemporaneously with such acquisition, or within 270 days thereafter, to secure or provide for the payment or financing of any part of the purchase price thereof, or any Lien upon any assets acquired after the date of the Indenture existing at the time of such acquisition (whether or not assumed by the Issuer or any Guarantor), provided that any such Lien shall attach only to the assets so acquired;

- any Lien on any assets in favor of the Issuer or any Guarantor;

- any Lien on assets incurred in connection with the issuance of tax-exempt governmental obligations (including, without limitation, industrial revenue bonds and similar financing);

- any Lien granted by any Guarantor on assets to the extent limitations on the incurrence of such Liens are prohibited by any agreement to which such Guarantor is subject as of the date of the Indenture; and

- any renewal of or substitution for any Lien permitted by any of the preceding bullet points, including any Lien securing reborrowing of amounts previously secured within 270 days of the repayment thereof, provided that no such renewal or substitution shall extend to any assets other than the assets covered by the Lien being renewed or substituted.

"***Sale and Leaseback Transaction***" means any direct or indirect arrangement with any person or to which any such person is a party, providing for the leasing to the Issuer or a Guarantor of any property, whether owned by the Issuer or such Guarantor at the date of the original issuance of the 2029 Notes or later acquired, which has been or is to be sold or transferred by the Issuer or such Guarantor to such person or to any other person by whom funds have been or are to be advanced on the security of such property.

Consolidation, Merger and Sale of Assets

The Indenture restricts the Issuer's ability to consolidate with, merge with or into, or sell, convey, transfer, lease, or otherwise dispose of all or substantially all of its property and assets as an entirety or substantially an entirety in one transaction or a series of related transactions to any person (other than a consolidation with or merger with or into or a sale, conveyance, transfer, lease or other disposition to a wholly-owned subsidiary with a positive net worth; provided that, in connection with any merger of the Issuer and a wholly-owned subsidiary, no consideration other than common stock in the surviving person shall be issued or distributed to the Issuer's stockholders) or permit any person to merge with or into such party unless:

- the Issuer is the continuing person or the person formed by such consolidation or into which such party is merged or that acquired or leased such property and assets shall be a corporation or limited liability company organized and validly existing under the laws of the United States of America or any jurisdiction thereof and shall expressly assume, by a supplemental indenture, executed and delivered to the Trustee, all of the Issuer's obligations on all of the 2029 Notes and under the Indenture;

- immediately after giving effect to such transaction, no default or event of default shall have occurred and be continuing; and

- the Issuer delivers to the Trustee an officers' certificate and opinion of counsel, in each case stating that such consolidation, merger, or transfer and such supplemental indenture complies with this provision and that all conditions precedent provided for in the Indenture and notes relating to such transaction have been complied with;

provided, however, that the foregoing limitations will not apply if, in the good faith determination of the Issuer's board of directors, whose determination must be set forth in a board resolution, the principal purpose of such transaction is to change the state of incorporation of such party; and provided further that any such transaction shall not have as one of its purposes the evasion of the foregoing limitations.

Upon any express assumption of the Issuer's obligations as described above, the Issuer shall be released and discharged from all obligations and covenants under the Indenture and all the 2029 Notes.

The Indenture and the guarantees do not limit the ability of any guarantor to consolidate with or merge into or sell all or substantially all its assets. Upon the sale or disposition of any guarantor (by merger, consolidation, the sale of its capital stock or the sale of all or substantially all of its assets) to any person, that guarantor will be deemed released from all its obligations under the Indenture and its guarantee.

Modification and Waiver

The Issuer and the Trustee may amend or supplement the Indenture or the 2029 Notes without notice to or the consent of any holder:

- to cure any ambiguity, defect, or inconsistency in the Indenture; provided that such amendments or supplements shall not adversely affect the interests of the holders in any material respect;
- to comply with the provisions described under "-Certain Covenants-Consolidation, Merger and Sale of Assets;"
- to comply with any requirements of the SEC in connection with the qualification of the Indenture under the Trust Indenture Act;
- to evidence and provide for the acceptance of appointment hereunder by a successor Trustee;
- to establish the form or forms or terms of the 2029 Notes as permitted by the Indenture;
- to provide for uncertificated notes and to make all appropriate changes for such purpose;
- to make any change that does not adversely affect the rights of any holder;
- to add to its covenants such new covenants, restrictions, conditions or provisions for the protection of the holders, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default; or
- to make any change so long as no 2029 Notes are outstanding.

Subject to certain conditions, without prior notice to any holder of 2029 Notes, modifications and amendments of the Indenture may be made by the Issuer and the Trustee with respect to any series of 2029 Notes with the written consent of the holders of a majority in principal amount of the affected series of 2029 Notes, and compliance by the Issuer with any provision of the Indenture with respect to any series of 2029 Notes may be waived by written notice to the Trustee by the holders of a majority in principal amount of the affected series of 2029 Notes outstanding; provided, however, that each affected holder must consent to any modification, amendment or waiver that:

- changes the stated maturity of the principal of, or any installment of interest on, the 2029 Notes of the affected series;
- reduces the principal amount of, or premium, if any, or interest on, the 2029 Notes of the affected series;
- changes the place or currency of payment of principal of, or premium, if any, or interest on, the 2029 Notes of the affected series;
- changes the provisions for calculating the optional redemption price, including the definitions relating thereto;

- changes the provisions relating to the waiver of past defaults or changes or impairs the right of holders to receive payment or to institute suit for the enforcement of any payment of the 2029 Notes of the affected series on or after the due date therefor;

- reduces the above-stated percentage of outstanding 2029 Notes of the affected series the consent of whose holders is necessary to modify or amend or to waive certain provisions of or defaults under the Indenture;

- waives a default in the payment of principal of, premium, if any, or interest on the 2029 Notes; or

- modifies any of the provisions of this paragraph, except to increase any required percentage or to provide that certain other provisions cannot be modified or waived without the consent of the holder of each 2029 Note of the series affected by the modification.

It is not necessary for the consent of the holders under the Indenture to approve the particular form of any note amendment, supplement or waiver, but it shall be sufficient if such consent approves the substance thereof. After an amendment, supplement or waiver under the Indenture becomes effective, notice must be given to the holders affected thereby briefly describing the amendment, supplement, or waiver. Supplemental indentures will be mailed to holders upon request. Any failure to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture or waiver.

Events of Default

For purposes of this section, the term “Obligor” shall mean each of the Issuer and Guarantors, in each case excluding such entities’ subsidiaries.

An event of default for a series of 2029 Notes is defined under the Indenture as being:

(1) a default by any Obligor in the payment of principal or premium on the 2029 Notes of such series when the same becomes due and payable whether at maturity, upon acceleration, redemption or otherwise;

(2) a default by any Obligor in the payment of interest on the 2029 Notes of such series when the same becomes due and payable, if that default continues for a period of 30 days;

(3) default by any Obligor in the performance of or breach by any Obligor of any of its other covenants or agreements in the Indenture applicable to all the 2029 Notes or applicable to the 2029 Notes of any series and that default or breach continues for a period of 30 consecutive days after written notice is received from the Trustee or from the holders of 25% or more in aggregate principal amount of the 2029 Notes of all affected series;

(4) any guarantee is not in full force and effect;

(5) a court having jurisdiction enters a decree or order for:

    - relief in respect of any Obligor in an involuntary case under any applicable bankruptcy, insolvency, or other similar law now or hereafter in effect;

    - appointment of a receiver, liquidator, assignee, custodian, Trustee, sequestrator or similar official of any Obligor for any substantial part of such party's property and assets; or

- the winding up or liquidation of any Obligor's affairs and such decree or order shall remain unstayed and in effect for a period of 180 consecutive days; or

(6) any Obligor:

- commences a voluntary case under any applicable bankruptcy, insolvency, or other similar law now or hereafter in effect, or consent to the entry of an order for relief in an involuntary case under any such law;

- consents to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator, or similar official of such party or for any substantial part of such party's property; or

- effects any general assignment for the benefit of creditors.

A default under any Obligor's other indebtedness is not a default under the Indenture.

If an event of default other than an event of default specified in clauses (5) and (6) above occurs with respect to an issue of 2029 Notes and is continuing under the Indenture, then, and in each and every such case, either the Trustee or the holders of not less than 25% in aggregate principal amount of such 2029 Notes then outstanding under the Indenture by written notice to the Issuer and to the Trustee, if such notice is given by the holders, may, and the Trustee at the request of such holders shall, declare the principal amount of and accrued interest, if any, on such 2029 Notes to be immediately due and payable. The amount due upon acceleration shall include only the original issue price of the 2029 Notes and accrued to the date of acceleration and accrued interest, if any. Upon a declaration of acceleration, such principal amount of and accrued interest, if any, on such 2029 Notes shall be immediately due and payable. If an event of default specified in clauses (5) and (6) above occurs with respect to any Obligor, the principal amount of and accrued interest, if any, on each issue of 2029 Notes then outstanding shall be and become immediately due and payable without any notice or other action on the part of the Trustee or any holder.

Upon certain conditions such declarations may be rescinded and annulled and past defaults may be waived by the holders of a majority in aggregate principal amount of an issue of 2029 Notes that has been accelerated. Furthermore, subject to various provisions in the Indenture, the holders of at least a majority in aggregate principal amount of an issue of 2029 Notes by notice to the Trustee may waive an existing default or event of default with respect to such 2029 Notes and its consequences, except a default in the payment of principal of or interest on such 2029 Notes or in respect of a covenant or provision of the Indenture which cannot be modified or amended without the consent of the holders of each such 2029 Notes. Upon any such waiver, such default shall cease to exist, and any event of default with respect to such 2029 Notes shall be deemed to have been cured, for every purpose of the Indenture; but no such waiver shall extend to any subsequent or other default or event of default or impair any right consequent thereto. For information as to the waiver of defaults, see "-Modification and Waiver."

The holders of at least a majority in aggregate principal amount of an issue of 2029 Notes may direct the time, method, and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee with respect to such 2029 Notes. However, the Trustee may refuse to follow any direction that conflicts with law or the Indenture, that may involve the Trustee in personal liability, or that the Trustee determines in good faith may be unduly prejudicial to the rights of holders of such issue of 2029 Notes not joining in the giving of such direction and may take any other action it deems proper that is not inconsistent with any such direction received from holders of such issue of 2029 Notes. A holder may not pursue any remedy with respect to the Indenture or any series of 2029 Notes unless:

- the holder gives the Trustee written notice of a continuing event of default;
- the holders of at least 25% in aggregate principal amount of such series of 2029 Notes make a written request to the Trustee to pursue the remedy in respect of such event of default;
- the requesting holder or holders offer the Trustee indemnity satisfactory to the Trustee against any costs, liability, or expense;
- the Trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and
- during such 60-day period, the holders of a majority in aggregate principal amount of such series of 2029 Notes do not give the Trustee a direction that is inconsistent with the request.

These limitations, however, do not apply to the right of any holder of the 2029 Note to receive payment of the principal of, premium, if any, or interest on such the 2029 Note, or to bring suit for the enforcement of any such payment, on or after the due date for the 2029 Notes, which right shall not be impaired or affected without the consent of the holder.

The Indenture will require certain of officers of the Issuer to certify, on or before a date not more than 120 days after the end of each fiscal year, as to their knowledge of the Issuer’s compliance with all conditions and covenants under the Indenture, such compliance to be determined without regard to any period of grace or requirement of notice provided under the Indenture.

Exhibit 10.13

COMCAST CORPORATION

2005 DEFERRED COMPENSATION PLAN

ARTICLE 1 - BACKGROUND AND COVERAGE OF PLAN

1.1. Background and Adoption of Plan.

1.1.1. Amendment and Restatement of the Plan. In recognition of the services provided by certain key employees and in order to make additional retirement benefits and increased financial security available on a tax-favored basis to those individuals, the Board of Directors of Comcast Corporation, a Pennsylvania corporation (the “Board”), hereby amends and restates the Comcast Corporation 2005 Deferred Compensation Plan (the “Plan”), effective December 10, 2019. The Plan has previously been amended and restated from time to time, in light of the enactment of section 409A of the Internal Revenue Code of 1986, as amended (the “Code”) as part of the American Jobs Creation Act of 2004, and the issuance of various Notices, Announcements, Proposed Regulations and Final Regulations thereunder (collectively, “Section 409A”), and to make desirable changes to the rules of the Plan.

1.1.2. Prior Plan. Prior to January 1, 2005, the Comcast Corporation 2002 Deferred Compensation Plan (the “Prior Plan”) was in effect. In order to preserve the favorable tax treatment available to deferrals under the Prior Plan in light of the enactment of Section 409A, the Board has prohibited future deferrals under the Prior Plan of amounts earned and vested on and after January 1, 2005. Amounts earned and vested prior to January 1, 2005 are and will remain subject to the terms of the Prior Plan. Amounts earned and vested on and after January 1, 2005 will be available to be deferred pursuant to the Plan, subject to its terms and conditions.

1.2. Reservation of Right to Amend to Comply with Section 409A. In addition to the powers reserved to the Board and the Committee under Article 10 of the Plan, the Board and the Committee reserve the right to amend the Plan, either retroactively or prospectively, in whatever respect is required to achieve and maintain compliance with the requirements of Section 409A.

1.3. Plan Unfunded and Limited to Outside Directors, Directors Emeriti and Select Group of Management or Highly Compensated Employees. The Plan is unfunded and is maintained primarily for the purpose of providing Outside Directors, Directors Emeriti and a select group of management or highly compensated employees the opportunity to defer the receipt of compensation otherwise payable to such Outside Directors, Directors Emeriti and eligible employees in accordance with the terms of the Plan.

1.4. References to Written Forms, Elections and Notices. Any action under the Plan that requires a written form, election, notice or other action shall be treated as completed if taken via electronic or other means, to the extent authorized by the Administrator.

ARTICLE 2 - DEFINITIONS

2.1. “Account” means the bookkeeping accounts established pursuant to Section 5.1 and maintained by the Administrator in the names of the respective Participants, to which all amounts deferred, and earnings allocated under the Plan shall be credited, and from which all amounts distributed pursuant to the Plan shall be debited.

2.2. "Active Participant" means:

(a) Each Participant who is in active service as an Outside Director or a Director Emeritus; and

(b) Each Participant who is actively employed by a Participating Company as an Eligible Employee.

2.3. "Administrator" means the Committee or its delegate.

2.4. "Affiliate" means, with respect to any Person, any other Person that, directly or indirectly, is in control of, is controlled by, or is under common control with, such Person. For purposes of this definition, the term "control," including its correlative terms "controlled by" and "under common control with," mean, with respect to any Person, the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

2.5. "Annual Rate of Pay" means, as of any date, an employee's annualized base pay rate. An employee's Annual Rate of Pay shall not include sales commissions or other similar payments or awards, including payments earned under any sales incentive arrangement for employees of NBCUniversal.

2.6. "Applicable Interest Rate."

(a) Active Participants.

(i) Protected Account Balances. Except as otherwise provided in Section 2.6(b), with respect to Protected Account Balances, the term "Applicable Interest Rate," means the interest rate that, when compounded daily pursuant to rules established by the Administrator from time to time, is mathematically equivalent to 12% (0.12) per annum, compounded annually.

(ii) Contributions Credited on and after January 1, 2014 (on and after January 1, 2013 for Eligible NBCUniversal Employees). Except as otherwise provided in Section 2.6(b):

(A) For amounts (other than Protected Account Balances) credited to Accounts of Eligible Comcast Employees, Outside Directors and Directors Emeriti with respect to Compensation earned on and after January 1, 2014 or pursuant to Section 3.8, and for amounts credited pursuant to Subsequent Elections filed on and after January 1, 2014 that are attributable to such amounts, the term "Applicable Interest Rate," means the interest rate that, when compounded daily pursuant to rules established by the Administrator from time to time, is mathematically equivalent to 9% (0.09) per annum, compounded annually.

(B) For amounts credited to Accounts of Eligible NBCUniversal Employees on and after January 1, 2013 and for amounts credited pursuant to Subsequent Elections filed after December 31, 2012 that are attributable to amounts credited to Accounts pursuant to Initial Elections filed with respect to Compensation earned after December 31, 2012, the term "Applicable Interest Rate," means the interest rate that, when compounded daily pursuant to rules established by the Administrator from time to time, is mathematically equivalent to 9% (0.09) per annum, compounded annually.

(b) Termination or Transition of Service. Effective for the period beginning as soon as administratively practicable following a Participant's employment termination date to the date the Participant's Account is distributed in full, the Administrator, in its sole discretion, may designate the term

“Applicable Interest Rate” for such Participant’s Account to mean the lesser of (i) the rate in effect under Section 2.6(a) or (ii) the Prime Rate plus one percent. A Participant’s re-employment by a Participating Company following an employment termination date shall not affect the Applicable Interest Rate that applies to the part of the Participant’s Account (including interest credited with respect to such part of the Participant’s Account) that was credited before such employment termination date. Notwithstanding the foregoing, the Administrator may delegate its authority to determine the Applicable Interest Rate under this Section 2.6(b) to an officer of the Company or committee of two or more officers of the Company.

2.7. “Beneficiary” means such person or persons or legal entity or entities, including, but not limited to, an organization exempt from federal income tax under section 501(c)(3) of the Code, designated by a Participant or Beneficiary to receive benefits pursuant to the terms of the Plan after such Participant’s or Beneficiary’s death. If no Beneficiary is designated by the Participant or Beneficiary, or if no Beneficiary survives the Participant or Beneficiary (as the case may be), the Participant’s Beneficiary shall be the Participant’s Surviving Spouse if the Participant has a Surviving Spouse and otherwise the Participant’s estate, and the Beneficiary of a Beneficiary shall be the Beneficiary’s Surviving Spouse if the Beneficiary has a Surviving Spouse and otherwise the Beneficiary’s estate.

2.8. “Board” means the Board of Directors of the Company.

2.9. “Change of Control” means any transaction or series of transactions that constitutes a change in the ownership or effective control or a change in the ownership of a substantial portion of the assets of the Company, within the meaning of Section 409A.

2.10. “Code” means the Internal Revenue Code of 1986, as amended.

2.11. “Comcast Spectacor” means Comcast Spectacor, L.P.

2.12. “Committee” means the Compensation Committee of the Board of Directors of the Company.

2.13. “Company” means Comcast Corporation, a Pennsylvania corporation, including any successor thereto by merger, consolidation, acquisition of all or substantially all the assets thereof, or otherwise.

2.14. “Company Stock” means with respect to amounts credited to the Company Stock Fund pursuant to (i) deferral elections by Outside Directors or Directors Emeriti made pursuant to Section 3.1(a), or (ii) deemed transfers pursuant to Article 5, Comcast Corporation Class A Common Stock, par value $0.01, and such other securities issued by the Company as may be subject to adjustment in the event that shares of Company Stock are changed into, or exchanged for, a different number or kind of shares of stock or other securities of the Company, whether through merger, consolidation, reorganization, recapitalization, stock dividend, stock split-up or other substitution of securities of the Company. In such event, the Committee shall make appropriate equitable anti-dilution adjustments to the number and class of hypothetical shares of Company Stock credited to Participants’ Accounts under the Company Stock Fund. The number of hypothetical shares of Company Stock credited to a Participant’s Account shall be rounded down to the next lower share, and the value of fractional shares that otherwise have been credited to the Company Stock Fund shall be credited to the Income Fund. Any reference to the term “Company Stock” in the Plan shall be a reference to the appropriate number and class of shares of stock as adjusted pursuant to this Section 2.14. The Committee’s adjustment shall be effective and binding for all purposes of the Plan.

2.15. "Company Stock Fund" means a hypothetical investment fund pursuant to which income, gains and losses are credited to a Participant's Account as if the Account, to the extent deemed invested in the Company Stock Fund, were invested in hypothetical shares of Company Stock, and, except as otherwise provided in Section 2.14 with respect to fractional shares, all dividends and other distributions paid with respect to Company Stock shall be credited to an Other Investment Fund, provided that dividends and other distribution paid with respect to Company Stock credited to the Accounts of Outside Directors shall be credited to the Income Fund. Except to the extent provided by Section 5.2(b)(i)(C) with respect to Section 16 Officers or by the Administrator with respect to Participants who are not Section 16 Officers, amounts credited to the Company Stock Fund may not thereafter be transferred to the Income Fund or another Other Investment Fund.

2.16. "Compensation" means:

(a) In the case of an Outside Director, the total remuneration payable in cash or payable in Company Stock (as elected by an Outside Director pursuant to the Comcast Corporation 2002 Non-Employee Director Compensation Plan) for services as a member of the Board and as a member of any Committee of the Board and in the case of a Director Emeritus, the total remuneration payable in cash for services to the Board.

(b) In the case of an Eligible Employee, the total cash remuneration for services payable by a Participating Company, excluding (i) Severance Pay, (ii) sales commissions or other similar payments or awards other than cash bonus arrangements described in Section 2.16(c), (iii) bonuses earned under any program designated by the Company's Programming Division as a "long-term incentive plan" and (iv) cash bonuses earned under any long-term incentive plan for employees of NBCUniversal.

(c) Except as otherwise provided by the Administrator, with respect to any Eligible Employee who is employed by NBCUniversal or any cash bonus arrangement maintained for the benefit of employees of NBCUniversal under which there is a defined sales incentive target goal and target payout that provides for payment on a quarterly, semi-annual or annual basis, the term "Compensation" shall include cash bonuses earned under any such sales incentive arrangement for employees of NBCUniversal, provided that such cash bonus arrangement is the exclusive cash bonus arrangement in which such Eligible Employee is eligible to participate.

2.17. "Contribution Limit" means the product of (a) seven (7) times (b) Total Compensation.

2.18. "Death Tax Clearance Date" means the date upon which a Deceased Participant's or a deceased Beneficiary's Personal Representative certifies to the Administrator that (i) such Deceased Participant's or deceased Beneficiary's Death Taxes have been finally determined, (ii) all of such Deceased Participant's or deceased Beneficiary's Death Taxes apportioned against the Deceased Participant's or deceased Beneficiary's Account have been paid in full and (iii) all potential liability for Death Taxes with respect to the Deceased Participant's or deceased Beneficiary's Account has been satisfied.

2.19. "Death Taxes" means any and all estate, inheritance, generation-skipping transfer, and other death taxes as well as any interest and penalties thereon imposed by any governmental entity (a "taxing authority") as a result of the death of the Participant or the Participant's Beneficiary.

2.20. "Deceased Participant" means a Participant whose employment, or, in the case of a Participant who was an Outside Director or Director Emeritus, a Participant whose service as an Outside Director or Director Emeritus, is terminated by death.

2.21. "Director Emeritus" means an individual designated by the Board, in its sole discretion, as Director Emeritus, pursuant to the Board's Director Emeritus Policy.

2.22. "Disability" means:

(a) an individual's inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months; or

(b) circumstances under which, by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months, an individual is receiving income replacement benefits for a period of not less than three months under an accident or health plan covering employees of the individual's employer.

2.23. "Disabled Participant" means:

(a) A Participant whose employment or, in the case of a Participant who is an Outside Director or Director Emeritus, a Participant whose service as an Outside Director or Director Emeritus, is terminated by reason of Disability;

(b) The duly-appointed legal guardian of an individual described in Section 2.23(a) acting on behalf of such individual.

2.24. "Domestic Relations Order" means any judgment, decree or order (including approval of a property settlement agreement) which:

(a) Relates to the provision of child support, alimony payments or marital property rights to a spouse or former spouse of a Participant; and

(b) Is made pursuant to a State domestic relations law (including a community property law).

2.25. "Eligible Comcast Employee" means an employee of a Participating Company described in Section 2.25(a) through 2.25(e) below, provided that except as otherwise designated by the Administrator, in the case of an employee of the Company or a subsidiary of the Company (other than NBCUniversal), such individual's Compensation is administered under the Company's common payroll system, and in the case of an employee of NBCUniversal, such individual's Compensation is administered under NBCUniversal's common payroll system:

(a) For the 2012 Plan Year, each employee of a Participating Company who was an Eligible Employee under the rules of the Plan as in effect on December 31, 2011, including employees who are Comcast-legacy employees of NBCUniversal.

(b) For the 2013 Plan Year, (i) each employee of a Participating Company other than NBCUniversal and (ii) each employee of NBCUniversal described in Section 2.25(a), provided that in each case, such employee has an Annual Rate of Pay of $200,000 or more as of both (iii) the date on which an Initial Election is filed with the Administrator for the 2013 Plan Year and (iv) January 1, 2013.

(c) For the period extending from January 1, 2014 through December 31, 2018, (i) each employee of a Participating Company other than NBCUniversal and (ii) each employee of NBCUniversal described in Section 2.25(a) whose Compensation was administered under NBCUniversal's common payroll system as of December 31, 2013, provided that in each case, such employee has an Annual Rate of Pay of $250,000 or more as of both the date on which an Initial Election is filed with the Administrator and the first day of the calendar year in which such Initial Election is filed.

(d) Effective on and after January 1, 2019, each employee of a Participating Company other than NBCUniversal, provided that such employee has an Annual Rate of Pay of $350,000 or more as of the date on which an Initial Election is filed with the Administrator.

(e) Each Grandfathered Employee who is an employee of a Participating Company other than NBCUniversal.

(f) Each New Key Employee who is an employee of a Participating Company other than NBCUniversal.

(g) Each Eligible Comcast Spectacor Employee.

2.26. "Eligible Comcast Spectacor Employee" means:

(a) Each Eligible Comcast Employee who is providing services to Comcast Spectacor under a secondment arrangement between the Company and Comcast Spectacor.

(b) Each employee of Comcast Spectacor, provided that such employee (i) has been designated as an Eligible Comcast Spectacor Employee by the Administrator or its delegate and (ii) has an Annual Rate of Pay of $350,000 or more as of both (x) the date on which an Initial Election is filed with the Administrator and (y) the first day of the calendar year in which such Initial Election is filed.

2.27. "Eligible Employee" means:

(a) Each Eligible Comcast Employee;

(b) Each Eligible NBCU Employee; and

(c) Each other employee of a Participating Company who is designated by the Administrator, in its discretion, as an Eligible Employee.

2.28. "Eligible NBCU Employee" means:

(a) Effective for the period extending from January 1, 2013 through December 31, 2018, an employee of NBCUniversal described in Section 2.28(a)(i) through 2.28(a)(v) below, provided that, in each case, except as otherwise designated by the Administrator, such individual's Compensation is administered under NBCUniversal's common payroll system.

(i) Each employee of NBCUniversal who has been designated as a member of NBCUniversal's Executive Committee, Management Committee or Operating Committee by the Chief Executive Officer of NBCUniversal and approved by the Administrator, other than an employee who is described in Section 2.25.

(ii) Each employee of NBCUniversal, other than an employee who is described in Section 2.25, who, for the 2013 Plan Year:

(A) Is not a member of NBCUniversal's Executive Committee, Management Committee or Operating Committee;

(B)Transferred employment directly from the Company to NBCUniversal in 2011 or 2012;

(C) Was an Eligible Employee under the rules of the Plan as in effect immediately before transferring employment from the Company to NBCUniversal;

(D) Elected to waive the opportunity to continue to be an Eligible Employee following the transfer of employment directly from the Company to NBCUniversal;

(E) Has an Annual Rate of Pay of $200,000 or more as of both (iii) the date on which an Initial Election is filed with the Administrator for the 2013 Plan Year and (iv) January 1, 2013; and

(F) Files an Initial Election with the Administrator for the 2013 Plan Year.

(iii) Each employee of NBCUniversal, other than an employee who is described in Section 2.25, who, for the 2013 Plan Year:

(A) Is not a member of NBCUniversal's Executive Committee, Management Committee or Operating Committee;

(B) Has been a participant in the NBCUniversal Supplementary Pension Plan for the period extending from January 29, 2011 through December 31, 2012;

(C) Has an Annual Rate of Pay is $200,000 or more as of both (iii) the date on which an Initial Election is filed with the Administrator for the 2013 Plan Year and (iv) January 1, 2013; and

(D) Files an Initial Election with the Administrator for the 2013 Plan Year.

(iv) Each Grandfathered Employee who is an employee of NBCUniversal.

(v) Each New Key Employee who is an employee of NBCUniversal.

(b) Effective on and after January 1, 2019, an employee of NBCUniversal described in Section 2.28(b)(i) through 2.28(b)(iii) below, provided that, in each case, except as otherwise designated by the Administrator, such individual's Compensation is administered under NBCUniversal's common payroll system.

(i) Each employee of NBCUniversal who has been designated as a member of NBCUniversal's Executive Committee or Management Committee by the Chief Executive Officer of NBCUniversal and approved by the Administrator, other than an employee who is described in Section 2.25.

(ii) Each Grandfathered Employee who is an employee of NBCUniversal.

(iii) Each New Key Employee who is an employee of NBCUniversal.

2.29. "Fair Market Value"

(a) If shares of any Other Investment Fund are listed on a stock exchange, Fair Market Value shall be determined based on the last reported sale price of a share on the principal exchange on which shares are listed on the date of determination, or if such date is not a trading day, the next trading date.

(b) If shares of any Other Investment Fund are not so listed, but trades of shares are reported on a quotation system, Fair Market Value shall be determined based on the last quoted sale price of a share on the quotation system on the date of determination, or if such date is not a trading day, the next trading date.

(c) If shares of any Other Investment Fund are not so listed nor trades of shares so reported, Fair Market Value shall be determined by the Committee in good faith.

2.30. "Grandfathered Employee" means:

(a) Effective before January 1, 2014:

(i) Each employee of a Participating Company other than NBCUniversal who, as of December 31, 1989, was eligible to participate in the Prior Plan and who has been in continuous service to the Company or an Affiliate since December 31, 1989.

(ii) Each employee of a Participating Company other than NBCUniversal who was, at any time before January 1, 1995, eligible to participate in the Prior Plan and whose Annual Rate of Pay was $90,000 or more as of both (A) the date on which an Initial Election is filed with the Administrator and (B) the first day of each calendar year beginning after December 31, 1994.

(iii) Each employee of a Participating Company other than NBCUniversal who was an employee of an entity that was a Participating Company in the Prior Plan as of June 30, 2002 and who had an Annual Rate of Pay of $125,000 as of each of (i) June 30, 2002; (ii) the date on which an Initial Election was filed with the Administrator and (iii) the first day of each calendar year beginning after December 31, 2002.

(iv) Each employee of a Participating Company other than NBCUniversal who (i) as of December 31, 2002, was an "Eligible Employee" within the meaning of Section 2.34 of the AT&T Broadband Deferred Compensation Plan (as amended and restated, effective November 18, 2002) with respect to whom an account was maintained, and (ii) for the period beginning on December 31, 2002 and extending through any date of determination, has been actively and continuously in service to the Company or an Affiliate.

(b) Effective for the period extending from January 1, 2014 through December 31, 2018:

(i) Each employee of a Participating Company other than NBCUniversal who is described in Section 2.30(a)(i)-(iv).

(ii) Each employee of a Participating Company other than NBCUniversal who is a Participant and who has an Annual Rate of Pay of $200,000 or more as of each of (A) December 31, 2013; (B) the date on which an Initial Election is filed with the Administrator and (C) the first day of each calendar year beginning after December 31, 2013.

(iii) Each employee of NBCUniversal described in Section 2.28(a)(ii) or 2.28(a)(iii) who is a Participant and who has an Annual Rate of Pay of $200,000 or more as of each of (A) December 31, 2013; (B) the date on which an Initial Election is filed with the Administrator and (C) the first day of each calendar year beginning after December 31, 2013.

(c) Effective for the period extending from January 1, 2019 through December 31, 2020, each employee of a Participating Company who either has a balance credited to his Account as of December 31, 2018, or has filed an Initial Election to defer bonus earned for the 2018 Plan Year and who:

(i) is an employee of NBCUniversal described in Section 2.25(a) whose Compensation was administered under NBCUniversal's common payroll system as of December 31, 2013, has an Annual Rate of Pay of $250,000 or more as of both the date on which an Initial Election is filed with the Administrator and the first day of the calendar year in which such Initial Election is filed;

(ii) is described in Section 2.28(a)(i), and who is a member of NBCUniversal's Operating Committee (but not NBCUniversal's Executive Committee or Management Committee); or

(iii) is described in Section 2.30(b).

2.31. "Hardship" means an "unforeseeable emergency," as defined in Section 409A. The Committee shall determine whether the circumstances of the Participant constitute an unforeseeable emergency and thus a Hardship within the meaning of this Section 2.31. Following a uniform procedure, the Committee's determination shall consider any facts or conditions deemed necessary or advisable by the Committee, and the Participant shall be required to submit any evidence of the Participant's circumstances that the Committee requires. The determination as to whether the Participant's circumstances are a case of Hardship shall be based on the facts of each case; provided however, that all determinations as to Hardship shall be uniformly and consistently made according to the provisions of this Section 2.31 for all Participants in similar circumstances.

2.32. "High Balance Participant" means a Participant the value of whose Account that is deemed invested in the Income Fund is greater than or equal to the Income Fund Limit, as determined by the Administrator.

2.33. "High-Water Mark" means:

(a) With respect to amounts credited to the Income Fund pursuant to an Eligible Comcast Employee's Initial Elections on account of Compensation earned in 2014, the highest of the sum of the amounts described in (i), (ii) and (iii) below as of the last day of any calendar quarter beginning after December 31, 2008 and before October 1, 2013:

(i)An Eligible Comcast Employee's Account to the extent such Account is credited to the Income Fund; plus

(ii) Such Eligible Comcast Employee's Account in the Prior Plan to the extent such Account is credited to the Income Fund; plus

(iii) Such Eligible Comcast Employee's Account in the Restricted Stock Plan to the extent such Account is credited to the "Income Fund."

(b) With respect to amounts credited to the Income Fund pursuant to an Eligible Comcast Employee's Initial Elections on account of Compensation earned after 2014, the sum of (x) plus (y) where (x) equals the highest of the sum of the amounts described in Section 2.33(a)(i), (ii) and (iii) as of the last day of any calendar quarter beginning after December 31, 2008 and before January 1, 2014, and (y) equals the sum of:

(i) The amount credited to the Income Fund with respect to an Eligible Comcast Employee's Account pursuant to Section 3.8 after December 31, 2013 and on or before September 30, 2014 that is contractually committed pursuant to an employment agreement entered into on or before December 31, 2013; plus

(ii) The deferred portion of an Eligible Comcast Employee's cash bonus award earned for 2013 to the extent credited to the Income Fund and payable, but for the Eligible Comcast Employee's Initial Election, after December 31, 2013 and on or before September 30, 2014; plus

(iii) The amount credited to the Eligible Comcast Employee's "Income Fund" under the Restricted Stock Plan pursuant to a "Diversification Election" made by an Eligible Comcast Employee before January 1, 2014 with respect to restricted stock units that vest under the Restricted Stock Plan after December 31, 2013 and on or before September 30, 2014.

2.34. "<u>Inactive Participant</u>" means each Participant (other than an Outside Director or Section 16 Officer described in Section 3.5(a), Retired Participant, Deceased Participant or Disabled Participant) who is not in active service as an Outside Director or Director Emeritus and is not actively employed by a Participating Company.

2.35. "<u>Income Fund</u>" means a hypothetical investment fund pursuant to which income, gains and losses are credited to a Participant's Account as if the Account, to the extent deemed invested in the Income Fund, were credited with interest at the Applicable Interest Rate. The "<u>9% Fund</u>" means that portion of the Income Fund with respect to which the Applicable Interest Rate is 9%. The "<u>12% Fund</u>" means that portion of the Income Fund with respect to which the Applicable Interest Rate is 12%. The "<u>Prime Plus One Fund</u>" means that portion of the Income Fund with respect to which the Applicable Interest Rate is described in Section 2.6(b). For purposes of this Section 2.35, the Income Fund shall include amounts credited to the Income Fund under the Prior Plan and the Restricted Stock Plan.

2.36. "Income Fund Limit" means $100 million, provided that if the amount credited to a Participant's Income Fund is greater than $100 million as of December 31, 2019, the Income Fund Limit applicable to such Participant for any applicable Plan Year shall be equal to the amount credited to a Participant's Income Fund as of the December 31 immediately preceding such applicable Plan Year until such balance is equal to or less than $100 million. The Administrator may waive or modify the Income Fund Limit applicable to one or more High Balance Participants in its discretion. For purposes of this Section 2.36, the Income Fund shall include amounts credited to the Income Fund under the Prior Plan and the Restricted Stock Plan.

2.37. "Initial Election."

(a) Outside Directors and Directors Emeriti. With respect to Outside Directors and Directors Emeriti, the term "Initial Election" means one or more written elections on a form provided by the Administrator and filed with the Administrator in accordance with Article 3, pursuant to which an Outside Director or Director Emeritus may:

(i) Elect to defer any portion of the Compensation payable for the performance of services as an Outside Director or a Director Emeritus, net of required withholdings and deductions as determined by the Administrator in its sole discretion; and

(ii) Designate the time of payment of the amount of deferred Compensation to which the Initial Election relates.

(b) Eligible Employees. The term "Initial Election" means one or more written elections provided by the Administrator and filed with the Administrator in accordance with Article 3 pursuant to which an Eligible Employee may:

(i) Subject to the limitations described in Section 2.37(b)(iii), elect to defer Compensation payable for the performance of services as an Eligible Employee following the time that such election is filed; and

(ii) Designate the time of payment of the amount of deferred Compensation to which the Initial Election relates.

(iii) The following rules shall apply to Initial Elections:

(A) Subject to the limits on deferrals of Compensation described in Section 2.37(b)(iii)(B) and Section 2.37(b)(iii)(C):

(1) the maximum amount of base salary available for deferral shall be determined net of required withholdings and deductions as determined by the Administrator in its sole discretion, but shall in no event be less than 85% of the Participant's base salary and

(2) the maximum amount of a Signing Bonus available for deferral pursuant to an Initial Election shall not exceed 50%.

(B) The maximum amount subject to Initial Elections for any Plan Year shall not exceed 35% of Total Compensation.

(C) No Initial Election with respect to Compensation expected to be earned in a Plan Year shall be effective if the sum of (x) the value of the Eligible Employee's Account in the Plan, plus (y) the value of the Eligible Employee's Account in the Prior Plan, plus (z) the value of the Eligible Employee's Account in the Restricted Stock Plan to the extent such Account is credited to the "Income Fund" thereunder, exceeds the Contribution Limit with respect to such Plan Year, determined as of September 30th immediately preceding such Plan Year.

2.38. [RESERVED]

2.39. "NBCUniversal" means NBCUniversal, LLC and its subsidiaries.

2.40. "New Key Employee" means:

(a) Employees of Comcast.

(i) Effective for the period extending from January 1, 2014 through December 31, 2018, and except as provided in Section 2.37(d), each employee of a Participating Company other than NBCUniversal and Comcast Spectacor:

(A) who (x) becomes an employee of a Participating Company and (y) has an Annual Rate of Pay of $250,000 or more as of his employment commencement date, or

(B) who (x) has an Annual Rate of Pay that is increased to $250,000 or more and (y) immediately preceding such increase, was not an Eligible Employee.

(ii) Effective on and after January 1, 2019, and except as provided in Section 2.40(d), each employee of a Participating Company other than NBCUniversal and Comcast Spectacor:

(A) who (x) becomes an employee of a Participating Company and (y) has an Annual Rate of Pay of $350,000 or more as of his employment commencement date, or

(B) who (x) has an Annual Rate of Pay that is increased to $350,000 or more and (y) immediately preceding such increase, was not an Eligible Employee.

(b) Employees of NBCUniversal.

(i) Effective for the period extending from January 1, 2013 through December 31, 2018, and except as provided in Section 2.39(d), each employee of NBCUniversal who (x) first becomes a member of the NBCUniversal Executive Committee, Management Committee or Operating Committee, and approved by the Administrator during a Plan Year and (y) immediately preceding the effective date of such membership, was not an Eligible Employee.

(ii) Effective on and after January 1, 2019, and except as provided in Section 2.39(d), each employee of NBCUniversal who (x) first becomes a member of the NBCUniversal Executive Committee or the NBCUniversal Management Committee and approved by the Administrator during a Plan Year and (y) immediately preceding the effective date of such membership, was not an Eligible Employee.

(c) Effective on and after May 20, 2014, and except as provided in Section 2.40(d), each employee of Comcast Spectacor:

(i) who (x) becomes an employee of Comcast Spectacor, (y) has an Annual Rate of Pay of $350,000 or more as of his employment commencement date and (z) is designated as an Eligible Comcast Spectacor Employee by the Administrator or its delegate, or

(ii) who (x) is designated as an Eligible Comcast Spectacor Employee by the Administrator or its delegate, (y) has an Annual Rate of Pay that is increased to $350,000 or more and (z) immediately preceding such increase, was not an Eligible Employee.

(d) Notwithstanding Section 2.40(a), (b), or (c) to the contrary, no employee shall be treated as a New Key Employee with respect to any Plan Year under this Section 2.40 if:

(i) Such employee was eligible to participate in another plan sponsored by the Company or an Affiliate of the Company which is considered to be of a similar type as defined in Treasury Regulation Section 1.409A-1(c)(2)(i)(A) or (B) with respect to such Plan Year; or

(ii) Such employee has been eligible to participate in the Plan or any other plan referenced in Section 2.40(d)(i) (other than with respect to the accrual of earnings) at any time during the 24-month period ending on the date such employee would, but for this Section 2.40(d), otherwise become a New Key Employee.

2.41. "Normal Retirement" means:

(a) For a Participant who is an employee of a Participating Company immediately preceding his termination of employment, a termination of employment that is treated by the Participating Company as a retirement under its employment policies and practices as in effect from time to time; and

(b) For a Participant who is an Outside Director or Director Emeritus immediately preceding his termination of service, the Participant's normal retirement from the Board.

2.42. "Other Investment Fund" means the Company Stock Fund and such other hypothetical investment funds designated by the Administrator, pursuant to which income, gains, and losses are credited to a Participant's Account as if the Account, to the extent deemed invested in such Other Investment Fund, were credited with income, gains, and losses as if actually invested in such Other Investment Fund. Unless otherwise specified by the Administrator, the Participant shall designate the Other Investment Funds in which the Participant's Account shall be invested in accordance with rules established by the Administrator.

2.43. "Outside Director" means a member of the Board who is not an Eligible Employee of a Participating Company.

2.44. "Participant" means each individual who has made an Initial Election, or for whom an Account is established pursuant to Section 5.1, and who has an undistributed amount credited to an Account under the Plan, including an Active Participant, a Deceased Participant, a Retired Participant, a Disabled Participant, and an Inactive Participant.

2.45. "Participating Company" means the Company and each Affiliate of the Company in which the Company owns, directly or indirectly, 50 percent or more of the voting interests or value, other than such an affiliate designated by the Administrator as an excluded Affiliate. Notwithstanding the foregoing, the Administrator may delegate its authority to designate an eligible Affiliate as an excluded Affiliate under this Section 2.45 to an officer of the Company or committee of two or more officers of the Company.

2.46. "Performance-Based Compensation" means "Performance-Based Compensation" within the meaning of Section 409A.

2.47. "Performance Period" means a period of at least 12 months during which a Participant may earn Performance-Based Compensation. Effective for Comcast Spectacor's fiscal years beginning on and after July 1, 2014, the Performance Period for annual incentive bonuses earned by Eligible Comcast Spectacor Employees shall be Comcast Spectacor's fiscal year ending June 30.

2.48. "Person" means an individual, a corporation, a partnership, an association, a trust or any other entity or organization.

2.49. "Plan" means the Comcast Corporation 2005 Deferred Compensation Plan, as set forth herein, and as amended from time to time.

2.50. "Plan Year" means the calendar year.

2.51. "Prime Rate" means, for any calendar year, the interest rate that, when compounded daily pursuant to rules established by the Administrator from time to time, is mathematically equivalent to the prime rate of interest (compounded annually) as published in the Eastern Edition of The Wall Street Journal on the last business day preceding the first day of such calendar year, and as adjusted as of the last business day preceding the first day of each calendar year beginning thereafter.

2.52. "Prior Plan" means the Comcast Corporation 2002 Deferred Compensation Plan.

2.53. "Protected Account Balance" means:

(a) The amount credited to the Account of an Eligible Comcast Employee, an Outside Director or a Director Emeritus pursuant to Initial Elections and Subsequent Elections with respect to Compensation earned before January 1, 2014 or pursuant to Company Credits described in Section 3.8 that are credited before January 1, 2014, including interest credits attributable to such amount.

(b) The portion of an Eligible Comcast Employee's Account attributable to Company Credits described in Section 3.8 that are made pursuant to an employment agreement entered into on or before December 31, 2013, including interest credits attributable to such amount.

(c) The amount credited pursuant to Initial Elections with respect to Compensation earned in 2014 or 2015, if, as of the September 30th immediately preceding the Plan Year to which the Initial Election applies, the sum of:

(i) An Eligible Comcast Employee's Account; plus

(ii) Such Eligible Comcast Employee's Account in the Prior Plan; plus

(iii) Such Eligible Comcast Employee's Account in the Restricted Stock Plan to the extent such Account is credited to the "Income Fund;"

is less than the High-Water Mark.

(d) The amount credited pursuant to Initial Elections with respect to Compensation earned on and after January 1, 2016 and the amount credited to an Eligible Comcast Employee's Account attributable to Company Credits described in Section 3.8 after May 20, 2015 (other than Company Credits described in Section 2.53(b)), if, as of the September 30th immediately preceding the Plan Year in which such amounts are creditable, the sum of:

(i) An Eligible Comcast Employee's Account; plus

(ii) Such Eligible Comcast Employee's Account in the Prior Plan; plus

(iii) Such Eligible Comcast Employee's Account in the Restricted Stock Plan to the extent such Account is credited to the "Income Fund;"
is less than the High-Water Mark.

(e) The amount credited pursuant to Subsequent Elections filed after December 31, 2013 that are attributable to any portion of an Eligible Comcast Employee's Account described in this Section 2.53.

Notwithstanding Sections 2.53(a), (b), (c), (d) and (e), except as otherwise provided by the Administrator, the Protected Account Balance of an Eligible Comcast Employee who is re-employed by a Participating Company following an employment termination date that occurs after December 31, 2013 shall be zero.

2.54. "Restricted Stock Plan" means the Comcast Corporation 2002 Restricted Stock Plan (or any successor plan).

2.55. "Retired Participant" means a Participant who has terminated service pursuant to a Normal Retirement.

2.56. "Section 16 Officer" means an "officer" of the Company, as defined pursuant to Rule 16a-1(f) under the Securities Exchange Act of 1934, as amended.

2.57. "Severance Pay" means any amount that is payable in cash and is identified by a Participating Company as severance pay, or any amount which is payable on account of periods beginning after the last date on which an employee (or former employee) is required to report for work for a Participating Company.

2.58. "Signing Bonus" means Compensation payable in cash and designated by the Administrator as a special bonus intended to induce an individual to accept initial employment (or re-employment) by a Participating Company or to execute an employment agreement, or an amount payable in connection with a promotion.

2.59. "Subsequent Election" means one or more written elections on a form provided by the Administrator, filed with the Administrator in accordance with Article 3, pursuant to which a Participant or Beneficiary may elect to defer the time of payment of amounts previously deferred in accordance with the terms of a previously made Initial Election or Subsequent Election.

2.60. “Surviving Spouse” means the widow or widower, as the case may be, of a Deceased Participant or a Deceased Beneficiary (as applicable).

2.61. “Third Party” means any Person, together with such Person’s Affiliates, provided that the term “Third Party” shall not include the Company or an Affiliate of the Company.

2.62. “Total Compensation” means:

(a) The sum of an Eligible Employee’s Annual Rate of Pay, plus Company Credits described in Section 3.8, plus any target bonus amount under a cash bonus award that is includible as “Compensation” under Section 2.16, plus the grant date value of any annual long-term incentive award granted in the immediately preceding Plan Year, all as determined by the Administrator in its sole discretion, as of the September 30th immediately preceding the Plan Year.

(b) For the purpose of determining Total Compensation under the Plan, the Administrator, in its sole discretion, may determine the applicable value of an Eligible Employee’s annual long-term incentive award in appropriate circumstances, such as where the Eligible Employee’s actual annual long-term incentive award (if any) reflects a new hire’s short period of service, or other similar circumstances.

ARTICLE 3 - INITIAL AND SUBSEQUENT ELECTIONS

3.1. Elections.

(a) Initial Elections. Subject to any applicable limitations or restrictions on Initial Elections, each Outside Director, Director Emeritus and Eligible Employee shall have the right to defer Compensation by filing an Initial Election with respect to Compensation that he would otherwise be entitled to receive for a calendar year or other Performance Period at the time and in the manner described in this Article 3. Notwithstanding the foregoing, an individual who is expected to become a New Key Employee on a specific date shall be treated as an “Eligible Employee” for purposes of this Section 3.1(a) and may file an Initial Election before the date on which such individual becomes a New Key Employee. The Compensation of such Outside Director, Director Emeritus or Eligible Employee for a calendar year or other Performance Period shall be reduced in an amount equal to the portion of the Compensation deferred by such Outside Director, Director Emeritus or Eligible Employee for such period of time pursuant to such Outside Director’s, Director Emeritus’s or Eligible Employee’s Initial Election. Such reduction shall be effected on a pro rata basis from each periodic installment payment of such Outside Director’s, Director Emeritus’s or Eligible Employee’s Compensation for such period of time (in accordance with the general pay practices of the Participating Company), and credited, as a bookkeeping entry, to such Outside Director’s, Director Emeritus’s or Eligible Employee’s Account in accordance with Section 5.1. Amounts credited to the Accounts of Outside Directors in the form of Company Stock shall be credited to the Company Stock Fund and credited with income, gains and losses in accordance with Section 5.2(c).

(b) Subsequent Elections. Each Participant or Beneficiary shall have the right to elect to defer the time of payment or to change the manner of payment of amounts previously deferred in accordance with the terms of a previously made Initial Election pursuant to the terms of the Plan by filing a Subsequent Election at the time, to the extent, and in the manner described in this Article 3.

3.2. Filing of Initial Election: General. An Initial Election shall be made on the form provided by the Administrator for this purpose. Except as provided in Section 3.3:

(a) No such Initial Election shall be effective with respect to Compensation other than Signing Bonuses or Performance-Based Compensation unless it is filed with the Administrator on or before December 31 of the calendar year preceding the calendar year to which the Initial Election applies.

(b) No such Initial Election shall be effective with respect to Performance-Based Compensation unless it is filed with the Administrator at least six months before the end of the Performance Period during which such Performance-Based Compensation may be earned.

(c) No such Initial Election shall be effective with respect to a Signing Bonus for an Eligible Employee other than a New Key Employee unless (i) such Signing Bonus is forfeitable if the Participant fails to continue in service to a specified date (other than as the result of the Participant's termination of employment because of death, Disability or Company-initiated termination without cause, as determined by the Administrator), and (ii) the Initial Election is filed with the Administrator on or before the 30th day following the date of grant of such Signing Bonus and at least one year before such specified date.

3.3. Filing of Initial Election by New Key Employees and New Outside Directors.

(a) New Key Employees. Notwithstanding Section 3.1 and Section 3.2, a New Key Employee may file an Initial Election:

(i) To defer Compensation payable for services to be performed after the date of such Initial Election. An Initial Election to defer Compensation payable for services to be performed after the date of such Initial Election must be filed with the Administrator within 30 days of the date such New Key Employee first becomes eligible to participate in the Plan.

(ii) To defer Compensation payable as a Signing Bonus. An Initial Election to defer Compensation payable as a Signing Bonus must be filed with the Administrator before such New Key Employee commences service as an Eligible Employee.

An Initial Election by such New Key Employee for succeeding calendar years or applicable Performance Periods shall be made in accordance with Section 3.1 and Section 3.2.

(b) New Outside Directors. Notwithstanding Section 3.1 and Section 3.2, an Outside Director may elect to defer Compensation by filing an Initial Election with respect to his Compensation attributable to services provided as an Outside Director in the calendar year in which an Outside Director's election as a member of the Board becomes effective (provided that such Outside Director is not a member of the Board immediately preceding such effective date), beginning with Compensation earned following the filing of an Initial Election with the Administrator and before the close of such calendar year. Such Initial Election must be filed with the Administrator within 30 days of the effective date of such Outside Director's election. Any Initial Election by such Outside Director for succeeding calendar years shall be made in accordance with Section 3.1 and Section 3.2

3.4. Years to which Initial Election May Apply.

(a) Separate Initial Elections for Each Calendar Year or Applicable Performance Period. A separate Initial Election may be made for each calendar year or other applicable Performance Period as to which an Outside Director, Director Emeritus or Eligible Employee desires to defer such Outside Director's, Director Emeritus's or Eligible Employee's Compensation. The failure of an Outside Director, Director Emeritus or Eligible Employee to make an Initial Election for any calendar year or other applicable Performance Period shall not affect such Outside Director's or Eligible Employee's right to make an Initial Election for any other calendar year or other applicable Performance Period.

(b) Initial Election of Distribution Date. Each Outside Director, Director Emeritus or Eligible Employee shall, contemporaneously with an Initial Election, also elect the time of payment of the amount of the deferred Compensation to which such Initial Election relates; provided, however, that, except as otherwise specifically provided by the Plan, no distribution may commence earlier than January 2nd of the second calendar year beginning after the date the compensation subject to the Initial Election would be paid but for the Initial Election, nor later than January 2nd of the tenth calendar year beginning after the date the compensation subject to the Initial Election would be paid but for the Initial Election. Further, each Outside Director, Director Emeritus or Eligible Employee may select with each Initial Election the manner of distribution in accordance with Article 4.

3.5. Subsequent Elections. No Subsequent Election shall be effective until 12 months after the date on which such Subsequent Election is made.

(a) Active Participants, Outside Directors, and Section 16 Officers. Each Active Participant, and each Participant designated by the Administrator who has served as an Outside Director or Section 16 Officer at any time on or after January 1, 2020 (whether or not such individual is an Active Participant), who has made an Initial Election, or who has made a Subsequent Election, may elect to defer the time of payment of any part or all of such Participant's Account for a minimum of five and a maximum of ten additional years from the previously-elected payment date, by filing a Subsequent Election with the Administrator at least 12 months before the lump-sum distribution or initial installment payment would otherwise be made. The number of Subsequent Elections under this Section 3.5(a) shall not be limited. The Administrator may designate the specific Other Investment Fund or Funds to which the Account of any individual who has terminated service to the Company shall be deemed invested.

(b) Inactive Participants. Except as otherwise provided in Section 3.5(a), the Committee may, in its sole and absolute discretion, permit an Inactive Participant to make a Subsequent Election defer the time of payment of any part or all of such Inactive Participant's Account for a minimum of five years and a maximum of ten additional years from the previously-elected payment date, by filing a Subsequent Election with the Administrator at least 12 months before the lump-sum distribution or initial installment payment would otherwise be made. The number of Subsequent Elections under this Section 3.5(b) shall be determined by the Committee in its sole and absolute discretion.

(c) Surviving Spouses - Subsequent Election. A Surviving Spouse who is a Deceased Participant's Beneficiary may elect to defer the time of payment of any part or all of such Deceased Participant's Account the payment of which would be made more than 12 months after the date of such election. Such election shall be made by filing a Subsequent Election with the Administrator in which the Surviving Spouse shall specify the change in the time of payment, which shall be no less than five (5) years nor more than ten (10) years from the previously-elected payment date, or such Surviving Spouse may elect to defer payment until such Surviving Spouse's death. A Surviving Spouse may make a total of two (2) Subsequent Elections under this Section 3.5(c), with respect to all or any part of the Deceased Participant's Account. Subsequent Elections pursuant to this Section 3.5(c) may specify different changes with respect to different parts of the Deceased Participant's Account.

(d) Beneficiary of a Deceased Participant Other Than a Surviving Spouse - Subsequent Election. A Beneficiary of a Deceased Participant other than a Surviving Spouse may elect to defer the time of payment, of any part or all of such Deceased Participant's Account the payment of which would be made more than 12 months after the date of such election. Such election shall be made by filing a Subsequent Election with the Administrator in which the Beneficiary shall specify the deferral of the time of payment, which shall be no less than five (5) years nor more than ten (10) years from the previously-elected payment date. A Beneficiary may make one (1) Subsequent Election under this Section 3.5(d), with respect to all or any part of the Deceased Participant's Account. Subsequent Elections pursuant to this Section 3.5(d) may specify different changes with respect to different parts of the Deceased Participant's Account.

(e) Retired Participants and Disabled Participants. The Committee may, in its sole and absolute discretion, permit a Retired Participant or a Disabled Participant to make a Subsequent Election to defer the time of payment of any part or all of such Retired or Disabled Participant's Account that would not otherwise become payable within twelve (12) months of such Subsequent Election for a minimum of five (5) years and a maximum of ten (10) additional years from the previously-elected payment date, by filing a Subsequent Election with the Administrator on or before the close of business on the date that is at least twelve (12) months before the date on which the lump-sum distribution or initial installment payment would otherwise be made. The number of Subsequent Elections under this Section 3.5(f) shall be determined by the Committee in its sole and absolute discretion.

(f) Most Recently Filed Initial Election or Subsequent Election Controlling. Except as otherwise specifically provided by the Plan, no distribution of the amounts deferred by a Participant shall be made before the payment date designated by the Participant or Beneficiary on the most recently filed Initial Election or Subsequent Election with respect to each deferred amount.

3.6. Discretion to Provide for Distribution in Full Upon or Following a Change of Control. To the extent permitted by Section 409A, in connection with a Change of Control, and for the 12-month period following a Change of Control, the Committee may exercise its discretion to terminate the Plan and, notwithstanding any other provision of the Plan or the terms of any Initial Election or Subsequent Election, distribute the Account balance of each Participant in full and thereby effect the revocation of any outstanding Initial Elections or Subsequent Elections.

3.7. Withholding and Payment of Death Taxes.

(a) Notwithstanding any other provisions of this Plan to the contrary, including but not limited to the provisions of Article 3 and Article 7, or any Initial or Subsequent Election filed by a Deceased Participant or a Deceased Participant's Beneficiary (for purposes of this Section, the "Decedent"), and to the extent permitted by Section 409A, the Administrator shall apply the terms of Section 3.7(b) to the Decedent's Account unless the Decedent affirmatively has elected, in writing, filed with the Administrator, to waive the application of Section 3.7(b).

(b) Unless the Decedent affirmatively has elected, pursuant to Section 3.7(a), that the terms of this Section 3.7(b) not apply, but only to the extent permitted under Section 409A:

(i) The Administrator shall prohibit the Decedent's Beneficiary from taking any action under any of the provisions of the Plan with regard to the Decedent's Account other than the Beneficiary's making of a Subsequent Election pursuant to Section 3.5;

(ii) The Administrator shall defer payment of the Decedent's Account until the later of the Death Tax Clearance Date and the payment date designated in the Decedent's Initial Election or Subsequent Election;

(iii) The Administrator shall withdraw from the Decedent's Account such amount or amounts as the Decedent's Personal Representative shall certify to the Administrator as being necessary to pay the Death Taxes apportioned against the Decedent's Account; the Administrator shall remit the amounts so withdrawn to the Personal Representative, who shall apply the same to the payment of the Decedent's Death Taxes, or the Administrator may pay such amounts directly to any taxing authority as payment on account of Decedent's Death Taxes, as the Administrator elects;

(iv) If the Administrator makes a withdrawal from the Decedent's Account to pay the Decedent's Death Taxes and such withdrawal causes the recognition of income to the Beneficiary, the Administrator shall pay to the Beneficiary from the Decedent's Account, within thirty (30) days of the Beneficiary's request, the amount necessary to enable the Beneficiary to pay the Beneficiary's income tax liability resulting from such recognition of income; additionally, the Administrator shall pay to the Beneficiary from the Decedent's Account, within thirty (30) days of the Beneficiary's request, such additional amounts as are required to enable the Beneficiary to pay the Beneficiary's income tax liability attributable to the Beneficiary's recognition of income resulting from a distribution from the Decedent's Account pursuant to this Section 3.7(b)(iv);

(v) Amounts withdrawn from the Decedent's Account by the Administrator pursuant to Sections 3.7(b)(iii) and 3.7(b)(iv) shall be withdrawn from the portions of Decedent's Account having the earliest distribution dates as specified in Decedent's Initial Election or Subsequent Election; and

(vi) Within 30 days after the Death Tax Clearance Date or upon the payment date designated in the Decedent's Initial Election or Subsequent Election, if later, the Administrator shall pay the Decedent's Account to the Beneficiary.

3.8. Company Credits. In addition to the amounts credited to Participants' Accounts pursuant to Initial Elections with respect to Compensation, the Committee may provide for additional amounts to be credited to the Accounts of one or more designated Eligible Employees ("Company Credits") for any year. A Participant whose Account is designated to receive Company Credits may not elect to receive any portion of the Company Credits as additional Compensation in lieu of deferral as provided by this Section 3.8. The total amount of Company Credits designated with respect to an Eligible Employee's Account for any Plan Year shall be credited to such Eligible Employee's Account as of the time or times designated by the Administrator, as a bookkeeping entry to such Eligible Employee's Account in accordance with Section 5.1. From and after the date Company Credits are allocated as designated by the Administrator, Company Credits shall be credited to the Income Fund. Company Credits and income, gains and losses credited with respect to Company Credits shall be distributable to the Participant on the same basis as if the Participant had made an Initial Election to receive a lump sum distribution of such amount on January 2nd of the third calendar year beginning after the later of Plan Year with respect to which the Company Credits were authorized or the Plan Year in which such Company Credits are free of a substantial risk of forfeiture, unless the Participant timely designates a later time and form of payment that is a permissible time and form of payment for amounts subject to an Initial Election under Section 3.4(b) and Section 4.1. In addition, the Participant may make one or more Subsequent Elections with respect to such Company Credits (and income, gains and losses credited with respect to Company Credits) on the same basis as all other amounts credited to such Participant's Account.

3.9. Separation from Service.

(a) Required Suspension of Payment of Benefits. To the extent compliance with the requirements of Treas. Reg. § 1.409A-3(i)(2) (or any successor provision) is necessary to avoid the application of an additional tax under Section 409A to payments due to a Participant upon or following his separation from service, then notwithstanding any other provision of this Plan, any such payments that are otherwise due within six months following the Participant's separation from service will be deferred and paid to the Participant in a lump sum immediately following that six-month period.

(b) Termination of Employment. For purposes of the Plan, a transfer of an employee between two employers, each of which is the Company or an Affiliate, shall not be deemed a termination of employment. A Participant who is an Outside Director shall be treated as having terminated employment on the Participant's termination of service as an Outside Director, provided that if such a Participant is designated as a Director Emeritus upon termination of service as an Outside Director, such Participant shall not be treated as having terminated employment until the Participant's termination of service as a Director Emeritus.

ARTICLE 4 - MANNER OF DISTRIBUTION

4.1. Manner of Distribution.

(a) Amounts credited to an Account shall be distributed, pursuant to an Initial Election or Subsequent Election in either (i) a lump sum payment or (ii) substantially equal monthly or annual installments over a five (5), ten (10) or fifteen (15) year period. Installment distributions payable in the form of shares of Company Stock shall be rounded to the next lower whole share. Except for amounts described in Section 5.2(c), all distributions shall be made in cash.

(b) To the extent permitted by Section 409A, notwithstanding any Initial Election, Subsequent Election or any other provision of the Plan to the contrary:

(i) distributions pursuant to Initial Elections or Subsequent Elections shall be made in one lump sum payment unless the portion of a Participant's Account subject to distribution, as of both the date of the Initial Election or Subsequent Election and the benefit commencement date, has a value of more than $10,000;

(ii) following a Participant's termination of employment for any reason, if the amount credited to the Participant's Account has a value of $10,000 or less, the Administrator may, in its sole discretion, direct that such amount be distributed to the Participant (or Beneficiary, as applicable) in one lump sum payment, provided that the payment is made on or before the later of (i) December 31 of the calendar year in which the Participant terminates employment or (ii) the date two and one-half months after the Participant terminates employment.

4.2. Determination of Account Balances for Purposes of Distribution. The amount of any distribution made pursuant to Section 4.1 shall be based on the balances in the Participant's Account on the date the recordkeeper appointed by the Administrator transmits the distribution request for a Participant to the Administrator for payment and processing, provided that payment with respect to such distribution shall be made as soon as reasonably practicable following the date the distribution request is transmitted to the Administrator. For this purpose, the balance in a Participant's Account shall be calculated by crediting income, gains and losses under the Other Investment Fund and Income Fund, as applicable, through the date immediately preceding the date on which the distribution request is transmitted from the recordkeeper.

4.3. Plan-to-Plan Transfers; Change in Time and Form of Election Pursuant to Special Section 409A Transition Rules. The Administrator may delegate its authority to arrange for plan-to-plan transfers or to permit benefit elections as described in this Section 4.3 to an officer of the Company or committee of two or more officers of the Company.

(a) The Administrator may, with a Participant's consent, make such arrangements as it may deem appropriate to transfer the Company's obligation to pay benefits with respect to such Participant which have not become payable under this Plan, to another employer, whether through a deferred compensation plan, program or arrangement sponsored by such other employer or otherwise, or to another deferred compensation plan, program or arrangement sponsored by the Company or an Affiliate. Following the completion of such transfer, with respect to the benefit transferred, the Participant shall have no further right to payment under this Plan.

(b) The Administrator may, with a Participant's consent, make such arrangements as it may deem appropriate to assume another employer's obligation to pay benefits with respect to such Participant which have not become payable under the deferred compensation plan, program or arrangement under which such future right to payment arose, to the Plan, or to assume a future payment obligation of the Company or an Affiliate under another plan, program or arrangement sponsored by the Company or an Affiliate. Upon the completion of the Plan's assumption of such payment obligation, the Administrator shall establish an Account for such Participant, and the Account shall be subject to the rules of this Plan, as in effect from time to time.

ARTICLE 5 - BOOK ACCOUNTS

5.1. Deferred Compensation Account. A Deferred Compensation Account shall be established for each Outside Director, Director Emeritus and Eligible Employee when such Outside Director, Director Emeritus or Eligible Employee becomes a Participant. Compensation deferred pursuant to the Plan shall be credited to the Account on the date such Compensation would otherwise have been payable to the Participant.

5.2. Crediting of Income, Gains, and Losses on Accounts.

(a) In General. Except for amounts credited to the Accounts of Participants who are:

(i) Outside Directors who have elected to defer the receipt of Compensation payable in the form of Company Stock,

(ii) Participants subject to the Income Fund Limit;

(iii) Section 16 Officers who, pursuant to rules established by the Administrator or its delegate, have elected to transfer amounts credited to their Accounts that are deemed to be invested in the Income Fund to an Other Investment Fund; and

(iv) Outside Directors and Section 16 Officers, with respect to amounts subject to Subsequent Elections permitted to be made after their termination of service;

all amounts credited to Participants' Accounts shall be credited with income, gains and losses as if they were invested in the Income Fund.

(b) Crediting of Income, Gains, and Losses on Accounts Subject to Investment Restrictions.

(i) Credits to Other Investment Funds.

(A) Post-Termination Elections. The Accounts of Outside Directors and Section 16 Officers whose Subsequent Elections are made after their termination of service in accordance with Section 3.5(a) shall be credited to an Other Investment Fund.

(B) Participants Whose Income Fund Exceeds the Income Fund Limit.

(1) Subsequent Election. Amounts subject to a Subsequent Election that takes effect while a Participant's Income Fund exceeds the Income Fund Limit shall be deemed invested in an Other Investment Fund.

(2) Year-End Adjustments. If a Participant's Income Fund exceeds the Income Fund Limit as of the last day of each Plan Year, the excess of (x) the amount credited to the Participant's Income Fund *over* (y) the Income Fund Limit shall be transferred to an Other Investment Fund.

(C) Section 16 Officers. Pursuant to rules established by the Administrator or its delegate, a Section 16 Officer may elect to (x) transfer amounts credited to their Account that are deemed to be invested in the Income Fund to an Other Investment Fund, or (y) transfer amounts credited to their Account that are deemed to be invested in an Other Investment Fund to the Income Fund to the extent that immediately after such transfer, the amount credited to such Section 16 Officer's Income Fund does not exceed the Income Fund Limit.

(ii) Protocol for Deemed Transfers between Income Fund and an Other Investment Fund. As provided in Article III, the timing of distributions of amounts credited to a Participant's Account is established pursuant to Initial Elections and Subsequent Elections, and a Participant may elect various distribution dates for amounts subject to Initial Elections and Subsequent Elections. Amounts deemed transferred from the Income Fund to Other Investment Funds as a result of the application of the Income Fund Limit or pursuant to elective transfers described in Section 5.2(b)(i)(C), and amounts deemed transferred from an Other Investment Fund to the Income Fund pursuant to elective transfers described in Section 5.2(b)(i)(C) shall be sourced and allocated on a uniform and consistent basis as determined by the Administrator, provided that amounts transferred among Funds, and any income, gains, or losses credited with respect to such transferred amounts, shall continue to be subject to the distribution timing and manner of distribution election to which such amounts were subject immediately before the deemed transfer, and provided further than no amounts shall be deemed transferred to or from the Income Fund under the Prior Plan.

(c) Stock Fund Credits. Amounts credited to the Accounts of Outside Directors and High Balance Participants in the form of Company Stock shall be credited with income, gains, and losses as if they were invested in the Company Stock Fund. Except as otherwise provided with respect to Section 16 Officers pursuant to Section 5.2(b)(i)(C) or by the Administrator with respect to Participants who are not Section 16 Officers, no portion of such Participant's Account may be deemed transferred from the Company Stock Fund to the Income Fund or to an Other Investment Fund. Amounts credited in the form of Company Stock at the time of distribution to the Accounts of (i) Outside Directors and (ii)

Participants under circumstances described in Section 5.2(a)(iv) shall be distributed in the form of Company Stock, rounded to the nearest lower whole share.

(d) Timing of Credits. Except as otherwise provided in this Section 5.2, Compensation deferred pursuant to the Plan shall be deemed invested in the Income Fund on the date such Compensation would otherwise have been payable to the Participant, provided that if (i) Compensation would otherwise have been payable to a Participant on a Company payroll date that falls within five days of the end of a calendar month, and (ii) based on the Administrator's regular administrative practices, it is not administratively practicable for the Administrator to transmit the deferred amount of such Compensation to the Plan's recordkeeper on or before the last day of the month, such deferred amount shall not be deemed invested in the Income Fund until the first day of the calendar month next following such Company payroll date. Accumulated Account balances subject to an investment fund election under Section 5.2(b) shall be deemed invested in the applicable investment fund as of the effective date of such election. The value of amounts deemed invested in an Other Investment Fund shall be based on hypothetical purchases and sales of such Other Investment Fund at Fair Market Value as of the effective date of the applicable investment election.

5.3. Status of Deferred Amounts. Regardless of whether or not the Company is a Participant's employer, all Compensation deferred under this Plan shall continue for all purposes to be a part of the general funds of the Company.

5.4. Participants' Status as General Creditors. Regardless of whether or not the Company is a Participant's employer, an Account shall at all times represent a general obligation of the Company. The Participant shall be a general creditor of the Company with respect to this obligation, and shall not have a secured or preferred position with respect to the Participant's Accounts. Nothing contained herein shall be deemed to create an escrow, trust, custodial account or fiduciary relationship of any kind. Nothing contained herein shall be construed to eliminate any priority or preferred position of a Participant in a bankruptcy matter with respect to claims for wages.

ARTICLE 6 - NO ALIENATION OF BENEFITS; PAYEE DESIGNATION

6.1. Non-Alienation. Except as otherwise required by applicable law, or as provided by Section 6.2, the right of any Participant or Beneficiary to any benefit or interest under any of the provisions of this Plan shall not be subject to encumbrance, attachment, execution, garnishment, assignment, pledge, alienation, sale, transfer, or anticipation, either by the voluntary or involuntary act of any Participant or any Participant's Beneficiary or by operation of law, nor shall such payment, right, or interest be subject to any other legal or equitable process.

6.2. Domestic Relations Orders. Notwithstanding any other provision of the Plan or the terms of any Initial Election or Subsequent Election, the Plan shall honor the terms of a Domestic Relations Order if the Administrator determines that it satisfies the requirements of the Plan's policies relating to Domestic Relations Orders as in effect from time to time, provided that a Domestic Relations Order shall not be honored unless (i) it provides for payment of all or a portion of a Participant's Account under the Plan to the Participant's spouse or former spouse and (ii) it provides for such payment in the form of a single cash lump sum that is payable as soon as administratively practicable following the determination that the Domestic Relations Order meets the conditions for approval.

6.3. Payee Designation. Subject to the terms and conditions of the Plan, a Participant or Beneficiary may direct that any amount payable pursuant to an Initial Election or a Subsequent Election on any date designated for payment be paid to any person or persons or legal entity or entities, including, but not limited to, an organization exempt from federal income tax under section 501(c)(3) of the Code, instead of to the Participant or Beneficiary. Such a payee designation shall be provided to the Administrator by the Participant or Beneficiary in writing on a form provided by the Administrator, and shall not be effective unless it is provided immediately preceding the time of payment. The Company's payment pursuant to such a payee designation shall relieve the Company and its Affiliates of all liability for such payment.

ARTICLE 7 - DEATH OF PARTICIPANT

7.1. Death of Participant. Except as otherwise provided in Section 3.5, a Deceased Participant's Account shall be distributed in accordance with the last Initial Election or Subsequent Election made by the Deceased Participant before the Deceased Participant's death.

7.2. Designation of Beneficiaries. Each Participant (and Beneficiary) shall have the right to designate one or more Beneficiaries to receive distributions in the event of the Participant's (or Beneficiary's) death by filing with the Administrator a Beneficiary designation on a form that may be prescribed by the Administrator for such purpose from time to time. The designation of a Beneficiary or Beneficiaries may be changed by a Participant (or Beneficiary) at any time prior to such Participant's (or Beneficiary's) death by the delivery to the Administrator of a new Beneficiary designation form. The Administrator may require that only the Beneficiary or Beneficiaries identified on the Beneficiary designation form prescribed by the Administrator be recognized as a Participant's (or Beneficiary's) Beneficiary or Beneficiaries under the Plan, and that absent the completion of the currently prescribed Beneficiary designation form, the Participants (or Beneficiary's) Beneficiary designation shall be the Participant's (or Beneficiary's) estate.

ARTICLE 8 - HARDSHIP AND OTHER ACCELERATION EVENTS

8.1. Hardship. Notwithstanding the terms of an Initial Election or Subsequent Election, if, at the Participant's request, the Committee determines that the Participant has incurred a Hardship, the Board may, in its discretion, authorize the immediate distribution of all or any portion of the Participant's Account.

8.2. Other Acceleration Events. To the extent permitted by Section 409A, notwithstanding the terms of an Initial Election or Subsequent Election, distribution of all or part of a Participant's Account may be made:

(a) To fulfill a domestic relations order (as defined in section 414(p)(1)(B) of the Code) to the extent permitted by Treasury Regulations section 1.409A-3(j)(4)(ii) or any successor provision of law).

(b) To the extent necessary to comply with laws relating to avoidance of conflicts of interest, as provided in Treasury Regulation section 1.409A-3(j)(4)(iii) (or any successor provision of law).

(c) To pay employment taxes to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(vi) (or any successor provision of law).

(d) In connection with the recognition of income as the result of a failure to comply with Section 409A, to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(vii) (or any successor provision of law).

(e) To pay state, local or foreign taxes to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(xi) (or any successor provision of law).

(f) In satisfaction of a debt of a Participant to a Participating Company where such debt is incurred in the ordinary course of the service relationship between the Participant and the Participating Company, to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(xiii) (or any successor provision of law).

(g) In connection with a bona fide dispute as to a Participant's right to payment, to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(xiv) (or any successor provision of law).

ARTICLE 9 - INTERPRETATION

9.1. Authority of Committee. The Committee shall have full and exclusive authority to construe, interpret and administer this Plan and the Committee's construction and interpretation thereof shall be binding and conclusive on all persons for all purposes.

9.2. Claims Procedure. If an individual (hereinafter referred to as the "Applicant," which reference shall include the legal representative, if any, of the individual) does not receive timely payment of benefits to which the Applicant believes he is entitled under the Plan, the Applicant may make a claim for benefits in the manner hereinafter provided.

An Applicant may file a claim for benefits with the Administrator on a form supplied by the Administrator. If the Administrator wholly or partially denies a claim, the Administrator shall provide the Applicant with a written notice stating:

(a) The specific reason or reasons for the denial;

(b) Specific reference to pertinent Plan provisions on which the denial is based;

(c) A description of any additional material or information necessary for the Applicant to perfect the claim and an explanation of why such material or information is necessary; and

(d) Appropriate information as to the steps to be taken in order to submit a claim for review.

Written notice of a denial of a claim shall be provided within 90 days of the receipt of the claim, provided that if special circumstances require an extension of time for processing the claim, the Administrator may notify the Applicant in writing that an additional period of up to 90 days will be required to process the claim.

If the Applicant's claim is denied, the Applicant shall have 60 days from the date of receipt of written notice of the denial of the claim to request a review of the denial of the claim by the Administrator. Request for review of the denial of a claim must be submitted in writing. The Applicant shall have the right to review pertinent documents and submit issues and comments to the Administrator in writing. The Administrator shall provide a written decision within 60 days of its receipt of the Applicant's request for review, provided that if special circumstances require an extension of time for processing the review of the Applicant's claim, the Administrator may notify the Applicant in writing that an additional period of up to 60 days shall be required to process the Applicant's request for review.

It is intended that the claims procedures of this Plan be administered in accordance with the claims procedure regulations of the Department of Labor set forth in 29 CFR § 2560.503-1.

Claims for benefits under the Plan must be filed with the Administrator at the following address:

Comcast Corporation
One Comcast Center
1701 John F. Kennedy Boulevard
Philadelphia, PA 19103
Attention: General Counsel

ARTICLE 10 - AMENDMENT OR TERMINATION

10.1. Amendment or Termination. Except as otherwise provided by Section 10.2, the Company, by action of the Board or by action of the Committee, shall have the right at any time, or from time to time, to amend or modify this Plan. The Company, by action of the Board, shall have the right to terminate this Plan at any time.

10.2. Amendment of Rate of Credited Earnings. No amendment shall change the Applicable Interest Rate with respect to the portion of a Participant's Account that is attributable to an Initial Election or Subsequent Election made with respect to Compensation and filed with the Administrator before the date of adoption of such amendment by the Board or the Committee. For purposes of this Section 10.2, a Subsequent Election to defer the payment of part or all of an Account for an additional period after a previously-elected payment date (as described in Section 3.5) shall be treated as a separate Subsequent Election from any previous Initial Election or Subsequent Election with respect to such Account.

ARTICLE 11- WITHHOLDING OF TAXES

Whenever the Participating Company is required to credit deferred Compensation to the Account of a Participant, the Participating Company shall have the right to require the Participant to remit to the Participating Company an amount sufficient to satisfy any federal, state and local withholding tax requirements prior to the date on which the deferred Compensation shall be deemed credited to the Account of the Participant, or take any action whatever that it deems necessary to protect its interests with respect to tax liabilities. The Participating Company's obligation to credit deferred Compensation to an Account shall be conditioned on the Participant's compliance, to the Participating Company's satisfaction, with any withholding requirement. To the maximum extent possible, the Participating Company shall satisfy all applicable withholding tax requirements by withholding tax from other Compensation payable by the Participating Company to the Participant, or by the Participant's delivery of cash to the Participating Company in an amount equal to the applicable withholding tax.

ARTICLE 12 - MISCELLANEOUS PROVISIONS

12.1. No Right to Continued Employment. Nothing contained herein shall be construed as conferring upon any Participant the right to remain in service as an Outside Director or Director Emeritus or in the employment of a Participating Company as an executive or in any other capacity.

12.2. Expenses of Plan. All expenses of the Plan shall be paid by the Participating Companies.

12.3. Gender and Number. Whenever any words are used herein in any specific gender, they shall be construed as though they were also used in any other applicable gender. The singular form, whenever used herein, shall mean or include the plural form, and *vice versa*, as the context may require.

12.4. Law Governing Construction. The construction and administration of the Plan and all questions pertaining thereto, shall be governed by the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and other applicable federal law and, to the extent not governed by federal law, by the laws of the Commonwealth of Pennsylvania.

12.6. Headings Not a Part Hereof. Any headings preceding the text of the several Articles, Sections, subsections, or paragraphs hereof are inserted solely for convenience of reference and shall not constitute a part of the Plan, nor shall they affect its meaning, construction, or effect.

12.7. Severability of Provisions. If any provision of this Plan is determined to be void by any court of competent jurisdiction, the Plan shall continue to operate and, for the purposes of the jurisdiction of that court only, shall be deemed not to include the provision determined to be void.

ARTICLE 13- EFFECTIVE DATE

The original effective date of the Plan is January 1, 2005. The amended and restated Plan document approved and adopted on December 10, 2019 shall be effective December 10, 2019.

IN WITNESS WHEREOF, COMCAST CORPORATION has caused this Plan to be executed by its officers thereunto duly authorized, and its corporate seal to be affixed hereto, on the 10th day of December, 2019.

COMCAST CORPORATION

BY: /s/ David L. Cohen

ATTEST: /s/ Thomas J. Reid

Exhibit 10.14

COMCAST CORPORATION

2002 RESTRICTED STOCK PLAN

(As Amended and Restated, Effective December 10, 2019)

1. BACKGROUND AND PURPOSE

(a) Background. COMCAST CORPORATION, a Pennsylvania corporation, hereby amends and restates the Comcast Corporation 2002 Restricted Stock Plan (the "Plan"), effective December 10, 2019.

(b) Purpose. The purpose of the Plan is to promote the ability of Comcast Corporation to recruit and retain employees and enhance the growth and profitability of Comcast Corporation by providing the incentive of long-term awards for continued employment and the attainment of performance objectives.

(c) Purpose of the Amendment; Credits Affected. The Plan was previously amended and restated, effective January 1, 2005 in order (i) to preserve the favorable tax treatment available to amounts deferred pursuant to the Plan before January 1, 2005 and the earnings credited in respect of such amounts (each a "Grandfathered Amount") in light of the enactment of section 409A of the Internal Revenue Code of 1986, as amended (the "Code") as part of the American Jobs Creation Act of 2004, and the issuance of various Notices, Announcements, Proposed Regulations and Final Regulations thereunder (collectively, "Section 409A"), and (ii) with respect to all other amounts eligible to be deferred under the Plan, to comply with the requirements of Section 409A. Grandfathered Amounts will continue to be subject to the terms and conditions of the Plan as in effect prior to January 1, 2005. All amounts eligible to be deferred under the Plan other than Grandfathered Amounts will be subject to the terms of this amendment and restatement of the Plan and Section 409A.

(d) Reservation of Right to Amend to Comply with Section 409A. In addition to the powers reserved to the Board and the Committee under Paragraph 14 of the Plan, the Board and the Committee reserve the right to amend the Plan, either retroactively or prospectively, in whatever respect is required to achieve and maintain compliance with the requirements of the Section 409A.

(e) Deferral Provisions of Plan Unfunded and Limited to Select Group of Management or Highly Compensated Employees**.** Deferral Eligible Grantees and Non-Employee Directors may elect to defer the receipt of Restricted Stock and Restricted Stock Units as provided in Paragraph 8. The deferral provisions of Paragraph 8 and the other provisions of the Plan relating to the deferral of Restricted Stock and Restricted Stock Units are unfunded and maintained primarily for the purpose of providing a select group of management or highly compensated employees the opportunity to defer the receipt of compensation otherwise payable to such eligible employees in accordance with the terms of the Plan.

(f) References to Written Forms, Elections and Notices. Any action under the Plan that requires a written form, election, notice or other action shall be treated as completed if taken via electronic or other means, to the extent authorized by the Committee.

2. DEFINITIONS

(a) [RESERVED]

(b) "Account" means unfunded bookkeeping accounts established pursuant to Paragraph 8(h) and maintained by the Committee in the names of the respective Grantees (i) to which Deferred Stock Units, dividend equivalents and earnings on dividend equivalents shall be credited with respect to the portion of the Account allocated to the Company Stock Fund and (ii) to which amounts credited to the Income Fund or an Other Investment Fund are credited with income, gains, and losses as provided in Article 8, reduced by distributions in accordance with the Plan.

(c) "Active Grantee" means each Grantee who is actively employed by a Participating Company.

(d) "Affiliate" means, with respect to any Person, any other person that, directly or indirectly, is in control of, is controlled by, or is under common control with, such Person. For purposes of this definition, the term "control," including its correlative terms "controlled by" and "under common control with," mean, with respect to any Person, the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

(e) "Annual Rate of Pay" means, as of any date, an employee's annualized base pay rate. An employee's Annual Rate of Pay shall not include sales commissions or other similar payments or awards.

(f) "Applicable Interest Rate" means:

(i) Except as otherwise provided in Paragraph 2(f)(ii):

(A) The Applicable Interest Rate with respect to amounts credited to the Income Fund that are attributable to (1) dividends and other distributions credited with respect to Deferred Stock Units that are deferred pursuant to Initial Deferral Elections made before January 1, 2010 and (2) Diversification Elections and Special Diversification Elections made before January 1, 2010 shall be the interest rate that, when compounded annually pursuant to rules established by the Committee from time to time, is mathematically equivalent to 8% (0.08) per annum, or such other interest rate established by the Committee from time to time.

(B) The Applicable Interest Rate with respect to amounts credited to the Income Fund that are attributable to (1) dividends and other distributions credited with respect to Deferred Stock Units that are deferred pursuant to Initial Deferral Elections made on or after January 1, 2010 and before January 1, 2014 and (2) Diversification Elections and Special Diversification Elections made on or after January 1, 2010 and before January 1, 2014, shall be the interest rate that, when compounded annually pursuant to rules established by the Committee from time to time, is mathematically equivalent to 12% per annum, or such other interest rate established by the Committee from time to time.

(C) Effective with respect to amounts credited to the Income Fund that are attributable to (1) dividends and other distributions credited with respect to Deferred Stock Units that are deferred pursuant to Initial Deferral Elections made on or after January 1, 2014, (2) dividends and other distributions credited with respect to Deferred Stock Units that are deferred pursuant to Regular Deferral Elections, and (3) Diversification Elections and Special Diversification Elections made on or after January 1, 2014, the "Applicable Interest Rate" shall be the Applicable Interest Rate that applies to "Protected Benefits" under the Comcast Corporation 2005 Deferred Compensation Plan (the "2005 Deferred Compensation Plan") if, as of the September 30th immediately preceding the Plan Year to which the Initial

Deferral Election, Regular Deferral Election or Diversification Election applies, the sum of (x) the Grantee's Account under the 2005 Deferred Compensation Plan, plus (y) the Grantee's Account under the Comcast Corporation 2002 Deferred Compensation Plan (the "2002 Deferred Compensation Plan"), plus (z) the portion of the Grantee's Account under this Plan credited to the Income Fund, is less than the High-Water Mark. If the conditions described in the preceding sentence do not apply, the "Applicable Interest Rate" shall be the Applicable Interest Rate that applies under the 2005 Deferred Compensation Plan to amounts credited pursuant to Initial Deferral Elections with respect to compensation earned after December 31, 2013, that are not Protected Benefits.

(ii) Effective for the period beginning as soon as administratively practicable following a Grantee's employment termination date to the date the Grantee's Account is distributed in full, the Committee, in its sole and absolute discretion, may designate the term "Applicable Interest Rate" for such Grantee's Account to mean the lesser of: (A) the rate in effect under Paragraph 2(f)(i) or (B) the interest rate that, when compounded annually pursuant to rules established by the Committee from time to time, is mathematically equivalent to the Prime Rate plus one percent, compounded annually as of the last day of the calendar year. A Grantee's re-employment by a Participating Company following an employment termination date shall not affect the Applicable Interest Rate that applies to the part of the Grantee's Account (including interest credited with respect to such part of the Grantee's Account) that was credited before such employment termination date. Notwithstanding the foregoing, the Committee may delegate its authority to determine the Applicable Interest Rate under this Paragraph 2(f)(ii) to an officer of the Company or committee of two or more officers of the Company.

(g) "AT&T Broadband Transaction" means the acquisition of AT&T Broadband Corp. (now known as Comcast Cable Communications, LLC) by the Company.

(h) "Award" means an award of Restricted Stock or Restricted Stock Units granted under the Plan.

(i) "Board" means the Board of Directors of the Company.

(j) "Change in Control" means:

(i) Except as provided in Paragraph 2(j)(ii), "Change in Control" means the occurrence of any one or more of the following events:

(A) following February 22, 2016, any person or "group" (as defined in Section 13(d) of the Exchange Act) (each, a "Person"), other than an employee benefit plan or trust maintained by the Company, becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 30% or more of the combined voting power of the Company's outstanding securities entitled to vote generally in the election of directors, unless a majority of the directors of the Company in office immediately preceding the date on which such Person acquires such beneficial ownership, by resolution negates the effectiveness of this provision in a particular circumstance);

(B) at any time during a period of 12 consecutive months, individuals who at the beginning of such period constituted the Board and any new member of the Board whose election or nomination for election was approved by a vote of at least a majority of the directors then still in office who either were directors at the beginning of such period or whose election or nomination for election was so approved, cease for any reason to constitute a majority of members of the Board;

(C) the consummation of (x) a merger, consolidation, reorganization or similar corporate transaction involving the Company or any of its subsidiaries with any other corporation or entity, which would result in the combined voting power of the Company's securities entitled to vote generally in the election of directors outstanding immediately prior to such merger, consolidation, reorganization or other similar transaction representing (either by remaining outstanding or being converted into voting securities of the surviving entity or, if applicable, the ultimate parent thereof) less than a majority of the combined voting power of the Company or such surviving entity or parent outstanding immediately after such merger, consolidation, reorganization or other similar transaction, or (y) any sale, lease, exchange or other transfer to any Person of all or substantially all of the assets of the Company, in one transaction or a series of related transactions; or

(D) the approval by the shareholders of the Company of a liquidation or dissolution of the Company.

(ii) For purposes of Paragraph 8, and with respect to the distribution of amounts subject to an Award that constitute "deferred compensation" (within the meaning of Section 409A), the term "Change in Control" shall mean any transaction or series of transactions that constitutes a change in the ownership or effective control or a change in the ownership of a substantial portion of the assets of the Company, within the meaning of Section 409A.

(k) "Code" means the Internal Revenue Code of 1986, as amended.

(l) "Comcast Plan" means any restricted stock, restricted stock unit, stock bonus, stock option or other compensation plan, program or arrangement established or maintained by the Company or an Affiliate, including but not limited to this Plan, the Comcast Corporation 2003 Stock Option Plan, the Comcast Corporation 2002 Stock Option Plan, the Comcast Corporation 1996 Stock Option Plan, Comcast Corporation 1987 Stock Option Plan and the Comcast Corporation 2002 Deferred Stock Option Plan.

(m) "Committee" means the Compensation Committee of the Board, provided that all references to the Committee shall be treated as references to the Committee's delegate with respect to any Award granted within the scope of the delegate's authority pursuant to Paragraph 5(f).

(n) "Common Stock" means Class A Common Stock, par value $0.01, of the Company.

(o) "Company" means Comcast Corporation, a Pennsylvania corporation, including any successor thereto by merger, consolidation, acquisition of all or substantially all the assets thereof, or otherwise.

(p) "Company Stock Fund" means a hypothetical investment fund pursuant to which Deferred Stock Units are credited with respect to a portion of an Award subject to an Election, and thereafter until (i) the date of distribution or (ii) the effective date of a Diversification Election, to the extent a Diversification Election applies to such Deferred Stock Units, as applicable. The portion of a Grantee’s Account deemed invested in the Company Stock Fund shall be treated as if such portion of the Account were invested in hypothetical shares of Common Stock otherwise deliverable as Shares upon the Vesting Date associated with Restricted Stock or Restricted Stock Units, and all dividends and other distributions paid with respect to Common Stock were credited to the Income Fund, held uninvested in cash and credited with interest at the Applicable Interest Rate as of the next succeeding December 31 (to the extent the Account continues to be deemed credited in the form of Deferred Stock Units through such December 31), provided that dividends and other distributions paid with respect to Common Stock shall be credited with interest at the Applicable Interest Rate commencing as of the date on which dividends or other distributions are paid. To the extent a distribution of a Grantee’s Account is attributable to amounts credited to the Company Stock Fund (i) as Deferred Stock Units that have never been the subject of a completed Diversification Election or (ii) under circumstances described in Paragraph 8(j)(ii)(A), distributions shall be made in the form of Common Stock. All other distributions of Account balances shall be made in cash.

(q) “Date of Grant” means the date on which an Award is granted.

(r) “Deceased Grantee” means:

(i) A Grantee whose employment by a Participating Company is terminated by death; or

(ii) A Grantee who dies following termination of employment by a Participating Company.

(s) “Deferral Eligible Employee” means:

(i) Effective for the period extending from January 1, 2014 through December 31, 2018:

(A) An Eligible Employee whose Annual Rate of Pay is $250,000 or more as of both: (x) the date on which an Initial Deferral Election or Regular Deferral Election is filed with the Committee; and (y) the first day of the calendar year in which such Initial Deferral Election or Regular Deferral Election is filed.

(B) Each New Key Employee.

(C) Each other employee of a Participating Company who is designated by the Committee, in its sole and absolute discretion, as a Deferral Eligible Employee.

(ii) Effective on and after January 1, 2019:

(A) An Eligible Employee whose Annual Rate of Pay is $350,000 or more as of both: (x) the date on which an Initial Deferral Election or Regular Deferral Election is filed with the Committee; and (y) the first day of the calendar year in which such Initial Deferral Election or Regular Deferral Election is filed.

(B) Each New Key Employee.

(C) Each other employee of a Participating Company who is designated by the Committee, in its sole and absolute discretion, as a Deferral Eligible Employee.

Notwithstanding anything in this Paragraph 2(s) to the contrary, except as otherwise provided by the Committee or its delegate, no Grantee who is an employee of NBCUniversal, LLC, a Delaware limited liability company, and its subsidiaries (collectively, “NBCUniversal”) shall be a Deferral Eligible Employee with respect to any Award granted to such Grantee on or after January 29, 2011.

(t) “Deferred Stock Units” means the number of hypothetical Shares subject to an Election.

(u) "Disability" means:

(i) A Grantee's substantial inability to perform Grantee's employment duties due to partial or total disability or incapacity resulting from a mental or physical illness, injury or other health-related cause for a period of 12 consecutive months or for a cumulative period of 52 weeks in any two-calendar year period; or

(ii) If different from the definition in Paragraph 2(u)(i) above, "Disability" as it may be defined in such Grantee's employment agreement between the Grantee and the Company or an Affiliate, if any.

(v) "Disabled Grantee" means:

(i) A Grantee whose employment by a Participating Company is terminated by reason of Disability;

(ii) The duly-appointed legal guardian of an individual described in Paragraph 2(v)(i) acting on behalf of such individual.

(w) "Diversification Election" means a Grantee's election to have a portion of the Grantee's Account credited in the form of Deferred Stock Units and attributable to any grant of Restricted Stock or Restricted Stock Units deemed liquidated and credited thereafter under the Income Fund or an Other Investment Fund, as provided in Paragraph 8(k).

(x) "Election" means, as applicable, an Initial Deferral Election, Regular Deferral Election, or a Subsequent Deferral Election.

(y) "Eligible Employee" means an employee of a Participating Company, as determined by the Committee.

(z) "Fair Market Value" means:

(i) If Shares or shares of any Other Investment Fund are listed on a stock exchange, Fair Market Value shall be determined based on the last reported sale price of a share on the principal exchange on which shares are listed on the date of determination, or if such date is not a trading day, the next trading date.

(ii) If Shares or shares of any Other Investment Fund are not so listed, but trades of shares are reported on the Nasdaq National Market, Fair Market Value shall be determined based on the last quoted sale price of a share on the Nasdaq National Market on the date of determination, or if such date is not a trading day, the next trading date.

(iii) If Shares or shares of any Other Investment Fund are not so listed nor trades of shares so reported, Fair Market Value shall be determined by the Committee in good faith.

(aa) "Family Member" has the meaning given to such term in General Instructions A.1(a)(5) to Form S-8 under the Securities Act of 1933, as amended, and any successor thereto.

(bb) "Grandfathered Amount" means amounts described in Paragraph 1(c) that were deferred under the Plan and that were earned and vested before January 1, 2005.

(cc) "Grantee" means an Eligible Employee or Non-Employee Director who is granted an Award.

(dd) "Hardship" means an "unforeseeable emergency," as defined in Section 409A. The Committee shall determine whether the circumstances of the Grantee constitute an unforeseeable emergency and thus a Hardship within the meaning of this Paragraph 2(dd). Following a uniform procedure, the Committee's determination shall consider any facts or conditions deemed necessary or advisable by the Committee, and the Grantee shall be required to submit any evidence of the Grantee's circumstances that the Committee requires. The determination as to whether the Grantee's circumstances are a case of Hardship shall be based on the facts of each case; provided however, that all determinations as to Hardship shall be uniformly and consistently made according to the provisions of this Paragraph 2(dd) for all Grantees in similar circumstances.

(ee) "High Balance Participant" means a Grantee the value of whose Account that is deemed invested in the Income Fund is greater than or equal to the Income Fund Limit, as determined by the Committee.

(ff) "High-Water Mark" means:

(i) With respect to amounts credited to the Income Fund on account of Diversification Elections made in 2014, the highest of the sum of the amounts described in (A), (B) and (C) below as of the last day of any calendar quarter beginning after December 31, 2008 and before October 1, 2013:

(A) the Grantee's Account under the 2005 Deferred Compensation Plan, to the extent credited to the Income Fund; plus

(B) the Grantee's Account under the 2002 Deferred Compensation Plan, to the extent credited to the Income Fund; plus

(C) the portion of the Grantee's Account under this Plan credited to the Income Fund.

(ii) With respect to amounts credited to the Income Fund on account of Diversification Elections and Special Diversification Elections made after 2014, the sum of (x) plus (y) where (x) equals the highest of the sum of the amounts described in Paragraphs 2(ee)(i)(A), (B) and (C) as of the last day of any calendar quarter beginning after December 31, 2008 and before January 1, 2014, and (y) equals the sum of:

(A) The amount credited to the Income Fund with respect to a Grantee's Account under Section 3.8 of the 2005 Deferred Compensation Plan after December 31, 2013 and on or before September 30, 2014 that is contractually committed pursuant to an employment agreement entered into on or before December 31, 2013; plus

(B) The deferred portion of a Grantee's cash bonus award earned for 2013 to the extent credited to the Income Fund and payable, but for the Grantee's deferral election under the 2005 Deferred Compensation Plan after December 31, 2013 and on or before September 30, 2014; plus

(C) The amount credited to the Income Fund pursuant to a Diversification Election or Special Diversification Election made by a Grantee before January 1, 2014 with respect to Restricted Stock Units that vest after December 31, 2013 and on or before September 30, 2014.

(gg) "Income Fund" means a hypothetical investment fund pursuant to which an amount equal to the Fair Market Value of Deferred Stock Units subject to a Diversification Election is credited as of the effective date of such Diversification Election and, except as otherwise provided in Paragraph 8(j) and Paragraph 8(k), as to which interest is credited thereafter until the date of distribution at the Applicable Interest Rate. In addition, the Income Fund shall also be deemed to hold dividend equivalents and earnings on dividend equivalents credited to a Grantee's Account as described in Paragraph 2(b) and Paragraph 2(p). Notwithstanding any other provision of the Plan to the contrary, for purposes of determining the time and form of payment of amounts credited to the Income Fund, the rules of the 2005 Deferred Compensation Plan shall apply on the same basis as if such amounts were credited to a Grantee's account under such 2005 Deferred Compensation

Plan. The "9% Fund" means that portion of the Income Fund with respect to which the Applicable Interest Rate is 9%. The "12% Fund" means that portion of the Income Fund with respect to which the Applicable Interest Rate is 12%. The "Prime Plus One Fund" means that portion of the Income Fund with respect to which the Applicable Interest Rate is described in Paragraph 2(f)(ii). For purposes of this Paragraph 2(gg), the Income Fund shall include amounts credited to the Income Fund under the 2002 Deferred Compensation Plan and the 2005 Deferred Compensation Plan.

(hh) "Income Fund Limit" means $100 million, provided that if the amount credited to a Grantee's Income Fund is greater than $100 million as of December 31, 2019, the Income Fund Limit applicable to such Grantee for any applicable Plan Year shall be equal to the amount credited to a Grantee's Income Fund as of the December 31 immediately preceding such applicable Plan Year until such balance is equal to or less than $100 million. The Committee may waive or modify the Income Fund Limit applicable to one or more High Balance Participants in its discretion. For purposes of this Paragraph 2(hh), the Income Fund shall include amounts credited to Income Fund under the 2002 Deferred Compensation Plan and 2005 Deferred Compensation Plan.

(ii) "Initial Deferral Election" means a written election on a form provided by the Committee, pursuant to which a Grantee: (i) elects, within the time or times specified in Paragraph 8(a)(i), to defer the distribution date of Shares issuable with respect to Restricted Stock Units; and (ii) designates the distribution date of such Shares.

(jj) [RESERVED]

(kk) "New Key Employee" means:

(i) Effective for the period extending from January 1, 2014 through December 31, 2018, each employee of a Participating Company who:

(A) becomes an employee of a Participating Company and has an Annual Rate of Pay of $250,000 or more as of his employment commencement date; or

(B) has an Annual Rate of Pay that is increased to $250,000 or more and who, immediately preceding such increase, was not a Deferral Eligible Employee.

(ii) Effective on and after January 1, 2019, each employee of a Participating Company who:

(A) becomes an employee of a Participating Company and has an Annual Rate of Pay of $350,000 or more as of his employment commencement date; or

(B) has an Annual Rate of Pay that is increased to $350,000 or more and who, immediately preceding such increase, was not a Deferral Eligible Employee.

(ll) "Non-Employee Director" means an individual who is a member of the Board, and who is not an Eligible Employee, including an individual who is a member of the Board and who previously was an employee of the Company.

(mm) "Normal Retirement" means a Grantee's termination of employment that is treated by the Participating Company as a retirement under its employment policies and practices as in effect from time to time.

(nn) "Other Available Shares" means, as of any date, the sum of:

(i) The total number of Shares owned by a Grantee or such Grantee's Family Member that were not acquired by such Grantee or such Grantee's Family Member pursuant to a Comcast Plan or otherwise in connection with the performance of services to the Company or an Affiliate; plus

(ii) The excess, if any of:

(A) The total number of Shares owned by a Grantee or such Grantee's Family Member other than the Shares described in Paragraph 2(nn)(i); over

(B) The sum of:

(1) The number of such Shares owned by such Grantee or such Grantee's Family Member for less than six months; plus

(2) The number of such Shares owned by such Grantee or such Grantee's Family Member that has, within the preceding six months, been the subject of a certification pursuant to Paragraph 9(c)(ii) or any similar certification under any other Comcast Plan; plus

(3) The number of such Shares owned by such Grantee or such Grantee's Family Member that has, within the preceding six months, been received in exchange for Shares surrendered as payment, in full or in part, or as to which ownership was attested to as payment, in full or in part, of the exercise price for an option to purchase any securities of the Company or an Affiliate of the Company, under any Comcast Plan, but only to the extent of the number of Shares surrendered or attested to; plus

(4) The number of such Shares owned by such Grantee or such Grantee's Family Member as to which evidence of ownership has, within the preceding six months, been provided to the Company in connection with the crediting of "Deferred Stock Units" to such Grantee's Account under the Comcast Corporation 2002 Deferred Stock Option Plan (as in effect from time to time).

For purposes of this Paragraph 2(nn), a Share that is subject to an Election pursuant to Paragraph 8 or a deferral election pursuant to another Comcast Plan shall not be treated as owned by a Grantee until all conditions to the delivery of such Share have lapsed. For purposes of determining the number of Other Available Shares, the term "Shares" shall also include the securities held by a Grantee or such Grantee's Family Member immediately before the consummation of the AT&T Broadband Transaction that have converted into Shares.

(oo) "Other Investment Fund" means the Company Stock Fund and such other hypothetical investment funds designated by the Committee, pursuant to which income, gains, and losses are credited to a Grantee's Account as if the Account, to the extent deemed invested in such Other Investment Fund, were credited with income, gains, and losses as if actually invested in such Other Investment Fund. The Grantee shall designate the Other Investment Funds in which the Grantee's Account shall be invested in accordance with rules established by the Committee.

(pp) "Participating Company" means the Company and each of the Subsidiary Companies.

(qq) "Performance-Based Compensation" means "Performance-Based Compensation" within the meaning of Section 409A.

(rr) "Performance Period" means a period of at least 12 months during which a Grantee may earn Performance-Based Compensation.

(ss) "Person" means an individual, a corporation, a partnership, an association, a trust or any other entity or organization.

(tt) "Plan" means the Comcast Corporation 2002 Restricted Stock Plan, as set forth herein, and as amended from time to time.

(uu) "Plan Year" means the calendar year.

(vv) "Prime Rate" means, for any calendar year, the interest rate that, when compounded daily pursuant to rules established by the Committee from time to time, is mathematically equivalent to the prime rate of interest (compounded annually) as published in the Eastern Edition of The Wall Street Journal on the last business day preceding the first day of such calendar year, and as adjusted as of the last business day preceding the first day of each calendar year beginning thereafter.

(ww) "Regular Deferral Election" means a written election on a form provided by the Committee, pursuant to which a Grantee: (i) elects, within the time or times specified in Paragraph 8(a)(ii), to defer the distribution date of Shares issuable with respect to Restricted Stock Units; and (ii) designates the distribution date of such Shares.

(xx) "Restricted Stock" means Shares subject to restrictions as set forth in an Award.

(yy) "Restricted Stock Unit" means a unit that entitles the Grantee, upon the Vesting Date set forth in an Award, to receive one Share.

(zz) "Retired Grantee" means a Grantee who has terminated employment pursuant to a Normal Retirement.

(aaa) "Rule 16b-3" means Rule 16b-3 promulgated under the 1934 Act, as in effect from time to time.

(bbb) "Section 16 Officer" means an "officer" of the Company, as defined pursuant to Rule 16a-1(f) under the 1934 Act.

(ccc) "Share" or "Shares" means a share or shares of Common Stock.

(ddd) "Special Diversification Election" means, with respect to each separate Award, a Diversification Election by a Grantee other than a Non-Employee Director to have more than 40 percent of the Deferred Stock Units credited to such Grantee's Account in the Company Stock Fund liquidated and credited thereafter under the Income Fund or an Other Investment Fund, as provided in Paragraph 8(k)(i), if (and to the extent that) it is approved by the Committee or its delegate in accordance with Paragraph 8(k)(ii).

(eee) "Subsequent Deferral Election" means a written election on a form provided by the Committee, filed with the Committee in accordance with Paragraph 8(d), pursuant to which a Grantee: (i) elects, within the time or times specified in Paragraph 8(d), to further defer the distribution date of Shares issuable with respect to Restricted Stock or Restricted Stock Units; and (ii) designates the distribution date of such Shares.

(fff) "Subsidiary Companies" means all business entities that, at the time in question, are subsidiaries of the Company, within the meaning of section 424(f) of the Code.

(ggg) "Successor-in-Interest" means the estate or beneficiary to whom the right to payment under the Plan shall have passed by will or the laws of descent and distribution.

(hhh) "Terminating Event" means a Change in Control.

(iii) "Third Party" means any Person, together with such Person's Affiliates, provided that the term "Third Party" shall not include the Company or an Affiliate of the Company.

(jjj) "Vesting Date" means, as applicable: (i) the date on which the restrictions imposed on a Share of Restricted Stock lapse or (ii) the date on which the Grantee vests in a Restricted Stock Unit.

(kkk) "1933 Act" means the Securities Act of 1933, as amended.

(lll) "1934 Act" means the Securities Exchange Act of 1934, as amended.

3. **RIGHTS TO BE GRANTED**

Rights that may be granted under the Plan are:

(a) Rights to Restricted Stock which gives the Grantee ownership rights in the Shares subject to the Award, subject to a substantial risk of forfeiture, as set forth in Paragraph 7, and to deferred payment, as set forth in Paragraph 8; and

(b) Rights to Restricted Stock Units which give the Grantee the right to receive Shares upon a Vesting Date, as set forth in Paragraph 7, and to deferred payment, as set forth in Paragraph 8. The maximum number of Shares subject to Awards that may be granted to any single individual in any calendar year, adjusted as provided in Paragraph 10, shall be 4.0 million Shares.

4. **SHARES SUBJECT TO THE PLAN**

(a) Shares Available for Grant. Subject to adjustment as provided in Paragraph 10, not more than 268 million Shares in the aggregate may be issued under the Plan pursuant to the grant of Awards. The Shares issued under the Plan may, at the Company's option, be either Shares held in treasury or Shares originally issued for such purpose.

(b) Shares Returned to the Reserve. If Restricted Stock or Restricted Stock Units are forfeited pursuant to the terms of an Award, the Shares underlying such forfeited Award shall return to the pool of Shares available for issuance under the Plan.

(c) Share Recycling Prohibitions. If the Company withholds Shares to satisfy its tax withholding obligations, such withheld Shares shall not again become available for Awards or increase the number of Shares available for grant under Paragraph 4(a).

5. **ADMINISTRATION OF THE PLAN**

(a) Administration. The Plan shall be administered by the Committee, provided that with respect to Awards to Non-Employee Directors, the rules of this Paragraph 5 shall apply so that all references in this Paragraph 5 to the Committee shall be treated as references to either the Board or the Committee acting alone.

(b) Grants. Subject to the express terms and conditions set forth in the Plan, the Committee shall have the power, from time to time, to select those Employees and Non-Employee Directors to whom Awards shall be granted under the Plan, to determine the number of Shares and/or Restricted Stock Units, as applicable, to be granted pursuant to each Award, and, pursuant to the provisions of the Plan, to determine the terms and conditions of each Award, including the restrictions applicable to such Shares and the conditions upon which a Vesting Date shall occur. The determination of the Committee in all such matters shall be conclusive.

(c) Meetings. The Committee shall hold meetings at such times and places as it may determine. Acts approved at a meeting by a majority of the members of the Committee or acts approved in writing by the unanimous consent of the members of the Committee shall be the valid acts of the Committee.

(d) Exculpation. No member of the Committee shall be personally liable for monetary damages for any action taken or any failure to take any action in connection with the administration of the Plan or the granting of Awards thereunder unless (i) the member of the Committee has breached or failed to perform the duties of his office, and (ii) the breach or failure to perform constitutes self-dealing, willful misconduct or recklessness; provided, however, that the provisions of this Paragraph 5(d) shall not apply to the responsibility or liability of a member of the Committee pursuant to any criminal statute.

(e) Indemnification. Service on the Committee shall constitute service as a member of the Board. Each member of the Committee shall be entitled without further act on his part to indemnity from the Company to the fullest extent provided by applicable law and the Company' s Articles of Incorporation and By-laws in connection with or arising out of any action, suit or proceeding with respect to the administration of the Plan or the granting of Awards thereunder in which he may be involved by reason of his being or having been a member of the Committee, whether or not he continues to be such member of the Committee at the time of the action, suit or proceeding.

(f) Delegation of Authority. The Committee may delegate its authority with respect to the grant, amendment, interpretation and administration of grants and awards of restricted stock and restricted stock units to a person, persons or committee, in its sole and absolute discretion. Actions taken by the Committee's duly-authorized delegate shall have the same force and effect as actions taken by the Committee. Any delegation of authority pursuant to this Paragraph 5(f) shall continue in effect until the earliest of:

(i) such time as the Committee shall, in its sole and absolute discretion, revoke such delegation of authority;

(ii) in the case of delegation to a person that is conditioned on such person's continued service as an employee of the Company or as a member of the Board, the date such delegate shall cease to serve in such capacity for any reason; or

(iii) the delegate shall notify the Committee that he or she declines to continue to exercise such authority.

6. **ELIGIBILITY**

Awards may be granted only to Eligible Employees and Non-Employee Directors.

7. **RESTRICTED STOCK AND RESTRICTED STOCK UNIT AWARDS**

The Committee may grant Awards in accordance with the Plan, provided that the Board or the Committee may grant Awards to Non-Employee Directors authorized by the Comcast Corporation 2002 Non-Employee Director Compensation Plan, or otherwise. With respect to Awards to Non-Employee Directors, the rules of this Paragraph 7 shall apply so that either the Board or the Committee acting alone shall have all of the authority otherwise reserved in this Paragraph 7 to the Committee.

The terms and conditions of Awards shall be set forth in writing as determined from time to time by the Committee, consistent, however, with the following:

(a) Time of Grant. All Awards shall be granted on or before May 19, 2026.

(b) Terms of Awards. The provisions of Awards need not be the same with respect to each Grantee. No cash or other consideration shall be required to be paid by the Grantee in exchange for an Award.

(c) Awards and Agreements. Each Grantee shall be provided with an agreement specifying the terms of an Award. The Company shall arrange for the recording of Grantee's ownership of the Restricted Stock on a book entry recordkeeping system maintained on behalf of the Company.

(d) Restrictions. Subject to the provisions of the Plan and the Award, the Committee may establish a period commencing with the Date of Grant during which the Grantee shall not be permitted to sell, transfer, pledge or assign Restricted Stock or Restricted Stock Units awarded under the Plan.

(e) Vesting/Lapse of Restrictions. Subject to the provisions of the Plan and the Award, a Vesting Date for Restricted Stock or Restricted Stock Units subject to an Award shall occur at such time or times and on such terms and conditions as the Committee may determine and as are set forth in the Award; provided, however, that except as otherwise provided by the Committee, a Vesting Date shall occur only if the Grantee is an employee of a Participating Company as of such Vesting Date, and has been an employee of a Participating Company continuously from the Date of Grant. The Award may provide for Restricted Stock or Restricted Stock Units to vest in installments, as determined by the Committee. The Committee may, in its sole discretion, waive, in whole or in part, any remaining conditions to vesting with respect to such Grantee's Restricted Stock or Restricted Stock Units, provided that for avoidance of doubt, such unilateral discretion shall not apply to any grant of rights that is designated as intended to satisfy the rules for performance-based compensation under section 162(m) of the Code.

(f) Rights of the Grantee. Grantees may have such rights with respect to Shares subject to an Award as may be determined by the Committee and set forth in the Award, including the right to vote such Shares, and the right to receive dividends paid with respect to such Shares. A Grantee whose Award consists of Restricted Stock Units shall not have the right to vote with respect to such Restricted Stock Units. With respect to Awards of Restricted Stock Units granted prior to March 1, 2015, a Grantee shall not have the right to receive dividend equivalents with respect to such Restricted Stock Units.

(g) Dividend Equivalents. With respect to Awards of Restricted Stock Units granted on and after March 1, 2015, the Committee may, in its discretion, provide for the payment of dividend equivalents with respect to Restricted Stock Units, which may be paid directly to the Grantee, accrued and paid by the Company at such time or times specified in the applicable agreement specifying the terms of an Award, or treated as reinvested in additional Restricted Stock Units, or a combination thereof, as determined by the Committee in its sole discretion.

(h) Termination of Grantee's Employment. A transfer of an Eligible Employee between two employers, each of which is a Participating Company, shall not be deemed a termination of employment. A Grantee who is a Non-Employee Director shall be treated as having been terminated upon the Grantee's termination of service as a Non-Employee Director, provided that if such a Grantee is designated as a Director Emeritus upon termination of service as a Non-Employee Director, such Non-Employee Director shall not be treated as having been terminated until the Grantee's termination of service as a Director Emeritus. In the event that a Grantee's employment with all Participating Companies terminates, all Restricted Shares and/or Restricted Stock Units as to which a Vesting Date has not occurred shall be forfeited by the Grantee and deemed canceled by the Company.

(i) Delivery of Shares. For purposes of the Plan, the Company may satisfy its obligation to deliver Shares issuable under the Plan by arranging for the recording of Grantee's ownership of Shares issuable under the Plan on a book entry recordkeeping system maintained on behalf of the Company. Except as otherwise provided by Paragraph 8, when a Vesting Date occurs with respect to all or a portion of an Award of Restricted Stock or Restricted Stock Units, the Company shall notify the Grantee that a Vesting Date has occurred, and shall deliver to the Grantee (or the Grantee's Successor-in-Interest) Shares as to which a Vesting Date has occurred (or in the case of Restricted Stock Units, the number of Shares represented by such Restricted Stock Units) without any legend or restrictions (except those that may be imposed by the Committee, in its sole judgment, under Paragraph 9(a)). The right to payment of any fractional Shares that may have accrued shall be satisfied in cash, measured by the product of the fractional amount times the Fair Market Value of a Share at the Vesting Date, as determined by the Committee.

8. DEFERRAL ELECTIONS

A Grantee may elect to defer the receipt of Shares that would otherwise be issuable with respect to Restricted Stock Units as to which a Vesting Date has not occurred, as provided by the Committee in the Award, consistent, however, with the following:

(a) Initial Deferral Election and Regular Deferral Election.

(i) Initial Deferral Election.

(A) Election. Each Grantee who is a Non-Employee Director or a Deferral Eligible Employee shall have the right to defer the receipt of some or all of the Shares issuable with respect to Restricted Stock Units as to which a Vesting Date has not yet occurred, by filing an Initial Deferral Election to defer the receipt of such Shares on a form provided by the Committee for this purpose.

(B) Deadline for Initial Deferral Election. No Initial Deferral Election to defer the receipt of Shares issuable with respect to Restricted Stock Units that are not Performance-Based Compensation shall be effective unless it is filed with the Committee on or before the 30th day following the Date of Grant and 12 or more months in advance of the applicable Vesting Date. No Initial Deferral Election to defer the receipt of Shares issuable with respect to Restricted Stock Units that are Performance-Based Compensation shall be effective unless it is filed with the Committee at least six months before the end of the Performance Period during which such Performance-Based Compensation may be earned.

(ii) Regular Deferral Election.

(A) Election. Each Grantee who is a Deferral Eligible Employee shall have the right to defer the receipt of some or all of the Shares issuable with respect to Restricted Stock Units as to which a Vesting Date has not yet occurred, and that are not subject to an Initial Deferral Election, by filing a Regular Deferral Election to defer the receipt of such Shares on a form provided by the Committee for this purpose.

(B) Deadline for Regular Deferral Election. No Regular Deferral Election to defer the receipt of Shares issuable with respect to Restricted Stock Units shall be effective unless it is filed with the Committee on or before the close of business at least one year before the scheduled Vesting Date of such Restricted Stock Units.

(b) Effect of Failure of Vesting Date to Occur. An Election shall be null and void if a Vesting Date with respect to the Restricted Stock Units does not occur before the distribution date for Shares issuable with respect to such Restricted Stock Units identified in such Election.

(c) Deferral Period. Except as otherwise provided in Paragraph 8(d), all Shares issuable with respect to Restricted Stock Units that are subject to an Election shall be delivered to the Grantee (or the Grantee's Successor-in-Interest) without any legend or restrictions (except those that may be imposed by the Committee, in its sole judgment, under Paragraph 9(a)), on the distribution date for such Shares designated by the Grantee on the most recently filed Election. The distribution date may vary with each separate Election.

(i) Initial Deferral Election. Except as otherwise specifically provided by the Plan, no distribution pursuant to an Initial Deferral Election may be made earlier than January 2nd of the third calendar year beginning after the Vesting Date, nor later than January 2nd of the eleventh calendar year beginning after the Vesting Date.

(ii) Regular Deferral Election. No distribution pursuant to a Regular Deferral Election may be made before the fifth anniversary or later than the tenth anniversary of the scheduled Vesting Date of the Restricted Stock Units to which the Regular Deferral Election applies.

(d) Additional Elections. Notwithstanding anything in this Paragraph 8(d) to the contrary, no Subsequent Deferral Election shall be effective until 12 months after the date on which such Subsequent Deferral Election is made.

(i) Each Active Grantee, and each Grantee designated by the Committee who has served as a Non-Employee Director or Section 16 Officer at any time on or after January 1, 2020 (whether or not such individual is an Active Grantee) (A) who has previously made an Initial Deferral Election or a

Regular Deferral Election to receive a distribution of part or all of his or her Account, or (B) who, pursuant to this Paragraph 8(d)(i) has made a Subsequent Deferral Election to defer the distribution date for Shares issuable with respect to Restricted Stock Units for an additional period from the originally-elected distribution date, may elect to defer the distribution date for a minimum of five and a maximum of ten additional years from the previously-elected distribution date, by filing a Subsequent Deferral Election with the Committee on or before the close of business at least one year before the date on which the distribution would otherwise be made. The number of Subsequent Deferral Elections under this Paragraph 8(d)(i) shall not be limited. Notwithstanding the foregoing, except as otherwise provided by the Committee, an Active Grantee who returns to service with a Participating Company following a termination of service may not make a Subsequent Deferral Election with respect to amounts subject to an Initial Deferral Election or a Subsequent Deferral Election that was filed with the Committee before such return to service.

(ii) A Deceased Grantee's Successor-in-Interest may elect to file a Subsequent Deferral Election to defer the distribution date for the Deceased Grantee's Shares issuable with respect to Restricted Stock Units for five additional years from the date payment would otherwise be made. A Subsequent Deferral Election must be filed with the Committee at least one year before the date on which the distribution would otherwise be made, as reflected on the Deceased Grantee's last Election.

(iii) A Retired Grantee may elect to defer the distribution date of the Retired Grantee's Shares issuable with respect to Restricted Stock Units for five additional years from the date payment would otherwise be made. A Subsequent Deferral Election must be filed with the Committee at least one year before the date on which the distribution would otherwise be made, as reflected on the Retired Grantee's last Election.

(e) Discretion to Provide for Distribution in Full Upon or Following a Change in Control. To the extent permitted by Section 409A, in connection with a Change in Control, and for the 12-month period following a Change in Control, the Committee may exercise its discretion to terminate the deferral provisions of the Plan and, notwithstanding any other provision of the Plan or the terms of any Initial Deferral Election, Regular Deferral Election or Subsequent Deferral Election, distribute the Account of each Grantee in full and thereby effect the revocation of any outstanding Initial Deferral Elections, Regular Deferral Election or Subsequent Deferral Elections.

(f) Hardship. Notwithstanding the terms of an Initial Deferral Election, Regular Deferral Election or Subsequent Deferral Election, if, at the Grantee's request, the Committee determines that the Grantee has incurred a Hardship, the Committee may, in its discretion, authorize the immediate distribution of all or any portion of the Grantee's Account.

(g) Other Acceleration Events. To the extent permitted by Section 409A, notwithstanding the terms of an Initial Deferral Election, Regular Deferral Election or Subsequent Deferral Election, distribution of all or part of a Grantee's Account may be made:

(i) To fulfill a domestic relations order (as defined in section 414(p)(1)(B) of the Code) to the extent permitted by Treasury Regulations section 1.409A-3(j)(4)(ii) or any successor provision of law).

(ii) To the extent necessary to comply with laws relating to avoidance of conflicts of interest, as provided in Treasury Regulation section 1.409A-3(j)(4)(iii) (or any successor provision of law).

(iii) To pay employment taxes to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(vi) (or any successor provision of law).

(iv) In connection with the recognition of income as the result of a failure to comply with Section 409A, to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(vii) (or any successor provision of law).

(v) To pay state, local or foreign taxes to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(xi) (or any successor provision of law).

(vi) In satisfaction of a debt of a Grantee to a Participating Company where such debt is incurred in the ordinary course of the service relationship between the Grantee and the Participating Company, to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(xiii) (or any successor provision of law).

(vii) In connection with a bona fide dispute as to a Grantee's right to payment, to the extent permitted by Treasury Regulation section 1.409A-3(j)(4)(xiv) (or any successor provision of law).

(h) Book Accounts. An Account shall be established for each Grantee who makes an Election. Deferred Stock Units shall be credited to the Account as of the date an Election becomes effective. Each Deferred Stock Unit will represent a hypothetical share of Common Stock credited to the Account in lieu of delivery of the Shares to which the Election applies. To the extent an Account is deemed invested in an Other Investment Fund, the Committee shall credit income, gains, and losses on the same basis as if the Account were directly invested in such Other Investment Fund. To the extent an Account is deemed invested in the Income Fund, the Committee shall credit earnings with respect to such Account at the Applicable Interest Rate, as further provided in Paragraph 8(k).

(i) Plan-to-Plan Transfers. The Committee may delegate its authority to arrange for plan-to-plan transfers as described in this Paragraph 8(i) to an officer of the Company or committee of two or more officers of the Company.

(i) The Committee may, with a Grantee's consent, make such arrangements as it may deem appropriate to transfer the Company's obligation to pay benefits with respect to such Grantee which have not become payable under this Plan, to another employer, whether through a deferred compensation plan, program or arrangement sponsored by such other employer or otherwise, or to another deferred compensation plan, program or arrangement sponsored by the Company or an Affiliate. Following the completion of such transfer, with respect to the benefit transferred, the Grantee shall have no further right to payment under this Plan.

(ii) The Committee may, with a Grantee's consent, make such arrangements as it may deem appropriate to assume another employer's obligation to pay benefits with respect to such Grantee which have not become payable under the deferred compensation plan, program or arrangement under which such future right to payment arose, to the Plan, or to assume a future payment obligation of the Company or an Affiliate under another plan, program or arrangement sponsored by the Company or an Affiliate. Upon the completion of the Plan's assumption of such payment obligation, the Committee shall establish an Account for such Grantee, and the Account shall be subject to the rules of this Plan, as in effect from time to time.

(j) Crediting of Income, Gains, and Losses on Accounts.

(i) In General. Except as otherwise provided in this Paragraph 8(j) or Paragraph 8(k), the value of a Grantee's Account as of any date shall be determined as if it were invested in the Company Stock Fund.

(ii) Credits to Other Investment Funds.

(A) Post-Termination Elections. To the extent credited to the Income Fund, the Accounts of Non-Employee Directors and Section 16 Officers whose Subsequent Deferral Elections are made after their termination of service shall be credited to an Other Investment Fund. The Committee may designate the specific Other Investment Fund or Funds to which the Account of any individual who has terminated service to the Company shall be invested.

(B) High Balance Participants. If a Grantee's Income Fund exceeds the Income Fund Limit as of the last day of a Plan Year, the excess of (x) the amount credited to the Grantee's Income Fund *over* (y) the Income Fund Limit shall be deemed transferred to an Other Investment Fund as of such last day of such Plan Year.

(C) Section 16 Officers. Pursuant to rules established by the Committee or its delegate, a Section 16 Officer may elect to (x) transfer amounts credited to their Accounts that were previously subject to a Diversification Election and that are deemed to be invested in the Income Fund to an Other Investment Fund, or (y) transfer amounts credited to their Accounts that were previously subject to a Diversification Election and that are deemed to be invested in an Other Investment Fund to the Income Fund to the extent that immediately after such transfer, the amount credited to such Section 16 Officer's Income Fund does not exceed the Income Fund Limit.

(D) Subsequent Deferral Elections. Amounts subject to a Subsequent Deferral Election that takes effect while a Grantee's Income Fund exceeds the Income Fund Limit shall be deemed invested in an Other Investment Fund.

(iii) Protocol for Deemed Transfers between Income Fund and an Other Investment Fund. As provided in Article 8, the timing of distributions of amounts credited to a Grantee's Account is established pursuant to Initial Deferral Elections, Regular Deferral Elections, and Subsequent Deferral Elections, and a Grantee may elect various distribution dates for amounts subject to Initial Deferral Elections, Regular Deferral Elections, and Subsequent Deferral Elections. Amounts deemed transferred from the Income Fund to Other Investment Funds as a result of the application of the Income Fund Limit or pursuant to elective transfers described in Paragraph 8(j)(ii)(C), and amounts deemed transferred from an Other Investment Fund to the Income Fund pursuant to elective transfers described in Paragraph 8(j)(ii)(C) shall be sourced and allocated on a uniform and consistent basis as determined by the Committee, provided that amounts transferred among Funds, and any income, gains, or losses credited with respect to such transferred amounts, shall continue to be subject to the distribution timing and manner of distribution election to which such amounts were subject immediately before the deemed transfer, and provided further than no amounts shall be deemed transferred to or from the Income Fund under the 2002 Deferred Compensation Plan.

(k) Diversification Elections. This Paragraph 8(k) shall not apply to elective transfers described in Paragraph 8(j)(ii)(C) of amounts that were previously subject to a Diversification Election.

(i) In General. Except as otherwise provided in Paragraph 8(k)(v):

(A) A Diversification Election shall be available: (x) at any time that a Registration Statement filed under the 1933 Act (a "Registration Statement") is effective with respect to the Plan; and (y) with respect to a Special Diversification Election, if and to the extent that the opportunity to make such a Special Diversification Election has been approved by the Committee or its delegate.

(B) No approval is required for a Diversification Election other than a Special Diversification Election.

(ii) Committee Approval of Special Diversification Elections. The opportunity to make a Special Diversification Election and the extent to which a Special Diversification Election applies to Deferred Stock Units credited to the Company Stock Fund may be approved or rejected by the Committee or its delegate in its sole discretion. A Special Diversification Election shall only be effective if (and to the extent) approved by the Committee or its delegate.

(iii) Timing and Manner of Making Diversification Elections. Each Grantee and, in the case of a Deceased Grantee, the Successor-in-Interest, may make a Diversification Election to convert up to 40 percent (or in the case of a Special Diversification Election, up to the approved percentage) of Deferred Stock Units attributable to such Award credited to the Company Stock Fund to the Income Fund. Except as otherwise provided in Paragraph 8(j)(ii), no deemed transfers shall be permitted from the Income Fund to the Company Stock Fund. Diversification Elections under this Paragraph 8(k)(iii) shall be prospectively effective on the later of: (A) the date designated by the Grantee on a Diversification Election filed with the Committee; or (B) the business day next following the lapse of six months from the date Deferred Stock Units subject to the Diversification Election are credited to the Grantee's Account. In no event may a Diversification Election be effective earlier than the business day next following the lapse of six (6) months from the date Deferred Stock Units are credited to the Account following the lapse of restrictions with respect to an Award.

(iv) Interfund Transfers and Timing of Credits. Account balances subject to a Diversification Election under this Paragraph 8(k) shall be deemed transferred from the Company Stock Fund to the Income Fund or Other Investment Fund, as applicable, immediately following the effective date of such Diversification Election. The value of amounts deemed invested in the Income Fund or Other Investment Fund immediately following the effective date of a Diversification Election shall be based on hypothetical sales of Common Stock underlying the liquidated Deferred Stock Units (and, if applicable, hypothetical purchases of shares of Other Investment Funds) at Fair Market Value as of the effective date of a Diversification Election.

(v) Diversification Limit. No Diversification Election or Special Diversification Election during a calendar year by an Eligible Employee shall be effective if the sum of (x) the value of the Eligible Employee's

Account in the 2005 Deferred Compensation Plan, plus (y) the value of the Eligible Employee's Account in the 2002 Deferred Compensation Plan, plus (z) the value of the Eligible Employee's Account in this Plan to the extent such Account is credited to the "Income Fund," exceeds the "Contribution Limit" (as defined in the 2005 Deferred Compensation Plan) with respect to such calendar year, determined as of September 30th immediately preceding such calendar year.

(l) Grantees' Status as General Creditors. A Grantee's right to delivery of Shares subject to an Election under this Paragraph 8, or to amounts deemed invested in the Income Fund pursuant to a Diversification Election, shall at all times represent the general obligation of the Company. The Grantee shall be a general creditor of the Company with respect to this obligation, and shall not have a secured or preferred position with respect to such obligation. Nothing contained in the Plan or an Award shall be deemed to create an escrow, trust, custodial account or fiduciary relationship of any kind. Nothing contained in the Plan or an Award shall be construed to eliminate any priority or preferred position of a Grantee in a bankruptcy matter with respect to claims for wages.

(m) Non-Assignability, Etc. The right of a Grantee to receive Shares subject to an Election under this Paragraph 8, or to amounts deemed invested in the Income Fund pursuant to a Diversification Election, shall not be subject in any manner to attachment or other legal process for the debts of such Grantee; and no right to receive Shares or cash payments hereunder shall be subject to anticipation, alienation, sale, transfer, assignment or encumbrance.

(n) Required Suspension of Payment of Benefits. Notwithstanding any provision of the Plan or any Grantee's election as to the date or time of payment of any benefit payable under the Plan, To the extent compliance with the requirements of Treas. Reg. § 1.409A-3(i)(2) (or any successor provision) is necessary to avoid the application of an additional tax under Section 409A to payments due to the Grantee upon or following his separation from service, then notwithstanding any other provision of this Plan, any such payments that are otherwise due within six months following the Grantee's separation from service will be deferred and paid to the Grantee in a lump sum immediately following that six month period.

9. **SECURITIES LAWS; TAXES**

(a) Securities Laws. The Committee shall have the power to make each grant of Awards under the Plan subject to such conditions as it deems necessary or appropriate to comply with the then-existing requirements of the 1933 Act and the 1934 Act, including Rule 16b-3. Such conditions may include the delivery by the Grantee of an investment representation to the Company in connection with a Vesting Date occurring with respect to Shares subject to an Award, or the execution of an agreement by the Grantee to refrain from selling or otherwise disposing of the Shares acquired for a specified period of time or on specified terms.

(b) Taxes. Subject to the rules of Paragraph 9(c), the Company shall be entitled, if necessary or desirable, to withhold the amount of any tax, charge or assessment attributable to the grant of any Award or the occurrence of a Vesting Date with respect to any Award, or distribution of all or any part of a Grantee's Account. The Company shall not be required to deliver Shares pursuant to any Award or distribute a Grantee's Account until it has been indemnified to its satisfaction for any such tax, charge or assessment.

(c) Payment of Tax Liabilities; Election to Withhold Shares or Pay Cash to Satisfy Tax Liability.

(i) In connection with the grant of any Award, the occurrence of a Vesting Date under any Award or the distribution of a Grantee's Account, or if, under the terms of an Award, a Grantee's rights with respect to Restricted Stock Units become free of a substantial risk of forfeiture as the result of the Grantee's satisfaction of the age and service conditions for retirement eligibility, and, as a result thereof, employment tax liabilities arise, the Company shall have the right to (A) require the Grantee to remit to the Company an amount sufficient to satisfy any federal, state and/or local withholding tax requirements, or (B) take any action whatever that it deems necessary to protect its interests with respect to tax liabilities. The Company's obligation to make any delivery or transfer of Shares shall be conditioned on the Grantee's compliance, to the Company's satisfaction, with any withholding requirement.

(ii) Except as otherwise provided in this Paragraph 9(c)(ii), any tax withholding obligations incurred in connection with the grant of any Award, the occurrence of a Vesting Date under any Award under the Plan that is not subject to an Initial Deferral Election, Regular Deferral Election or Subsequent Deferral Election, or the distribution of the portion of a Grantee's Account that is credited to the Company Stock Fund, shall be satisfied by the Company's withholding a portion of the Shares subject to such Award having a Fair Market Value approximately equal to the minimum amount of taxes required to be withheld by the Company under applicable law, unless otherwise determined by the Committee with respect to any Grantee. Notwithstanding the foregoing, the Committee may permit a Grantee to elect one or more of the following:

(A) To the extent permitted by applicable law, to have taxes withheld in excess of the minimum amount required to be withheld by the Company under applicable law, provided that the Grantee certifies in writing to the Company at the time of such election that the Grantee owns Other Available Shares having a Fair Market Value that is at least equal to the Fair Market Value to be withheld by the Company in payment of withholding taxes in excess of such minimum amount;

(B) With respect to tax liabilities arising on or after January 1, 2017, to have Shares otherwise deliverable to the Grantee after the application of the other provisions of this Paragraph 9(c)(ii) redeemed by the Company for the Fair Market Value of such Shares on the vesting date or other time of delivery of Shares, and have the cash proceeds of such redemption remitted by the Company to the Grantee to facilitate one or more estimated tax payments to the Internal Revenue Service or other taxing authority for the taxable year in which such vesting occurs, provided that the Grantee certifies in writing to the Company at the time of such election that the Grantee owns Other Available Shares having a Fair Market Value that is at least equal to the Fair Market Value of such Shares to be redeemed by the Company; and

(C) To pay to the Company in cash all or a portion of the taxes to be withheld in connection with such grant, Vesting Date or Account distribution.

In all cases, the Shares so withheld or redeemed by the Company, as applicable, shall have a Fair Market Value that does not exceed the amount of taxes to be withheld or remitted via estimated tax payments minus the cash payment, if any, made by the Grantee or withheld from an Account distribution. Any election pursuant to this Paragraph 9(c)(ii) must be in writing made prior to the date specified by the Committee, and in any event prior to the date the amount of tax to be withheld or paid is determined. An election pursuant to this Paragraph 9(c)(ii) may be made only by a Grantee or, in the event of the Grantee’s death, by the Grantee’s legal representative. Shares withheld or redeemed, as applicable, pursuant to this Paragraph 9(c)(ii) shall not be available for subsequent grants under the Plan. The Committee may add such other requirements and limitations regarding elections pursuant to this Paragraph 9(c)(ii) as it deems appropriate.

(iii) If part of a Grantee’s Award is subject to an Initial Deferral Election or a Regular Deferral Election, or, under the terms of an Award, a Grantee’s rights with respect to Restricted Stock Units become free of a substantial risk of forfeiture as the result of the satisfaction of a performance or service condition, or the Grantee’s satisfaction of the age and service conditions for retirement eligibility, and, as a result thereof, employment tax liabilities arise, then, except to the extent the Grantee affirmatively elects otherwise as part of the Initial Deferral Election or Regular Deferral Election, the Grantee shall be required to remit to the Company an amount sufficient to satisfy any federal, state and/or local withholding tax requirements. As part of the Grantee’s Initial Deferral Election or Regular Deferral Election, the Grantee may elect that Shares subject to such Award be withheld by the Company to the extent necessary to pay such employment tax liabilities (on a fully grossed-up basis to cover income and other withholding tax liabilities that may arise in connection with such an event), notwithstanding that such Shares may not yet have vested and become deliverable in accordance with the terms of the Award. Shares withheld pursuant to this Paragraph 9(c)(iii) shall be deemed allocated and offset against the number of Restricted Stock Units that may become subject to vesting under the terms of the Award on a basis pro rata to the Restricted Stock Units that give rise to the employment tax liabilities. With respect to any Grantee under the Plan who is subject to the short-swing profit recapture rules of section 16(b) of the 1934 Act, the requirement to withhold Shares pursuant to this Paragraph 9(c)(iii) is intended to permit such Grantees to obtain the benefit of section 16(b)(3)(e) of the 1934 Act.

10. **CHANGES IN CAPITALIZATION**

The aggregate number of Shares and class of Shares as to which Awards may be granted and the number of Shares covered by each outstanding Award shall be appropriately adjusted in the event of a stock dividend, stock split, recapitalization or other change in the number or class of issued and outstanding equity securities of the Company resulting from a subdivision or consolidation of the Shares and/or other outstanding equity security or a recapitalization or other capital adjustment (not including the issuance of Shares and/or other outstanding equity securities on the conversion of other securities of the Company which are convertible into Shares and/or other outstanding equity securities) affecting the Shares which is effected without receipt of consideration by the Company. The Committee shall have authority to determine the adjustments to be made under this Paragraph 10 and any such determination by the Committee shall be final, binding and conclusive.

11. **TERMINATING EVENTS**

(a) The Committee shall give Grantees at least thirty (30) days' notice (or, if not practicable, such shorter notice as may be reasonably practicable) prior to the anticipated date of the consummation of a Terminating Event. Except as otherwise provided in Paragraph 11(b), the Committee may, in its discretion, provide in such notice that upon the consummation of such Terminating Event, any conditions to the occurrence of a Vesting Date with respect to an Award of Restricted Stock or Restricted Stock Units (other than Restricted Stock or Restricted Stock Units that have previously been forfeited) shall be eliminated, in full or in part. Further, the Committee may, in its discretion, provide in such notice that notwithstanding any other provision of the Plan or the terms of any Election made pursuant to Paragraph 8, upon the consummation of a Terminating Event, Shares issuable with respect to Restricted Stock or Restricted Stock Units subject to an Election made pursuant to Paragraph 8 shall be transferred to the Grantee, and all amounts credited to the Income Fund shall be paid to the Grantee.

(b) No amounts subject to an Award under the Plan that constitute "deferred compensation" (as defined in Section 409A) shall be subject to distribution before the scheduled vesting date for such distribution in connection with a Change in Control unless such Change in Control constitutes a change in the ownership or effective control of the Company, or in the ownership of a substantial portion of the Company's assets (in either case, as defined in Section 409A of the Code), except to the extent that earlier distribution would not result in any obligation to pay interest or additional tax under Section 409A.

12. **CLAIMS PROCEDURE**

If an individual (hereinafter referred to as the "Applicant," which reference shall include the legal representative, if any, of the individual) does not receive timely payment of benefits to which the Applicant believes he is entitled under Paragraph 8 of the Plan, the Applicant may make a claim for benefits in the manner hereinafter provided.

An Applicant may file a claim for benefits with the Committee on a form supplied by the Committee. If the Committee wholly or partially denies a claim, the Committee shall provide the Applicant with a written notice stating:

(a) The specific reason or reasons for the denial;

(b) Specific reference to pertinent Plan provisions on which the denial is based;

(c) A description of any additional material or information necessary for Applicant to perfect the claim and an explanation of why such material or information is necessary; and

(d) Appropriate information as to the steps to be taken in order to submit a claim for review.

Written notice of a denial of a claim shall be provided within 90 days of the receipt of the claim, provided that if special circumstances require an extension of time for processing the claim, the Committee may notify the Applicant in writing that an additional period of up to 90 days will be required to process the claim.

If the Applicant's claim is denied, the Applicant shall have 60 days from the date of receipt of written notice of the denial of the claim to request a review of the denial of the claim by the Committee. Request for review of the denial of a claim must be submitted in writing. The Applicant shall have the right to review pertinent documents and submit issues and comments to the Committee in writing. The Committee shall provide a written decision within 60 days of its receipt of the Applicant's request for review, provided that if special circumstances require an extension of time for processing the review of the Applicant's claim, the Committee may notify the

Applicant in writing that an additional period of up to 60 days shall be required to process the Applicant's request for review.

It is intended that the claims procedures of this Plan be administered in accordance with the claims procedure regulations of the Department of Labor set forth in 29 CFR § 2560.503-1.

Claims for benefits under the Plan must be filed with the Committee at the following address:

Comcast Corporation
One Comcast Center, 52nd Floor
1701 John F. Kennedy Boulevard
Philadelphia, PA 19103-2838
Attention: General Counsel

13. **REPAYMENT**

If it is determined by the Board that gross negligence, intentional misconduct or fraud by a Section 16 Officer or a former Section 16 Officer caused or partially caused the Company to have to restate all or a portion of its financial statements, the Board, in its sole discretion, may, to the extent permitted by law and to the extent it determines in its sole judgment that it is in the best interests of the Company to do so, require repayment of any Shares of Restricted Stock granted after February 28, 2007 or Shares delivered pursuant to the vesting of Restricted Stock Units granted after February 28, 2007 to such Section 16 Officer or former Section 16 Officer, or to effect the cancellation of unvested Restricted Stock or unvested Restricted Stock Units, if (i) the vesting of the Award was calculated based upon, or contingent on, the achievement of financial or operating results that were the subject of or affected by the restatement, and (ii) the extent of vesting of the Award would have been less had the financial statements been correct. In addition, to the extent that the receipt of an Award subject to repayment under this Paragraph 13 has been deferred pursuant to Paragraph 8 (or any other plan, program or arrangement that permits the deferral of receipt of an Award), such Award (and any earnings credited with respect thereto) shall be forfeited in lieu of repayment.

14. AMENDMENT AND TERMINATION

The Plan may be terminated by the Board at any time. The Plan may be amended by the Board or the Committee at any time. No Award shall be affected by any such termination or amendment without the written consent of the Grantee.

15. Interpretation

The Committee shall have the power to interpret the Plan's provisions, prescribe, amend and rescind rules and regulations for the Plan, and make all other determinations necessary or advisable for the administration of the Plan. All determinations by the Committee shall be final, conclusive and binding on all Persons, including Grantees and their beneficiaries.

16. TERM OF PLAN

The Plan shall expire on May 19, 2026, unless sooner terminated by the Board.

17. GOVERNING LAW

The Plan and all determinations made and actions taken pursuant to the Plan shall be governed in accordance with Pennsylvania law.

Executed on the 10th day of December, 2019.

COMCAST CORPORATION

BY: /s/ David L. Cohen

ATTEST: /s/ Thomas J. Reid

Exhibit 10.16

COMCAST CORPORATION

2002 NON-EMPLOYEE DIRECTOR COMPENSATION PLAN

(As Amended And Restated, Effective December 11, 2019)

1. BACKGROUND AND PURPOSE

COMCAST CORPORATION, a Pennsylvania corporation, hereby amends and restates the Comcast Corporation 2002 Non-Employee Director Compensation Plan**,** effective December 10, 2019, except as otherwise specifically provided herein. The purpose of the Plan is to provide Non-Employee Directors of COMCAST CORPORATION (the "Company") with compensation for services to the Company.

2. DEFINITIONS

(a) "Annual Retainer" means the amount payable for service as a Non-Employee Director for a calendar year, as a member of the Board, and as a member of one or more Committees as determined under Paragraph 3(a) of the Plan.

(b) "Board" means the Board of Directors of the Company.

(c) "Board Meeting" means a meeting of the Board, whether in person or by telephone.

(d) "Committee" means a duly-constituted committee of the Board.

(e) "Committee Meeting" means a meeting of a Committee, whether in person or by telephone, other than a meeting of a Committee that is convened and held during a Board Meeting.

(f) "Company" means Comcast Corporation, a Pennsylvania corporation, including any successor thereto by merger, consolidation, acquisition of all or substantially all the assets thereof, or otherwise.

(g) "Deferred Compensation Plan" means the Comcast Corporation 2005 Deferred Compensation Plan, as amended from time to time, or such other more recently-adopted plan pursuant to which a Non-Employee Director may elect to defer the receipt of compensation for service as a Non-Employee Director.

(h) "Director Emeritus" means an individual designated by the Board, in its sole discretion, as Director Emeritus, pursuant to the Board's Director Emeritus Policy.

(i) "Fair Market Value" means:

(i) If Shares are listed on a stock exchange, Fair Market Value shall be determined based on the last reported sale price of a Share on the principal exchange on which Shares are listed on the date of determination, or if such date is not a trading day, the next trading date.

(ii) If Shares are not so listed, but trades of Shares are reported on the Nasdaq National Market, Fair Market Value shall be determined based on the last quoted sale price of a

Share on the Nasdaq National Market on the date of determination, or if such date is not a trading day, the next trading date.

(iii) If Shares are not so listed nor trades of Shares so reported, Fair Market Value shall be determined by the Committee in good faith.

(j) "Non-Employee Director" means an individual who is a member of the Board, and who is not an employee of the Company, including an individual who is a member of the Board and who previously was an employee of the Company.

(k) "Plan" means the Comcast Corporation 2002 Non-Employee Director Compensation Plan, as set forth herein, and as amended from time to time.

(l) "Plan Year" means the calendar year.

(m) "Restricted Stock Plan" means the Comcast Corporation 2002 Restricted Stock Plan (or such other more recently-adopted generally applicable plan pursuant to which the Company grants restricted stock or restricted stock units).

(n) "Restricted Stock Unit" means a Restricted Stock Unit granted under the Restricted Stock Plan.

(o) "Share" means a share of Comcast Corporation Class A Common Stock, par value $0.01.

3. NON-EMPLOYEE DIRECTOR COMPENSATION

(a) Non-Employee Director Compensation Package. Effective January 1, 2018, Non-Employee Directors shall be entitled to payments, grants and awards determined as follows:

(i) Annual Retainer. The Annual Retainer for service to the Company as a Non-Employee Director shall be $110,000.

(ii) Board Meeting Fee ; Committee Meeting Fee; Other Assignments. No fee shall be payable for attendance in person or via telephone at a Board Meeting or Committee Meeting. A fee of $2,500 shall be paid when a member of the Board attends a meeting (other than a Board Meeting or Committee Meeting) or conducts business on behalf of the Company in his or her capacity as a Director.

(iii) Annual Retainer: Chair - Audit Committee. The Annual Retainer for service as Chair of the Audit Committee shall be $40,000

(iv) Annual Retainer: Member - Audit Committee. The Annual Retainer for service as a member of the Audit Committee shall be $15,000.

(v) Annual Retainer: Chair - Compensation Committee. The Annual Retainer for service as Chair of the Compensation Committee shall be $40,000.

(vi) Annual Retainer: Member - Compensation Committee. The Annual Retainer for service as a member of the Compensation Committee shall be $15,000.

(vii) Annual Retainer: Chair -- Governance and Directors Nominating Committee. The Annual Retainer for service as Chair of the Governance and Directors Nominating Committee shall be $20,000.

(viii) Annual Retainer: Member -Governance and Directors Nominating Committee. The Annual Retainer for service as a member of the Governance and Directors Nominating Committee shall be $12,500.

(ix) Annual Retainer: Chair - Any Committee of the Board other than the Audit Committee, the Compensation Committee or the Governance and Directors Nominating Committee. The Annual Retainer for service as the Chair of any committee of the Board other than the Audit Committee, the Compensation Committee or the Governance and Directors Nominating Committee shall be $10,000.

(x) Annual Retainer: Member - Any Committee of the Board other than the Audit Committee, the Compensation Committee or the Governance and Directors Nominating Committee. The Annual Retainer for service as a member of any committee of the Board other than the Audit Committee, the Compensation Committee or the Governance and Directors Nominating Committee shall be $7,500.

(xi) Stock Grants. Except as otherwise specifically provided below, this Paragraph 3(a)(xi) shall apply as of November 20 each Plan Year beginning after 2019.

(A) The Board shall grant Restricted Stock Units for Shares having a Fair Market Value on the date of grant of $195,000, rounded, if necessary, to the next higher whole Share, provided that with respect to each individual who first becomes a Non-Employee Director on or after January 1, 2020, the Board shall grant Restricted Stock Units for Shares determined as follows:

Date of Commencement of Service as a Non-Employee Director	Number of Shares Subject to Grant of Restricted Stock Units
After November 20 of a Plan Year and before the next following February 20	Shares having a Fair Market Value on the date of grant of $195,000
On or after February 20 of a Plan Year and before the next following May 20	Shares having a Fair Market Value on the date of grant of $146,250
On or after May 20 of a Plan Year and before the next following August 20	Shares having a Fair Market Value on the date of grant of $97,500
On or after August 20 of a Plan Year and before the next following November 20	Shares having a Fair Market Value on the date of grant of $48,750

Each Restricted Stock Unit shall (1) be fully and immediately vested on the date of grant, and (2) bear such other terms and conditions as shall be determined by the Board in its discretion.

(B) In the event that Shares are changed into or exchanged for a different number or kind of shares of stock or other securities of the Company, whether through merger, consolidation, reorganization, recapitalization, stock dividend, stock split-up or other substitution of securities of the Company, the number and class of shares of stock subject to the grant of Restricted Stock Units under the Plan shall be adjusted consistent with the adjustment made pursuant to the Restricted Stock Plan, and such adjustment shall be effective and binding for all purposes of this Plan.

(b) Payment Practices. Payments, grants and awards described in Paragraph 3(a) of the Plan shall be subject to the following payment practices:

(i) Except to the extent deferred under the Deferred Compensation Plan, Annual Retainer payments described in Paragraphs 3(a)(i), 3(a)(iii), 3(a)(iv), 3(a)(v), 3(a)(vi), 3(a)(vii), 3(a)(viii), 3(a)(ix) and 3(a)(x) are payable as soon as reasonably practicable following the close of each calendar quarter, in arrears. Payments shall be pro-rated for partial years of service as a Non-Employee Director or on a Committee of the Board, so that a Non-Employee Director shall be entitled to one-quarter of each Annual Retainer payment referenced in this Paragraph 3(b)(i) for each calendar quarter within which such Non-Employee Director has one or more days of service as a Non-Employee Director or as a member of a Committee of the Board, as applicable.

(ii) A Non-Employee Director may elect to receive up to 50% of the Annual Retainer amount described in Paragraph 3(a)(i) in the form of Shares issuable pursuant to a grant of fully-vested Restricted Stock Units under the Restricted Stock Plan. The number of Shares payable to a Non-Employee Director shall be determined based on the closing price of Shares on the last business day of each calendar quarter and rounded, if necessary, to the next higher whole Share.

(c) Special Rules and Payment Practices for Director Emeritus Compensation.

(i) Except as otherwise provided in Paragraph 3(c)(ii) and Paragraph 3(c)(iii), for the duration of an individual's service to the Company as a Director Emeritus, the Director Emeritus such shall be entitled to compensation on the same basis as a Non-Employee Director as described in Paragraph 3(a) and subject to the same payment practices as apply to a Non-Employee Director as described in Paragraph 3(b).

(ii) Paragraph 3(b)(iii), relating to a Non-Employee Director's elect to receive up to 50% of the Annual Retainer amount described in Paragraph 3(a)(i) in the form of Shares, shall not apply to a Director Emeritus. All Annual Retainer payments to a Director Emeritus shall be in the form of cash.

(iii) This Paragraph 3(c)(iii) shall apply to a Director Emeritus in lieu of the Stock Grant provisions of Paragraph 3(a)(xiii). On November 20, 2020 and each anniversary thereof (or the next following business day if November 20th is not a business day) during which the Director Emeritus is serving as such, the Company shall pay each Director Emeritus a single cash lump sum of $195,000.

4. ADMINISTRATION OF THE PLAN

The Plan shall be administered by the Board. Subject to the express terms and conditions set forth in the Plan, the Board shall have the power, from time to time, to interpret the Plan's provisions, prescribe, amend and rescind rules and regulations for the Plan, and make all other determinations necessary or advisable for the administration of the Plan. The determination of the Board in all matters as stated above shall be conclusive.

5. TAXES

The Company shall withhold the amount of any federal, state, local or other tax, charge or assessment attributable to the grant of any Award or lapse of restrictions under any Award as it may deem necessary or appropriate, in its sole discretion.

6. AMENDMENT AND TERMINATION

The Plan may be amended or terminated by the Board at any time. No accrued right to payment as determined under Paragraph 3 shall be affected by any such termination or amendment without the written consent of the affected Non-Employee Director.

7. EFFECTIVE DATE

The effective date of this amendment and restatement of the Plan is December 10, 2019. The original effective date of the Plan is November 18, 2002.

8. GOVERNING LAW

The Plan and all determinations made and actions taken pursuant to the Plan shall be governed in accordance with Pennsylvania law.

COMCAST CORPORATION

BY: /s/ David L. Cohen

ATTEST: /s/ Thomas J. Reid

SCHEDULE I
COMCAST CORPORATION
NON-EMPLOYEE DIRECTOR COMPENSATION
EFFECTIVE AS OF DECEMBER 10, 2019

Director Annual Retainer	$110,000, subject to election to receive up to half in the form of Comcast Corporation Class A Common Stock
Board Meeting Fee	None[1]
Audit Committee Annual Retainer - Chair	$40,000
Compensation Committee Annual Retainer - Chair	$40,000
Governance and Directors Nominating Committee Annual Retainer - Chair	$20,000
Other Committee Annual Retainer - Chair	$10,000
Audit Committee Annual Retainer - Member	$15,000
Compensation Committee Annual Retainer - Member	$15,000
Governance and Directors Nominating Committee Annual Retainer - Member	$12,500
Other Committee Annual Retainer - Member	$7,500
Annual Restricted Stock Unit Grant	Shares having a Fair Market Value on the date of grant of $195,000

[1] A fee of $2,500 shall be paid when a member of the Board attends a meeting (other than a Board meeting) or conducts business on behalf of the Company in his or her capacity as a Director.

Exhibit 10.20

AMENDMENT NO. 1 TO EMPLOYMENT AGREEMENT

This AMENDMENT NO. 1 TO EMPLOYMENT AGREEMENT ("Amendment No. 1") is entered as of 5:00 p.m. on the 16th day of December, 2019, between COMCAST CORPORATION, a Pennsylvania corporation (together with its subsidiaries, the "Company"), and BRIAN L. ROBERTS ("Employee").

BACKGROUND

The Company and Employee entered into an Employment Agreement (the "Agreement") dated as of July 26, 2017, and desire to further amend the Agreement as provided herein.

AGREEMENT

Intending to be legally bound hereby, the Company and Employee agree as follows:

1. Subparagraph 5(b) of the Agreement is hereby deleted in its entirety.
2. Clause (D) of subparagraph 11(b)(i) of the Agreement (and the word "and" immediately preceding clause (D)) are hereby deleted in their entirety, and the word "and" shall be inserted before "(C)" in such subparagraph.
3. Clause (B) of subparagraph 11(b)(ii) of the Agreement is hereby deleted in its entirety, including the reference to "and (B)" in the last sentence of such subparagraph, and clause (C) of such subparagraph shall become a new clause (B).
4. Clause (A)(1) of subparagraph 11(d)(ii) of the Agreement is hereby amended and restated to read in its entirety as follows: "(1) for the period through the date on which the Term would have expired, without any further automatic extensions, had no termination occurred on the Date of Termination (the "End Date"), on a monthly basis, Employee's Base Salary at the highest annual rate in effect at any time during the Term;".
5. Clause (B) of subparagraph 11(d)(ii) of the Agreement is hereby deleted in its entirety, and clause (C) of such subparagraph shall become a new clause (B) and the word "and" shall be inserted before the new clause (B).
6. Other than as amended hereby, the Agreement remains in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Amendment No. 1 as of the date first-above written.

COMCAST CORPORATION

By: /s/ Thomas J. Reid

EMPLOYEE:

/s/ Brian L. Roberts

Brian L. Roberts

AMENDMENT NO. 4 TO EMPLOYMENT AGREEMENT

This AMENDMENT NO. 4 TO EMPLOYMENT AGREEMENT (“Amendment No. 4”) is entered as of the 16th day of December, 2019, between COMCAST CORPORATION, a Pennsylvania corporation (together with its subsidiaries, the “Company”), and STEPHEN B. BURKE (“Employee”).

BACKGROUND

The Company and Employee entered into an Employment Agreement (the “Original Agreement”) December 16, 2009, as amended by Amendment No. 1 to Employment Agreement, Amendment No. 2 to Employment Agreement, and Amendment No. 3 to Employment Agreement (collectively with the Original Agreement, the “Agreement”), and desire to further amend the Agreement as provided herein.

AGREEMENT

Intending to be legally bound hereby, the Company and Employee agree as follows:

1. Subparagraph 3(e)(ii) of the Agreement is hereby deleted in its entirety.
2. Other than as amended hereby, the Agreement remains in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Amendment No. 4 as of the date first-above written.

COMCAST CORPORATION

By: /s/ Thomas J. Reid

EMPLOYEE:

/s/ Stephen B. Burke
Stephen B. Burke

Exhibit 10.26

AMENDMENT NO. 1 TO EMPLOYMENT AGREEMENT

This AMENDMENT NO. 1 TO EMPLOYMENT AGREEMENT ("Amendment No. 1") is entered as of the 16th day of December, 2019, between COMCAST CORPORATION, a Pennsylvania corporation (together with its subsidiaries, the "Company"), and DAVID L. COHEN ("Employee").

BACKGROUND

The Company and Employee entered into an Employment Agreement (the "Agreement") dated as of October 23, 2015, and desire to further amend the Agreement as provided herein.

AGREEMENT

Intending to be legally bound hereby, the Company and Employee agree as follows:

1. Subparagraph 3(d)(ii) of the Agreement is hereby deleted in its entirety.
2. Other than as amended hereby, the Agreement remains in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Amendment No. 1 as of the date first-above written.

COMCAST CORPORATION

By: /s/ Thomas J. Reid

EMPLOYEE:

/s/ David L. Cohen
David L. Cohen

Exhibit 10.29

AMENDMENT NO. 1 TO EMPLOYMENT AGREEMENT

This AMENDMENT NO. 1 TO EMPLOYMENT AGREEMENT ("Amendment No. 1") is entered as of the 16th day of December, 2019, between COMCAST CORPORATION, a Pennsylvania corporation (together with its subsidiaries, the "Company"), and MICHAEL J. CAVANAGH ("Employee").

BACKGROUND

The Company and Employee entered into an Employment Agreement (the "Agreement") dated as of December 21, 2018, and desire to further amend the Agreement as provided herein.

AGREEMENT

Intending to be legally bound hereby, the Company and Employee agree as follows:

1. Subparagraph 3(d)(ii) of the Agreement is hereby deleted in its entirety.
2. Other than as amended hereby, the Agreement remains in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Amendment No. 1 as of the date first-above written.

COMCAST CORPORATION

By: /s/ Thomas J. Reid

EMPLOYEE:

/s/ Michael J. Cavanagh
Michael J. Cavanagh

Exhibit 10.31

AMENDMENT NO. 1 TO EMPLOYMENT AGREEMENT

This AMENDMENT NO. 1 TO EMPLOYMENT AGREEMENT ("Amendment No. 1") is entered as of the 16th day of December, 2019, between COMCAST CORPORATION, a Pennsylvania corporation (together with its subsidiaries, the "Company"), and DAVID N. WATSON ("Employee").

BACKGROUND

The Company and Employee entered into an Employment Agreement (the "Agreement") dated as of April 2, 2018, and desire to further amend the Agreement as provided herein.

AGREEMENT

Intending to be legally bound hereby, the Company and Employee agree as follows:

1. Subparagraph 3(d)(ii) of the Agreement is hereby deleted in its entirety.
2. Other than as amended hereby, the Agreement remains in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Amendment No. 1 as of the date first-above written.

COMCAST CORPORATION

By: /s/ Thomas J. Reid

EMPLOYEE:

/s/ David N. Watson
David N. Watson

Legal Name	State/Country of Organization
Bravo Media LLC	NY
Centaur Funding Corporation	Cayman Islands
CNBC LLC	DE
Comcast ABB Note Consolidation, Inc.	DE
Comcast Bidco Holdings Limited	United Kingdom
Comcast Bidco Limited	United Kingdom
Comcast Business Communications, LLC	PA
Comcast Cable Communications Management, LLC	DE
Comcast Cable Communications, LLC	DE
Comcast Holdings Corporation	PA
Comcast Hulu Holdings, LLC	DE
Comcast Interactive Media, LLC	DE
Comcast IP Phone, LLC	PA
Comcast MO Investments, LLC	DE
Comcast of Arkansas/Louisiana/Minnesota/Mississippi/Tennessee, LLC	DE
Comcast of Baltimore City, LLC	CO
Comcast of Boston, Inc.	NY
Comcast of California II, LLC	DE
Comcast of California III, Inc.	PA
Comcast of California IX, Inc.	PA
Comcast of California/Colorado, LLC	DE
Comcast of California/Colorado/Florida/Oregon, Inc.	PA
Comcast of California/Colorado/Illinois/Indiana/Michigan, LLC	DE
Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC	DE
Comcast of California/Massachusetts/Michigan/Utah, LLC	DE
Comcast of Chicago, Inc.	IL
Comcast of Colorado IX, LLC	DE
Comcast of Colorado/Pennsylvania/West Virginia, LLC	DE
Comcast of Connecticut, Inc.	OK
Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC	DE
Comcast of Delmarva, LLC	DE
Comcast of Florida/Michigan/New Mexico/Pennsylvania/Washington, LLC	CO
Comcast of Garden State, L.P.	DE
Comcast of Georgia/Illinois/Michigan, LLC	FL
Comcast of Georgia/South Carolina, LLC	CO
Comcast of Houston, LLC	DE
Comcast of Illinois VI, LLC	DE
Comcast of Illinois XI, LLC	DE
Comcast of Illinois/Indiana/Ohio, LLC	DE
Comcast of Illinois/West Virginia, LLC	DE
Comcast of Maine/New Hampshire, Inc.	NH
Comcast of Maryland Limited Partnership	MD
Comcast of Maryland, LLC	CO
Comcast of Massachusetts II, Inc.	DE

Comcast of Massachusetts III, Inc.	DE
Comcast of Minnesota, Inc.	PA
Comcast of Minnesota/Wisconsin, Inc.	PA
Comcast of New Jersey II, LLC	DE
Comcast of Oregon II, Inc.	OR
Comcast of Philadelphia II, LLC	DE
Comcast of Potomac, LLC	DE
Comcast of South Jersey, LLC	DE
Comcast of Southeast Pennsylvania, LLC	DE
Comcast of the South	CO
Comcast of Utah II, Inc.	PA
Comcast OTR1, LLC	DE
Comcast Ventures, LP	DE
E! Entertainment Television, LLC	DE
MSNBC Cable L.L.C.	DE
NBC Olympics LLC	DE
NBC Sports Network, L.P.	DE
NBC West, LLC	DE
NBCU New Site Holdings LLC	DE
NBCUniversal Enterprise, Inc.	DE
NBCUniversal Media, LLC	DE
NBCUniversal Shared Services, LLC	DE
NBCUniversal, LLC	DE
Pacific Regional Programming Partners	NY
Sky CP Limited	United Kingdom
Sky Deutschland Fernsehen GmbH & Co. KG	Germany
Sky German Holdings GmbH	Germany
Sky International Operations Limited	United Kingdom
Sky Italia S.r.l.	Italy
Sky Italian Holdings S.p.A.	Italy
Sky Limited	United Kingdom
Sky Subscribers Services Limited	United Kingdom
Sky Telecommunications Services Limited	United Kingdom
Sky UK Limited	United Kingdom
Telemundo Network Group LLC	DE
TGC, LLC	DE
Universal City Development Partners, Ltd.	FL
Universal City Studios LLC	DE
Universal City Studios Productions LLLP	DE
Universal Content Productions LLC	DE
Universal Film Exchanges LLC	DE
Universal Studios International B.V.	The Netherlands
Universal Studios Limited	United Kingdom
Universal Studios LLC	DE
Universal Television LLC	NY
Universal Television Networks	NY

USJ LLC	Japan

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in Registration Statements on Form S-8 (Nos. 333-101295, 333-104385, 333-121082, 333-123059, 333-130844, 333-130845, 333-130847, 333-150976, 333-161468, 333-174416, 333-174417, 333-179638, 333-183008, 333-193903, 333-210085, 333-212716, 333-224455, 333-224456 and 333-232416) and Form S-3 (No. 333-232941) of our reports dated January 30, 2020, relating to the consolidated financial statements and the consolidated financial statement schedule of Comcast Corporation, and the effectiveness of Comcast Corporation's internal control over financial reporting, appearing in this Annual Report on Form 10-K of Comcast Corporation for the year ended December 31, 2019.

/S/ DELOITTE & TOUCHE LLP

Philadelphia, Pennsylvania

January 30, 2020

Exhibit 23.2

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in Registration Statements on Form S-8 (Nos. 333-177681 and 333-215522) and Form S-3 (No. 333-232941-02) of our reports dated January 30, 2020, relating to the consolidated financial statements and consolidated financial statement schedule of NBCUniversal Media, LLC appearing in this Annual Report on Form 10-K of NBCUniversal Media, LLC for the year ended December 31, 2019.

/S/ DELOITTE & TOUCHE LLP

New York, New York

January 30, 2020

Exhibit 31.1

CERTIFICATIONS

I, Brian L. Roberts, certify that:

1. I have reviewed this Annual Report on Form 10-K of Comcast Corporation;

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 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; and

5. The registrant’s other certifying officer 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: January 30, 2020

/s/ BRIAN L. ROBERTS

Name: Brian L. Roberts
Title: Chief Executive Officer

I, Michael J. Cavanagh, certify that:

1. I have reviewed this Annual Report on Form 10-K of Comcast Corporation;

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 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; and

5. The registrant’s other certifying officer 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: January 30, 2020

/s/ MICHAEL J. CAVANAGH

Name: Michael J. Cavanagh
Title: Chief Financial Officer

Exhibit 31.2

CERTIFICATIONS

I, Brian L. Roberts, certify that:

1. I have reviewed this Annual Report on Form 10-K of NBCUniversal Media, LLC;

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 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; and

5. The registrant's other certifying officer 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: January 30, 2020

/s/ BRIAN L. ROBERTS

Name: Brian L. Roberts
Title: Principal Executive Officer

I, Michael J. Cavanagh, certify that:

1. I have reviewed this Annual Report on Form 10-K of NBCUniversal Media, LLC;

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 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; and

5. The registrant's other certifying officer 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: January 30, 2020

/s/ MICHAEL J. CAVANAGH

Name: Michael J. Cavanagh

Title: Principal Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT

January 30, 2020

Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Ladies and Gentlemen:

The certification set forth below is being submitted in connection with the Annual Report on Form 10-K of Comcast Corporation (the “Report”) for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the “Exchange Act”) and Section 1350 of Chapter 63 of Title 18 of the United States Code.

Brian L. Roberts, the Chief Executive Officer and Michael J. Cavanagh, the Chief Financial Officer of Comcast Corporation, each certifies that, to the best of his knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Comcast Corporation.

/s/ BRIAN L. ROBERTS

Name: Brian L. Roberts
Title: Chief Executive Officer

/s/ MICHAEL J. CAVANAGH

Name: Michael J. Cavanagh
Title: Chief Financial Officer

Exhibit 32.2

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT

January 30, 2020

Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Ladies and Gentlemen:

The certification set forth below is being submitted in connection with the Annual Report on Form 10-K of NBCUniversal Media, LLC (the "Report") for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code.

Brian L. Roberts, the Principal Executive Officer and Michael J. Cavanagh, the Principal Financial Officer of NBCUniversal Media, LLC, each certifies that, to the best of his knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of NBCUniversal Media, LLC.

/s/ BRIAN L. ROBERTS

Name: Brian L. Roberts

Title: Principal Executive Officer

/s/ MICHAEL J. CAVANAGH

Name: Michael J. Cavanagh

Title: Principal Financial Officer