Consolidated Financial Statements
December 31, 2016

VIRGIN MEDIA INC.
1550 Wewatta Street, Suite 1000
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United States

VIRGIN MEDIA INC.

TABLE OF CONTENTS

FORWARD-LOOKING STATEMENTS

Certain statements in this annual report constitute forward-looking statements. To the extent that statements in this annual report are not recitations of historical fact, such statements constitute forward-looking statements, which, by definition, involve risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements. In particular, statements under *Business, Risk Factors, Management's Discussion and Analysis of Financial Condition and Results of Operations* and *Quantitative and Qualitative Disclosures About Market Risk* may contain forward-looking statements, including statements regarding our business, product, foreign currency and finance strategies in 2017, our property and equipment additions in 2017 (including with respect to a network extension program in the United Kingdom (**U.K.**), which was subsequently expanded to include Ireland (the **Network Extension**), subscriber growth and retention rates, competitive, regulatory and economic factors, the maturity of our markets, the anticipated impacts of new legislation (or changes to existing rules and regulations), anticipated changes in our revenue, costs or growth rates, our liquidity, credit risks, foreign currency risks, target leverage levels, our future projected contractual commitments and cash flows and other information and statements that are not historical fact.

Where, in any forward-looking statement, we express an expectation or belief as to future results or events, such expectation or belief is expressed in good faith and believed to have a reasonable basis, but there can be no assurance that the expectation or belief will result or be achieved or accomplished.

In evaluating these statements, you should consider the risks and uncertainties discussed under *Risk Factors* and *Quantitative and Qualitative Disclosures About Market Risk*, as well as the following list of some but not all of the factors that could cause actual results or events to differ materially from anticipated results or events:

- economic and business conditions and industry trends in the countries in which we operate;
- the competitive environment in the cable television, broadband and telecommunications industries in the U.K. and Ireland, including competitor responses to our products and services;
- fluctuations in currency exchange rates and interest rates;
- instability in global financial markets, including sovereign debt issues in the European Union (**E.U.**) and related fiscal reforms;
- consumer disposable income and spending levels, including the availability and amount of individual consumer debt;
- changes in consumer television viewing preferences and habits;
- consumer acceptance of our existing service offerings, including our cable television, broadband internet, fixed-line telephony, mobile and business service offerings, and of new technology, programming alternatives and other products and services that we may offer in the future;
- our ability to manage rapid technological changes;
- our ability to maintain or increase the number of subscriptions to our cable television, broadband internet, fixed-line telephony and mobile service offerings and our average revenue per household;
- our ability to provide satisfactory customer service, including support for new and evolving products and services;
- our ability to maintain or increase rates to our subscribers or to pass through increased costs to our subscribers;
- the impact of our future financial performance, or market conditions generally, on the availability, terms and deployment of capital;
- changes in, or failure or inability to comply with, government regulations in the countries in which we operate and adverse outcomes from regulatory proceedings;

- government intervention that impairs our competitive position, including any intervention that would open our broadband distribution networks to competitors and any adverse change in our accreditations or licenses;
- our ability to obtain regulatory approval and satisfy other conditions necessary to close acquisitions and dispositions, and the impact of conditions imposed by competition and other regulatory authorities in connection with acquisitions;
- changes in laws or treaties relating to taxation, or the interpretation thereof, in the countries in which we operate;
- changes in laws and government regulations that may impact the availability and cost of capital and the derivative instruments that hedge certain of our financial risks;
- the ability of suppliers and vendors (including our third-party wireless network providers under our mobile virtual network operator (**MVNO**) arrangements) to timely deliver quality products, equipment, software, services and access;
- the availability of attractive programming for our video services and the costs associated with such programming;
- uncertainties inherent in the development and integration of new business lines and business strategies;
- our ability to adequately forecast and plan future network requirements, including the costs and benefits associated with the Network Extension;
- the availability of capital for the acquisition and/or development of telecommunications networks and services;
- problems we may discover post-closing with the operations, including the internal controls and financial reporting process, of businesses we acquire;
- our ability to successfully integrate and realize anticipated efficiencies from the businesses we may acquire;
- the leakage of sensitive customer data;
- the outcome of any pending or threatened litigation;
- the loss of key employees and the availability of qualified personnel;
- changes in the nature of key strategic relationships with partners and joint venturers;
- adverse changes in public perception of the “Virgin” brand, which we and others license from Virgin Group Limited, and any resulting impacts on the goodwill of customers toward us; and
- events that are outside of our control, such as political unrest in international markets, terrorist attacks, malicious human acts, natural disasters, pandemics and other similar events.

The broadband distribution and mobile service industries are changing rapidly and, therefore, the forward-looking statements of expectations, plans and intent in this annual report are subject to a significant degree of risk. These forward-looking statements and the above-described risks, uncertainties and other factors speak only as of the date of this annual report, and we expressly disclaim any obligation or undertaking to disseminate any updates or revisions to any forward-looking statement contained herein, to reflect any change in our expectations with regard thereto, or any other change in events, conditions or circumstances on which any such statement is based. Readers are cautioned not to place undue reliance on any forward-looking statement.

BUSINESS

In this annual report, unless the context otherwise requires, the terms "we," "our," "our company," "us" and "Virgin Media" refer, as the context requires, to Virgin Media Inc. or collectively to Virgin Media and its consolidated subsidiaries. Unless otherwise indicated, operational and statistical data, including subscriber statistics and product offerings, are as of December 31, 2016.

Introduction

We are a subsidiary of Liberty Global plc (**Liberty Global**) that provides video, broadband internet, fixed-line telephony and mobile services in the U.K. and Ireland. We are one of the U.K.'s and Ireland's largest providers of residential video, broadband internet and fixed-line telephony services in terms of the number of customers. We believe our advanced, deep-fiber cable access network enables us to offer faster and higher quality broadband services than our digital subscriber line (**DSL**) competitors. As a result, we provide our customers with a leading next-generation broadband service and one of the most advanced interactive television services available in the U.K. and Irish markets.

Our residential broadband subscribers generally access the internet at various download speeds ranging up to 200 Mbps in the U.K. and up to 360 Mbps in Ireland, depending on the tier of service selected. We determine pricing for each different tier of broadband internet service through analysis of speed, market conditions and other factors.

Our digital cable service offerings include basic and premium programming and incremental product and service offerings such as enhanced pay-per-view (**PPV**) programming (including digital cable-on-demand), digital cable recorders, high definition (**HD**), and 3D programming and access to over-the-top (**OTT**) content.

We provide mobile services to our customers in the U.K. and Ireland using third-party networks through MVNO arrangements.

In addition, we provide broadband internet, fixed-line and mobile telephony and other connectivity services to businesses, public sector organizations and service providers in the U.K. and Ireland.

Liberty Global is the world's largest international TV and broadband company, with operations in more than 30 countries across Europe, Latin America and the Caribbean. Liberty Global invests in the infrastructure that empowers its customers to make the most of the digital revolution. Its scale and commitment to innovation enables it to develop market-leading products delivered through next-generation networks that, as of December 31, 2016, connected its 25 million customers who subscribed to over 50 million television, broadband internet and telephony services. As of December 31, 2016, Liberty Global also served 10 million mobile subscribers and offered WiFi service across five million access points. Liberty Global's consumer brands are Virgin Media, Unitymedia, Telenet, UPC, VTR, Flow, Liberty, Más Móvil, and BTC. In addition, Liberty Global also owns 50% of VodafoneZiggo, a Dutch joint venture.

Operating Statistics

The following table shows our operating statistics as of December 31, 2016:

CABLE	U.K.	Ireland	Combined
Footprint			
Homes Passed[1]	13,459,200	852,300	14,311,500
Two-way Homes Passed[2]	13,446,400	807,500	14,253,900
Subscribers (RGUs)[3]			
Basic Video[4]	—	29,700	29,700
Enhanced Video[5]	3,729,100	275,100	4,004,200
Total Video	3,729,100	304,800	4,033,900
Internet[6]	4,916,700	363,500	5,280,200
Telephony[7]	4,390,100	352,400	4,742,500
Total RGUs	13,035,900	1,020,700	14,056,600
Customer Relationships			
Customer Relationships[8]	5,284,000	454,700	5,738,700
RGUs per Customer Relationship	2.47	2.24	2.45
Customer Bundling			
Single-Play	16.9%	20.6%	17.2%
Double-Play	19.6%	34.3%	20.8%
Triple-Play	63.5%	45.1%	62.0%
Fixed-mobile Convergence[9]	20.1%	3.4%	18.9%
MOBILE			
Mobile Subscribers[10]			
Postpaid	2,383,700	17,900	2,401,600
Prepaid	638,600	—	638,600
Total Mobile subscribers	3,022,300	17,900	3,040,200

(1) Homes Passed are homes, residential multiple dwelling units or commercial units that can be connected to our networks without materially extending the distribution plant. Our Homes Passed counts are based on census data that can change based on either revisions to the data or from new census results. Effective October 1, 2016, we made a nonorganic adjustment to our homes passed and two-way homes passed in the U.K. to include 256,000 commercial premises that potentially could subscribe to our residential or small or home office (**SOHO**) services.

(2) Two-way Homes Passed are Homes Passed by those sections of our networks that are technologically capable of providing two-way services, including video, internet and telephony services. Effective October 1, 2016, we made a nonorganic adjustment to our homes passed and two-way homes passed in the U.K. to include 256,000 commercial premises that potentially could subscribe to our residential or SOHO services. At December 31, 2016, the U.K.'s 13,446,400 two-way homes passed included 13,183,400 residential premises and 263,000 commercial premises.

(3) Revenue Generating Unit (**RGU**) is separately a Basic Video Subscriber, Enhanced Video Subscriber, Internet Subscriber or Telephony Subscriber (each as defined and described below). A home, residential multiple dwelling unit, or commercial unit may contain one or more RGUs. For example, if a residential customer subscribed to our enhanced video service, fixed-line telephony service and broadband internet service, the customer would constitute three RGUs. Total RGUs is the sum of Basic

Video, Enhanced Video, Internet and Telephony Subscribers. RGUs generally are counted on a unique premises basis such that a given premises does not count as more than one RGU for any given service. On the other hand, if an individual receives one of our services in two premises (e.g. a primary home and a vacation home), that individual will count as two RGUs for that service. Each bundled cable, internet or telephony service is counted as a separate RGU regardless of the nature of any bundling discount or promotion. Non-paying subscribers are counted as subscribers during their free promotional service period. Some of these subscribers may choose to disconnect after their free service period. Services offered without charge on a long-term basis (e.g., VIP subscribers, free service to employees) generally are not counted as RGUs. We do not include subscriptions to mobile services in our externally reported RGU counts. In this regard, our December 31, 2016 RGU counts exclude our separately reported postpaid and prepaid mobile subscribers.

(4) Basic Video Subscriber is a home, residential multiple dwelling unit or commercial unit that receives our video service over our broadband network either via an analog video signal or via a digital video signal without subscribing to any recurring monthly service that requires the use of encryption-enabling technology. Encryption-enabling technology includes smart cards, or other integrated or virtual technologies that we use to provide our enhanced service offerings. With the exception of RGUs that we count on an equivalent billing unit (**EBU**) basis, we count RGUs on a unique premises basis. In other words, a subscriber with multiple outlets in one premises is counted as one RGU and a subscriber with two homes and a subscription to our video service at each home is counted as two RGUs.

(5) Enhanced Video Subscriber is a home, residential multiple dwelling unit or commercial unit that receives our video service over our broadband network or through a partner network via a digital video signal while subscribing to any recurring monthly service that requires the use of encryption-enabling technology. Enhanced Video Subscribers that are not counted on an EBU basis are counted on a unique premises basis. For example, a subscriber with one or more set-top boxes that receives our video service in one premises is generally counted as just one subscriber. An Enhanced Video Subscriber is not counted as a Basic Video Subscriber. As we migrate customers from basic to enhanced video services, we report a decrease in our Basic Video Subscribers equal to the increase in our Enhanced Video Subscribers.

(6) Internet Subscriber is a home, residential multiple dwelling unit or commercial unit that receives internet services over our networks. Our Internet Subscribers do not include customers that receive services from dial-up connections.

(7) Telephony Subscriber is a home, residential multiple dwelling unit or commercial unit that receives voice services over our networks. Telephony Subscribers exclude mobile telephony subscribers.

(8) Customer Relationships are the number of customers who receive at least one of our video, internet or telephony services that we count as RGUs, without regard to which or to how many services they subscribe. To the extent that RGU counts include EBU adjustments, we reflect corresponding adjustments to our Customer Relationship counts. Customer Relationships generally are counted on a unique premises basis. Accordingly, if an individual receives our services in two premises (e.g., a primary home and a vacation home), that individual generally will count as two Customer Relationships. We exclude mobile-only customers from Customer Relationships.

(9) Fixed-mobile Convergence penetration represents the number of customers who subscribe to both our internet service and postpaid mobile telephony service, divided by the number of customers who subscribe to our internet service.

(10) Our mobile subscriber count represents the number of active subscriber identification module (**SIM**) cards in service rather than services provided. For example, if a mobile subscriber has both a data and voice plan on a smartphone this would equate to one mobile subscriber. Alternatively, a subscriber who has a voice and data plan for a mobile handset and a data plan for a laptop (via a dongle) would be counted as two mobile subscribers. Customers who do not pay a recurring monthly fee are excluded from our mobile telephony subscriber counts after a 30 day period of inactivity. During the fourth quarter we made a nonorganic adjustment to our post pay mobile subscriber count to include 13,500 subscribers who had previously been presented within the prepay subscriber count.

<u>Additional General Note to Table:</u>

As a result of our decision to discontinue our Multi-channel Multipoint Distribution System (**MMDS**) service in Ireland, we have excluded subscribers to our MMDS service from our externally reported operating statistics effective January 1, 2016, which resulted in a reduction to Homes Passed, RGUs and Customer Relationships in Ireland of 22,200.

Products and Services in the U.K.

Cable

We offer our customers a choice of packages and tariffs within each of our cable product categories. Our bundled packaging and pricing are designed to encourage our customers to purchase multiple services across our product portfolio by offering incentives to customers who subscribe to two or more of our products. The types and number of services that each customer uses, and the prices we charge for these services, drive our revenue. For example, broadband internet generates more revenue than our television services and, on average, our "triple-play" customers are more profitable than "double-play" or "single-play" customers. As of December 31, 2016, 83% of our cable customers received multiple services from us and 64% were "triple-play" customers, receiving broadband internet, video and fixed-line telephony services.

We offer our consumer products and services through a broad range of retail channels, including inbound and outbound telesales, customer care centers and online. We have a national retail store base with approximately 85 retail stores and approximately 140 fixed and transportable kiosk-type retail outlets that offer a complete range of our consumer products and services. Our stores not only provide sales services, but also showcase our products, allowing demonstrations and customer interaction, and help resolve customer queries. In addition, as of December 31, 2016, we employed approximately 2,500 staff members in our call centers. We also use outsourced call centers in the U.K., Philippines and India.

Broadband Internet

We deliver ultrafast broadband internet services to customers on our cable network. As of December 31, 2016, we provided cable broadband services to approximately 4.9 million subscribers. We are one of the leading providers of broadband internet access in the U.K.

We currently offer three tiers of cable broadband services to new subscribers with unlimited downloads at speeds of up to 50 Mbps, 100 Mbps and 200 Mbps.

Television

Our digital cable platform includes access to over 290 linear television channels, advanced interactive features and a range of premium subscription-based and PPV services. As of December 31, 2016, we provided digital cable services to approximately 3.7 million residential subscribers.

In addition to our linear television services, which allow our customers to view television programming at a scheduled time, our digital cable customers also have access to a broad range of digital interactive services, including Virgin TV On Demand, one of the most comprehensive digital cable-on-demand services in the U.K., and Virgin TV Anywhere, one of the most comprehensive cloud-based entertainment services in the U.K., which are described below.

We also offer interactive "red button" applications from the British Broadcasting Corporation (**BBC**) and other commercial broadcasters, such as Sky plc (**Sky**) and BT Sport. Red button functionality in the U.K. permits television viewers to press a red button on their remote control handset to receive additional interactive services, including multiple alternative broadcasts.

TiVo and Digital Cable Recorders

We offer three advanced digital cable recorders in the U.K. Set-top boxes equipped with digital cable recorders digitally record television programming to a hard disk in real-time, which allows customers to play back, pause, fast forward or rewind the program at any point during or for a period after the broadcast.

Under a strategic partnership agreement, we are the exclusive distributor of the TiVo user interface software for set-top boxes in the U.K.

The Virgin Media TiVo set-top box is available in both 1TB and 500 GB sizes, with the 1TB version recording up to 500 hours of television. It brings together television, digital cable-on-demand and OTT services through a single user experience and features unique content discovery and personalization tools. The TiVo box is HD-enabled and has three tuners, allowing viewers to record three programs while watching a fourth they previously recorded. The TiVo service, combined with the existing digital cable-on-demand service, makes available television shows, movies and music videos in addition to supporting web video services such as Netflix, the BBC iPlayer and YouTube. As of December 31, 2016, we had approximately 3.2 million TiVo customers, or 85% of our television customer base.

In late 2016, we launched a new set-top box called the Virgin Media V6 box. This device combines ultra high-definition 4K video with improved streaming functionalities and more processing power. The Virgin Media V6 box allows customers to record six channels simultaneously while watching a seventh. Customers can also start watching programming on one television and pick up where they left off on other TiVo boxes in another room or through an app on their smart phones and tablets.

Virgin TV On Demand

Our digital cable-on-demand service provides our customers with instant access to a wide selection of premium movies, television programs, music videos and other digital cable-on-demand content including live PPV events. Content is available in broadcast standard definition (**SD**), HD and some Ultra-HD/4K. Our HD content is available to all of our digital cable customers who have an HD box, at no additional charge, however the exact channels available depend on the particular customer's package. Viewers can watch programs instantly, without the need for buffering, and can freeze-frame, fast-forward and rewind the content at will. This gives our customers increased control over the content and timing of their television viewing. Additionally, our cable network enables us to provide digital cable-on-demand content to our customers separately from their high-speed data services, thereby maintaining their broadband speed. We have also participated in a trial with the BBC via their on-demand player.

The primary categories of content available within Virgin TV On Demand are television programming, movies (on a PPV and premium subscription basis) and music videos. A selection of content, including our “catch-up” television service, is available free of charge to all of our television customers. The BBC iPlayer is the largest catch-up television service we offer, enabling viewers to view more than 700 hours of BBC programs. Our catch-up television also includes content from All 4, My5, ITV Player and other linear channels.

Subscription Video On Demand

We offer our television customers basic subscription digital cable-on-demand (**SVOD**) with a selection of content that increases in number in line with the customer’s digital cable subscription tier.

The offering includes 'Virgin TV Exclusives' which is a handful of TV series that are exclusively available to Virgin TV customers. The Sky On Demand service allows our customers to access approximately 1,000 hours of television content from across Sky's range of basic channels, and around 1,000 movie titles being made available to Virgin Media subscribers of Sky Cinema. Other content providers include BBC Worldwide, Sony, Viacom, NBCU and A&E Networks. Tailored advertising is also inserted across many providers within the SVOD and free catch-up services.

Virgin Movies

Our PPV movie service, Virgin Movies, offers approximately 500 titles from all the major studios and the majority of independent studios, most of which are available for rent on the same day as their DVD release and some the same day as their cinema release. All our digital cable customers have access to Virgin Movies, which, after purchase, may be viewed multiple times within a 48-hour window.

Virgin TV Anywhere

In November 2012, we launched Virgin TV Anywhere, one of the U.K.’s most comprehensive internet streaming television services that allows our television customers to stream more than 110 live television channels and watch Virgin TV On Demand through their web browser or via mobile applications (**apps**) for compatible iOS and Android tablets and mobiles anywhere in the U.K. with a broadband connection.

Customers are able to also discover new shows with customized recommendations and ratings. Our TiVo customers can manage their TiVo boxes on compatible iOS and Android tablets and mobiles, and online via web browser. When in the home, mobile devices can also act as a remote control for their TiVo boxes. Virgin TV Anywhere is available at no extra cost to our digital cable customers. Virgin Media subscribers of Sky Sports or Sky Cinema are able to stream these premium channels online or on iOS and Android mobile devices through Sky-provided services.

Fixed-line Telephony

We provide local, national and international telephony services to our residential customers over our twisted copper, hybrid fiber coaxial cable and fiber-to-the-premise (**FTTP**) networks. We also provide telephony services through voice-over-internet-protocol (**VoIP**) technology, which was launched in late 2016. We offer a basic line rental service to our cable customers for a fixed monthly fee. In addition, we also offer tiered bundles of call tariffs, features and services, including calling plans that enable customers to make unlimited national landline calls and calls to mobile telephones either during specified periods or anytime, for an incremental fixed monthly fee. Our fixed-line customers can also make calls to our mobile customers free of charge and may also subscribe to additional services such as call waiting, call blocking, call forwarding, three-way calling, advanced voicemail and caller line identification services for an additional fee. As of December 31, 2016, we provided fixed-line telephony services to approximately 4.4 million residential subscribers.

Mobile

Our mobile communication services are provided using the mobile network owned by EE Limited (**EE**) through an MVNO arrangement offering 4G and 3G services. During 2017, our mobile operations will move from a light MVNO to a full MVNO arrangement due to a revised agreement with the third-party network provider. We offer a broad range of mobile communications products and services, including mobile voice services and data services, such as short message service (**SMS**) and picture messaging. We also offer a broad range of handsets, including Android-based, Microsoft Windows and Apple iOS-based smartphones, and mobile broadband services, which complement our fixed broadband offering.

Our customers have free access to our Virgin Media WiFi app (available to download from the App Store and Google Play) which connects them to a footprint of over 500k WiFi hotspots across the U.K., along the high street, on London Underground, airports and through our own network of home hubs.

Our customer base comprises both postpaid customers, who subscribe to our services for periods ranging from a minimum of 30 days for a SIM-only contract to up to 24 months for contracts taken alongside a "Split-contract Program" handset purchase agreement, and prepaid customers, who top up their accounts prior to using the services and have no minimum contracted term. We also offer Split-contract Program mobile contracts, providing customers with the flexibility to finance the purchase of a handset independently/separately to their airtime contract.

As of December 31, 2016, we had over 3.0 million mobile services customers, of which approximately 2.4 million were postpaid customers.

We continue to focus on increasing our proportion of higher-value postpaid customers, improving access to content via our mobile platform, expanding our range of higher-value mobile handsets and cross-selling into homes already connected to our cable network. We continue to promote the use of our mobile platform to view internet and television content by introducing features such as Virgin TV Anywhere.

Business Products and Services

Through the Virgin Media Business brand, we offer a broad portfolio of business-to-business (**B2B**) voice, data and internet solutions to small businesses, medium and large enterprises and public sector organizations in the U.K., ranging from analog telephony to managed data networks and managed communication services. We also provide services to small businesses and medium enterprise customers using our cable network. B2B peak usage generally occurs at different times of the day from that of our residential customers, which allows for more efficient use of our network. We provide B2B services to approximately 42,000 U.K. businesses and over 3,000 public sector organizations. We have security accreditations across a range of B2B products and services in order to increase our offerings to public sector organizations in the U.K. These accreditations are granted subject to periodic reviews of our policies and procedures by the U.K. governmental authorities. If we were to fail to maintain an accreditation or to obtain a new one when required, it could impact our ability to provide certain offerings to the public sector.

We offer contractual service levels to all B2B customers and these are supported by U.K.-based regional teams. In addition to our standard B2B service levels, a tiered B2B service level is available to tailor service requirements based on size of organization, sector and importance. These tiered B2B service levels include priority response, named dedicated staff and customer premises-based teams managing service levels.

Converged Solutions

Converged solutions use a single network to transport voice, data and video, allowing our B2B customers to benefit from cost synergies. Additionally, we offer services such as internet protocol (**IP**) virtual private networks, which enable our customers to prioritize bandwidth for different types of traffic so that more time sensitive data or critical application data is transported with priority, providing increased flexibility and control over data management. Our extensive network reach also enables us to offer large or dispersed organizations the ability to effectively link sites across the U.K. using a wide range of access technologies, supporting services such as voice and video conferencing, instant messaging and file transfers.

Ethernet

Our Ethernet network has approximately 300 Ethernet nodes and is capable of carrying a variety of services and high bandwidth applications simultaneously. We have been delivering Ethernet services for over 10 years and have achieved both Metro Ethernet Forum (**MEF**) 9 and MEF 14 accreditation (becoming the first service provider in the world to renew this accreditation), ensuring our Ethernet product portfolio can support stringent real-time communications applications, including VoIP and HD-quality videoconferencing. We offer a range of products from local area network extensions to managed wide area Ethernet networks, providing our B2B customers with high bandwidth and flexible solutions, including market-leading point to multi-point services.

Applications and Services

As an overlay to network products we also offer applications, such as video conferencing, and managed services, such as information security services, designed to increase flexibility and reduce costs for our customers.

Voice and Mobile Services

We offer a comprehensive range of B2B voice products, from analog and digital services to converged IP telephony solutions. Our B2B voice solutions include basic features such as call divert and voicemail, as well as products such as Centrex, which provides switchboard-like capability that is managed from our telephone exchange, offering our customers a cost-effective, scalable alternative to a premises-based system. We also provide similar Centrex features through a number of hosted unified IP-based solutions, which add additional features such as integrated messaging and video. This combination of mature services being offered in parallel with a next-generation of converged services allows our customers to carry out phased migrations to new technologies.

In addition, we provide a mobile service to public and private sector B2B customers, providing voice and 3G and 4G data services as a reseller of EE's business services. As a result, we now offer our B2B customers a one-supplier solution for both their fixed-line and mobile telephony needs.

*Bundled offers for small and medium enterprises (**SME**) and SOHO customers*

We offer SME and SOHO customers a range of solutions to help them realize their digital potential underpinned by our ultrafast network. In addition to a range of connectivity products to suit their level of digital requirement, customers can also work with us to meet their voice communications needs (fixed, mobile and IP) and a range of other needs including security and hardware. In January 2016, Virgin Media Business launched the U.K.'s fastest, widely available broadband speed for small businesses, a service offering up to 300 Mbps download speed over Virgin Media's own ultrafast network.

Our Network in the U.K.

We deliver voice, video and high-speed data services over our cable access network, which covers parts of many metropolitan areas in the U.K. The deep-fiber design of our access network enables us to transmit data by means of fiber optic cable from equipment in technical properties known as "headends" and "hubsites" to widely deployed distribution cabinets; data are then transmitted to further distribution points via fiber or coaxial cable. For video and high-speed data services, until 2016, we had only high capacity coaxial cable as the final connection into each home, which has considerable spectrum and associated bandwidth capabilities and which concurrently supports a full portfolio of linear and on-demand services as well as high-speed broadband services for both consumers and business customers. The final connection into the majority of homes from the fiber access network comprises two components combined into a single drop cable (twisted copper and coaxial cable). Since 2016, we have put in place an FTTP architecture for a proportion of newly developed areas where the final connection to the home is fiber rather that coaxial based. Using DOCSIS 3.0, we currently offer download speeds of up to 300 Mbps. We have also conducted trials of 1 Gbps and 1.5 Gbps downstream speeds. For fixed-line telephony services, we have used the twisted copper pair access network that exists in parallel with our hybrid fiber coaxial network. As a result of the extensive use of fiber deep in our access networks, we are also able to provide high-speed data network services to business customers delivering nationwide connectivity.

We believe that our deep-fiber access network has enabled us to take a leading position in the roll-out of next-generation broadband access technologies in the U.K. In recent years, we completed the upgrade from analog to digital across virtually all of our hybrid fiber coaxial access network footprint. As of December 31, 2016, virtually all of the homes served by our cable network could receive all our broadband, digital television and fixed-line telephony services. We expect to leverage the next generation of cable technology (DOCSIS 3.1) to increase the data rates that can be transmitted over the coaxial cable that, in turn, allows our existing infrastructure to support customer download speeds of 1 Gbps and beyond.

Competition

We face intense competition from incumbent telecommunications operators, direct-to-home satellite operators and/or other providers, which offer television, broadband internet, fixed-line telephony and mobile services. In addition, technological advances and product innovations have increased, and are likely to continue to increase, the number of alternative providers available to our customers and intensify the competitive environment.

We believe that our deep-fiber access provides us with several competitive advantages in the areas served by our network. For instance, our cable network allows us to concurrently deliver internet access, together with real-time television and digital cable-on-demand content at higher speeds and with less data loss than services of other providers. Our competitors are reliant on the access infrastructure of the U.K.'s incumbent telecommunications provider, BT Group plc (**BT**), which typically relies on copper-pair technology from the local exchange to the customer's home. BT is upgrading its infrastructure to provide data services capable of higher speeds, using fiber-to-the-cabinet (**FTTC**) technology, but service providers using BT's existing network are subject to performance constraints as a result of copper based services degrading over distance which affects data download. Our cable network also offers benefits over the infrastructure of satellite service providers, which are unable to offer a full array of interactive services in the absence of a fixed-line telephony or broadband connection using third-party access infrastructure. By contrast, our cable infrastructure allows us to provide "triple-play" bundled services of broadband internet, television and fixed-line telephony services without relying on a third-party service provider or network. In addition, our capacity is dimensioned to support peak consumer demand. In serving the B2B market, many aspects of the network can be leveraged at very low incremental cost given that B2B demand peaks at a time when residential consumer demand is low, and peaks at lower levels than residential consumer demand. As such, we believe we have an advantage over competitors who serve either residential or B2B customers but not both.

We also face intense competition in the mobile retail market, which is primarily driven by increased pricing pressure from both established and new service providers, evolving customer needs and technological developments.

We offer most of our products on a stand-alone basis or as part of bundled packages designed to encourage customers to subscribe to multiple services. We offer television services, broadband internet and fixed-line telephony services to residential users exclusively in areas served by our cable network. We also offer broadband internet, data services, fixed-line telephony and mobile telephony and data services to business users throughout the U.K., using both our own network and wholesale inputs from other providers. Our primary competitors are BT (which now owns and operates mobile operator, EE), Sky (which has recently announced its proposed acquisition by 21st Century Fox and is currently seeking regulatory clearances for the transaction), TalkTalk

Telecom Group plc (**TalkTalk**), Vodafone Limited (**Vodafone**), Hutchison 3G UK Limited (which operates in the U.K. as "3 UK") and Telefónica UK Limited (which operates in the U.K. as "**O2**").

Broadband Internet

We have a number of significant competitors in the market for broadband internet services. Of those competitors, BT is the largest retail provider, serving approximately 32% of the total broadband internet market in the U.K. We serve approximately 19% of the total broadband market in the U.K.

BT provides broadband internet access services over its own DSL access network and is advanced in its upgrade to FTTC, which is currently available to approximately 90% of the U.K. with the intention of reaching 95% of the U.K. by the end of 2017. BT's local access network is managed by its Openreach division, via which access for BT retail divisions and for competing providers on a wholesale basis is provided. BT has announced its intention to rollout ultrafast speeds of up to 300 Mbps to 500 Mbps by the end of 2020 to up to 10.0 million premises using G-fast technology, a DSL standard designed for local loops less than 250 meters. This technology is also expected to eventually support a rollout of 1 Gbps service.

Operators such as Sky, TalkTalk and EE deploy their own network access equipment in BT exchanges via a process known as local loop unbundling (**LLU**). This allows an operator to reduce the recurring operating costs charged by BT by reducing the proportion of traffic that must travel directly over BT's network. LLU deployment requires a substantial capital investment to implement and requires a large customer base to deliver a return on investment.

In addition to the competition and pricing pressure in the broadband market arising from LLU, we may be subject to increased competition in the provision of broadband services from mobile broadband and technological developments (such as long-term evolution, or **LTE**, and 4G mobile technology) and other wireless technologies, such as WiFi and Worldwide Interoperability for Microwave Access (**Wi-Max**). For example, EE (now owned and operated by BT) has announced that its 4G mobile coverage has reached over 99% of the U.K. population.

Television

We are the largest cable television provider in the U.K. in terms of the number of video customers and the sole provider of video cable services in all of our network area. Our digital television services are available to approximately 46% of U.K. television households and we serve approximately 13% of the U.K. television market. Our digital television services compete primarily with those of FTA television and Sky. Sky is the primary pay satellite television platform in the U.K. and Ireland with approximately 12.4 million subscribers. Sky owns the U.K. rights to SD, HD and 3D versions, as the case may be, of various sports and movie programming content. Sky is both our principal competitor in the pay-TV market and an important supplier of basic and premium television content to us. Other significant competitors are BT and TalkTalk, each of which offer triple-play services, as well as internet protocol television (**IPTV**) video services. Each of these competitors have multimedia home gateways.

In February 2016, Sky launched its next-generation set-top box called Sky-Q offering greater storage and recording capability, with access to increased content (including applications). In August, Sky began offering Ultra-HD content for Sky-Q customers with the 2TB Box, which includes sport, movies and entertainment.

BT is both a principal competitor and an important supplier of content to us. In August 2013, BT launched its own premium BT Sport channels, providing a range of sports content including football from the English Premier League and, through the 2020/2021 football season, BT has exclusive rights to the UEFA Champions League and the UEFA Europa League. The BT Sport channels are available over BT's IPTV platform, Sky's satellite system and our cable network. BT is currently offering customers who subscribe to their BT television service or EE mobile services free access to some of the SD version of BT Sport channels. BT has also launched a BT Sport Ultra HD channel.

Content owners, online aggregators and television channel owners are increasingly using broadband as a new digital distribution channel direct to consumers. In 2012, a free-to-air internet-connected television service to U.K. homes was launched by YouView, a joint venture which includes Arqiva Group, BBC, BT, Channel 4, Channel 5, ITV plc (**ITV**), and TalkTalk. Consumers are able to purchase a box from retailers or get a free subsidized box as part of a bundled package (television, broadband and telephony) with providers BT and TalkTalk.

Residential customers may also receive digital terrestrial television (**DTT**), which is delivered to homes through a conventional television aerial and a separately purchased set-top box or an integrated digital television set. The free-to-air DTT service in the U.K. is called Freeview. This service is provided by a consortium of operators, including the BBC.

BBC and ITV also offer a free-to-air digital satellite alternative to Freeview service, known as **Freesat**. Freesat offers approximately 150 subscription-free television channels, including selected HD channels such as BBC 1 HD, ITV HD and Channel 4 HD. Freesat also offers a range of satellite boxes offering access to catch-up television services under the brand Freetime, and a range of digital video recorders (**DVR**) under the brand Freesat+. Vodafone has announced an intention to launch its own television service to allow it to offer quad-play services in the U.K. in 2017.

Residential customers may also access television content by means of IPTV. BT TV, a combined DTT and video on demand service offered by BT over a DSL broadband connection, is available throughout the U.K. Sky also offers live streamed television and services over a broadband connection, through its Sky On Demand, Sky Go and NOW TV services. In addition, Netflix, Amazon, Google, Apple and others have launched IPTV products.

The communications industry is constantly evolving and there are a number of new and emerging technologies which can be used to provide video services that are likely to compete with our digital cable and digital cable-on-demand services. These include the DSL services mentioned above and next-generation LTE services. We expect continued advances in communications technology and in content, such as ultra HD.

Fixed-line Telephony

We compete primarily with BT in providing telephony services to residential customers in the U.K. BT occupies an established market position as the former state provider. We also compete with other telecommunications companies that provide telephony services directly, through LLU, or indirectly. These include TalkTalk and Sky, and mobile telephone operators such as EE (now owned and operated by BT), Vodafone and 3 U.K. Our share of the fixed-line telephony market in the U.K. is approximately 15%.

We compete with mobile telephone businesses that offer consumers an alternative to fixed-line telephony services. Mobile telephone services also contribute to the competitive price pressure on fixed-line telephony services.

In addition, we face competition from companies offering VoIP, services using the customer's existing broadband, mobile data and WiFi connections. These services are offered by independent providers, such as WhatsApp and Skype, as well as those affiliated with established competitors, such as BT (which now owns and operates EE). These services generally offer free calls between users of the same service, but charge for calls made to fixed-line or mobile numbers either on a flat monthly rate for unlimited calls (typically restricted to geographic areas) or based on usage.

Mobile

In the mobile telephony market, we face direct competition from mobile network operators (**MNO**s), such as BT (through its wholly owned subsidiary, EE), O2, Vodafone and 3 U.K., and other MVNOs, such as Tesco Mobile, Lebara, TalkTalk, Sky and ASDA. We also compete with fixed-line telephony operators, with companies offering VoIP services, and from the growth in online communication, as described in "Fixed-line Telephony" above.

EE became the first U.K. mobile network operator to launch 4G in October 2012, following approval from the U.K. Office of Communications (**Ofcom**) to use its existing 1800MHz spectrum. Vodafone, O2 and 3 U.K. launched their 4G services during 2013. We launched 4G services in November 2016. In addition, our ability to include mobile for our customers in the U.K. and Ireland for a low incremental fee creating a fixed-mobile convergence bundle is a key market offer.

Business

The U.K. B2B telecommunications market is characterized by strong competition and ongoing consolidation. Competition in the U.K. B2B telecommunications market continues to be value driven, with the key components being quality, reliability and price.

We compete primarily with traditional network operators such as Vodafone UK and BT. BT represents the main competition nationally due to its network reach and product portfolio. We also compete with regional providers, such as COLT Telecom Group plc, which have a strong network presence within limited geographic areas. Recently, we have faced increasing competition from services provided by MNOs that target small B2B customers.

In the retail market, we continue to focus on small, medium and large nationally oriented businesses and public sector organizations.

Virgin Media Ireland

On February 12, 2015, we acquired a 65.0% controlling interest in Virgin Media Ireland Ltd. (**VM Ireland**), formerly known as UPC Broadband Ireland Ltd., and its subsidiaries from a subsidiary of Liberty Global outside of the Virgin Media borrowing group (the **VM Ireland Acquisition**). The remaining 35.0% noncontrolling interest in VM Ireland was acquired by another subsidiary of Liberty Global outside of the Virgin Media borrowing group.

In connection with the VM Ireland Acquisition, we (i) paid aggregate cash consideration of €1,341.3 million (£993.8 million at the transaction date) to acquire (a) the controlling interest in VM Ireland and (b) another Liberty Global's subsidiary's right to receive €634.3 million (£470.0 million at the transaction date) from a VM Ireland subsidiary pursuant to a promissory note (the **VM Ireland Note**) and (ii) received a €165.6 million (£122.7 million at the transaction date) cash payment from Liberty Global Europe 2 Limited (**LG Europe 2**), our immediate parent, formerly known as Lynx Europe 2 Limited, on an 8.5% note receivable due 2023.

VM Ireland is the largest cable television operator in Ireland by number of subscribers. VM Ireland provides video, broadband internet and fixed and mobile telephony services in five regional clusters in Ireland, including the cities of Dublin, Cork, Galway and Limerick to both residential and B2B customers. As of December 31, 2016, VM Ireland provided services to an aggregate of 454,700 customers, comprising 1.0 million RGUs (including 304,800 video subscribers, 363,500 broadband internet subscribers, and 352,400 fixed-telephony subscribers) across a footprint of 852,300 homes passed. In addition, VM Ireland provided services to 17,900 mobile subscribers. VM Ireland provides digital and analog cable video services via cable. Its cable network is 95% upgraded to two-way capability, with 98% of its cable homes served by a network with a bandwidth of at least 750 Mhz. VM Ireland makes its digital video, broadband internet and fixed-line telephony services available to 98%, 95% and 94%, respectively, of its homes passed. Highlights of VM Ireland include:

- For enhanced video subscribers, different packages starting with a base package that includes 72 video channels and several radio channels, along with a variety of premium channels, HD programming, a PPV service, an electronic program guide, remote booking and a DVR service;

- Horizon TV (Liberty Global's next-generation set-top box platform), which is a family of media products that allows customers to view and share content across their television, computer, tablet and smartphone, and includes the Horizon TV app and Horizon TV online service;

- Download speeds of up to 360 Mbps for residential customers and up to 500 Mbps for business customers utilizing Euro DOCSIS 3.0 technology;

- Business WiFi distribution networks via VM Ireland's wholly-owned subsidiary, Bitbuzz Limited, which was acquired in December 2014 (primarily servicing the hospitality industry);

- Community WiFi networks in select markets, with plans to activate this network throughout our Ireland footprint;

- Digital telephony, via VoIP, with multiple value-added features; and
- A mobile telephony SIM-only service via an MVNO arrangement with Three Ireland (Hutchison) Limited (**Three Ireland**). This service was launched in October 2015 and is available to all consumers in the Republic of Ireland.

On December 7, 2015, we acquired Tullamore Beta Limited, the parent of TV3, a commercial broadcaster in Ireland, for a purchase price of €80 million (£58 million at the transaction date). The purchase price was funded through existing liquidity.

Regulatory Matters

Overview

Legislative Framework

Our business activities are subject to the laws and regulations of the E.U., the U.K. and Ireland. At an E.U. level, we are regulated by a variety of legal instruments and policies, collectively referred to as the "Regulatory Framework," regulating the establishment and operation of electronic communications networks, including cable television and traditional telephony networks, and the offer of electronic communications services, such as telephony, internet and, to some degree, television services. The Regulatory Framework does not generally address issues of content. The Regulatory Framework primarily seeks to open European markets for communications services and comprises:

- Directive 2002/21 on a common regulatory framework for electronic communications networks and services;
- Directive 2002/20 on the authorization of electronic communications networks and services;
- Directive 2002/19 on access to, and interconnection of, electronic communications networks and associated facilities; and
- Directive 2002/22 on universal service and users rights relating to electronic communications networks and services.

These Directives are supplemented by E.U. Directive 2002/58, regulating the processing of personal data and the protection of privacy in the electronic communications sector.

The European Commission is currently undertaking a review of the Regulatory Framework which could result in material changes to certain elements of it. While the timing of any changes remain unclear, a target date for implementation of 2019 or 2020 has been set. It remains to be seen what implications Brexit, see *Risk Factors - Risks Relating to Our Industry and Our Business,* may have on the applicability of these changes, and indeed the Regulatory Framework in general, to the U.K.

In the U.K., the Regulatory Framework is implemented through (i) the Communications Act 2003, which regulates all forms of communications technology, whether used for telecommunications or broadcasting, and (ii) the Wireless Telegraphy Act 2006, which regulates radio communications in the U.K. (including spectrum, licensing arrangements, usage conditions and charges, license bidding and trading and enforcement and penalties). In addition, the Privacy and Electronic Communications Regulations 2003, as amended, implemented E.U. Directive 2002/58, which regulates the processing of personal data and the protection of privacy in the electronic communications sector.

We are also subject to regulation under the U.K. Broadcasting Acts 1990 and 1996 and other U.K. statutes and subordinate legislation, including the Competition Act 1998, the Enterprise Act 2002 and the Enterprise and Regulatory Reform Act 2013. Ofcom regulates both linear and on-demand programming, the latter deriving from the Audiovisual Media Services Directive (Directive 2010/13/EU).

In Ireland, the Regulatory Framework is implemented through (i) the Communications Regulation Act 2002, as amended, which regulates electronic communications networks, including cable networks and traditional telephony networks and electronic communications service providers and (ii) the Wireless Telegraphy Act 1926 (as amended), which regulates radio communications in Ireland (including with respect to the spectrum, licensing arrangements, usage conditions and charges enforcement and penalties). The Privacy and Electronic Communications Regulations 2003, as amended, implemented E.U. Directive 2002/58, regulating the processing of personal data and the protection of privacy in the electronic communications sector.

We are also subject to regulation under the Broadcasting Act 2009 and other Irish Acts and Statutory Instruments, including the Competition Acts 2002-2014.

U.K. Regulatory Authorities

Ofcom is the key regulatory authority for the communications sector in which we operate in the U.K. It is responsible for furthering the interests of consumers by promoting competition. In particular, Ofcom is responsible for regulating the behavior of providers of electronic communications networks or services that have significant market power in identified markets, which may have a harmful influence on competition and consumers. A provider is deemed to have significant market power if it has a position of economic strength affording it the power to act independently of competitors and customers within a given market. Beginning in 2017, Ofcom will also assume the responsibilities of regulating the BBC, a role currently undertaken by the BBC Trust. Pursuant to the Enterprise and Regulatory Reform Act 2013, effective April 1, 2014, the competition functions of the Office of Fair Trading, together with those of the Competition Commission were transferred to a new U.K. competition authority, the Competition and Markets Authority (**CMA**). The CMA's primary duty is to promote competition, both within and outside the U.K., for the benefit of consumers.

Irish Regulatory Authorities

The Commission for Communications Regulation ("**ComReg**") is the key regulatory authority for the communications sector in which we operate in Ireland. It is responsible for furthering the interests of consumers by promoting competition. In particular, ComReg is responsible for regulating the behavior of providers of electronic communications networks or services that have significant market power in identified markets which may have a harmful influence on competition and consumers. A provider is deemed to have significant market power if it has a position of economic strength affording it the power to act independently of competitors and customers within a given market. In November 2015, ComReg signed a cooperation agreement with the Competition and Consumer Protection Commission in relation to consumer protection functions of both bodies. The purpose of the agreement being to ensure greater coordination between these two bodies on consumer related matters, with ComReg now, as a result, playing a more active role in consumer protection matters in the electronic communications sector. The Broadcasting Authority of Ireland (**BAI**) is the key regulatory authority for broadcasting services licensed in Ireland. Further, it has a number of statutory duties that include oversight of public service broadcasters and the allocation of public funding; stimulating the provision of high quality, diverse, and innovative programming and promoting diversity of control in the commercial and community sectors. TV3 Group, the wholly owned subsidiary of Virgin Media Limited, has broadcasting licenses from the BAI for its television channels: TV3, TV3+1, 3e and UTV Ireland (which as of January 9, 2017, rebranded to be3).

Broadband Expansion

The U.K. government is attempting to drive the provision of ultrafast broadband to at least 95% of the population of the U.K. by the end of 2017. The U.K. government is using money from the publicly funded BBC license fee, under-spend from the Analogue TV Switch-Off Project and other sources of public investment to subsidize private investment. The state aid measure permitting this subsidy was renewed (and amended) in 2016 and is expected to result in up to an additional 1%-2% superfast coverage.

In the U.K. government's 2016 Autumn Statement, the government announced proposals for further funding, and other measures, targeted at supporting market rollout of full fiber and 5G services. Proposed measures include public funding for the creation of a match-funded "full fiber deployment" fund (indicative £400.0 million), business rate relief for the deployment of new full fiber networks from 2017 and public funding for a strategic program of full fiber and 5G trials (indicative £740.0 million). On December 29, 2016, the government sought suggestions on how best to stimulate full fiber deployments, including, where appropriate, with the use of public funds. Little detail has been provided to date, but in the 2017 budget, announced on March 8, 2017, the government confirmed that it will invest £200 million in local projects to accelerate the delivery of "full-fiber" networks. This will include connection vouchers for businesses, direct connection of public sector buildings and the opening up of public sector assets.

In November 2015, the U.K. government announced that everyone will, by 2020, have a legal right to request a broadband connection of at least 10 Mbps regardless of where they live. The government intends to achieve this by introducing a broadband Universal Service Obligation (**USO**). The USO is aimed at addressing the final 5% of the population in the U.K. without access to a broadband connection of a reasonable speed. The Department for Culture, Media & Sport commissioned Ofcom to undertake a detailed analysis of the key factors that will help inform the design of the USO and a report was issued to the U.K. government to this end on December 16, 2016. The U.K. government is considering the Ofcom report and is expected to set out its decision on the final USO structure and adopt legislation to implement the necessary legislation in 2017.

The Irish Government is investing in a national broadband network, which will guarantee the universal availability of high-speed broadband, with download speeds of up to 30 Mbps and upload speeds of 6 Mbps by 2022. The National Broadband Plan (**NBP**) forms part of a broader National Digital Strategy, which was published in 2013 and is aimed at encouraging and assisting more citizens and small businesses to get on-line.

The Irish Government has publicly stated it intends to allocate an initial stimulus of €275.0 million (£234.9 million) for the NBP, with further funding to be provided if required. The full cost of the NBP, and in particular the exact amount of state funding, will not be known until the supply contracts have been awarded in 2017. Network build for the NBP will commence by early 2017 and is expected to be fully complete by 2022.

In line with E.U. State Aid rules, the coverage of the state-funded network will be limited to areas where there is unlikely to be an overlap between public and private sector investment. The NBP coverage map therefore does not overlap with our network footprint.

Regulation of Television and Video-on-Demand Services

In the U.K., we are required to hold individual licenses under the Broadcasting Acts 1990 and 1996 for any television channels (including barker channels) which we own or operate and for the provision of certain other services on our cable television platform, such as electronic program guides. These television licensable content service (**TLCS**) licenses are granted and administered by Ofcom. Under these licenses, each covered service must comply with a number of Ofcom codes, including the Broadcasting Code, and with all directions issued by Ofcom. Breach of any of the terms of a TLCS license may result in the imposition of fines on the license holder and, ultimately, the license being revoked.

As a provider of an on-demand program service (**ODPS**), we must comply with a number of statutory obligations in relation to “editorial content” and notify Ofcom of our intention to provide an ODPS. Failure to notify Ofcom or comply with the relevant statutory obligations may result in the imposition of fines or, ultimately, the prohibition on providing an ODPS.

Following a review by Ofcom, Sky's wholesale must offer ("**WMO**") obligation, which regulates terms of the wholesale supply of supply of Sky Sports 1 and 2 in SD and HD was removed. The removal of this obligation was appealed by BT and on December 21, 2016, the Competition Appeal Tribunal (**CAT**) issued a judgment denying BT's appeal. BT has requested permission to appeal from the Court of Appeal.

In Ireland, we hold BAI licenses for our barker channel and TV3 Group, the wholly owned subsidiary of Virgin Media Limited, holds broadcasting licenses for its television channels: TV3, TV3+1, 3e and be3 (formerly UTV Ireland).

Government Communications White Paper

In July 2013, the U.K. government published a white paper reviewing U.K. Communications legislation. This included a number of elements such as plans to review the payment arrangements in place between public service broadcasters and pay-television providers and the prominence of various services in platform providers’ electronic program guides. A resulting consultation seeking evidence on the balance of payments between television platforms and public service broadcasters was published in March 2015. That consultation closed in May 2015, with the government publishing its conclusions on July 5, 2016 that, while certain legislation relating to the existing net zero payment arrangement will be removed, there should continue to be no net payments between all platform operators and the public service broadcasters (with the U.K. government stating that it may seek to legislate to achieve that outcome, if necessary). Legislative changes are expected in 2017.

Regulation of Electronic Communication Services

In order to operate in the telecommunications sector in the U.K. and Ireland, a provider must comply with general conditions imposed by each country’s respective national regulator, those being Ofcom and ComReg. These general conditions cover a broad range of issues including interconnection standards, number portability, deployment of telephone numbers, access to emergency services and sales and marketing standards. Any breach of these general conditions could lead to the imposition of fines by the national regulator and, ultimately, to the suspension or revocation of a company’s right to provide electronic communications networks and services. Ofcom and ComReg also undertake triennial reviews of the various economic markets within the telecommunications sector to establish whether any provider has significant market power warranting the imposition of remedies.

Ofcom Strategic Review of Digital Communications

In March 2015, Ofcom launched a strategic review of U.K. digital communications. A discussion document was published in July 2015, inviting stakeholder comment and input. Key focus areas for Ofcom were stated to be: investment and innovation, delivering widespread availability of services; sustainable competition; empowering consumers; and targeted regulation where necessary, deregulation elsewhere. We responded to the discussion document emphasizing the importance of investment for competition, innovation and consumer interest.

A key area of consideration was the future regulatory treatment of BT, in particular whether BT should be fully (structurally) separated, with the Openreach network division becoming a separate, independent company. Openreach is the operator of the backbone of Britain's broadband internet network.

An “emerging thinking” document was published on February 25, 2016, setting out conclusions and Ofcom’s proposed policy position relating to a number of aspects of the U.K. regulatory regime. Key conclusions from the exercise included: no enforced full structural separation of BT at the present time; an intention to improve quality of service across all providers; a requirement for BT to enhance its wholesale duct and pole access product; and an intention to advance further consumer protection measures. On July 26, 2016, Ofcom proposed legal but not structural separation of Openreach. On November 29, 2016, Ofcom issued an update on its plans to reform Openreach, stating that it intended to proceed with a formal notification to the European Commission to require the legal separation of Openreach from BT (but that it was still open to a negotiated settlement).

On March 10, 2017, Ofcom announced that BT had agreed to the legal separation of the Openreach division. As a result, Openreach will become a distinct company within the BT Group with its own staff and management, together with its own strategy and a legal purpose to serve all of its customers equally. A newly established Openreach Board will run the company under a new governance agreement and Openreach will develop its own strategy and annual operating plans, within an overall budget set by BT Group. The new Openreach will directly employ all of its 32,000 staff, who will be transferred across from BT. Assets, such as the physical access network, will be controlled by Openreach alone, with the Openreach Board making decisions on building and maintaining these assets. BT will be removed from Openreach branding.

We expect that Ofcom will, in Q2 2017, publish further detail on how, and by when the reforms will be implemented.

Broadband Services

Ofcom finalized its most recent triennial review of the fixed access markets in 2014 (including wholesale local access incorporating physical or passive network access via methods such as LLU and duct access) and wholesale broadband access market (virtual or active network access via methods such as provision of wholesale managed service products). This did not lead to any substantive change in its approach to regulation from the previous review period. Therefore, we do not anticipate significant consequences for our operations in the period leading up to the next review in 2017.

BT was found to have significant market power in the wholesale local access market and one sub-national area of the wholesale broadband access market and is therefore required to provide certain products and services on regulated terms, including providing access to its ducts and poles infrastructure.

Ofcom also imposed a new condition regulating BT’s wholesale pricing of certain of its fiber products, whereby it is subject to an ongoing margin squeeze test. Ofcom published its final statement setting out the form that this test should take in March 2015. In its current form, BT has not had to undertake a major pricing realignment in order to comply with this additional obligation.

In 2017, Ofcom will commence its next triennial review of the fixed access markets, including the wholesale local access market (incorporating physical or passive network access via methods such as LLU and duct access) and the wholesale broadband access market (virtual or active network access via methods such as provision of wholesale managed service products). A key area of focus will be the regulation of BT’s FTTx based wholesale products (specifically the pricing thereof) and improving the existing BT Passive Infrastructure Access (**PIA**) remedy (allowing third parties access to BT’s duct and pole estate). To this end, on December 6, 2016, Ofcom issued a consultation on making the PIA remedy more effective.

In Ireland, ComReg’s review of the wholesale broadband markets is ongoing. In a previous broadband market analysis decision, the national incumbent telecommunications provider, Eircom Limited (**Eir**), was found to have significant market power in the wholesale broadband access market (virtual access and bistream) and the wholesale physical network access market. Eir remains subject to regulatory obligations in both of these markets, pending the outcome of the ComReg market reviews (expected by the end of the second quarter of 2017). ComReg's initial proposals were under public consultation until January 30, 2017, and do not include proposed regulation of our activities with regard to these wholesale broadband markets.

Business Connectivity Services

Ofcom concluded its latest review of the U.K. business connectivity markets (leased lines and dedicated business connections, among others) in the spring of 2016. Ofcom found that BT held significant market power in certain markets and proposed consequential regulatory remedies. These remedies included an obligation on BT to provide access to its dark fiber. BT, CityFibre and TalkTalk have appealed Ofcom's decision. Virgin Media has intervened in the appeal. This matter remains ongoing and a hearing is expected in 2017.

In Ireland, ComReg's review of the business connectivity services is ongoing. In a previous leased line market analysis decision (now called business connectivity market), Eir was found to have significant market power in the market for wholesale terminating segments of leased lines. Eir remains subject to regulatory obligations in this market, pending the outcome of ComReg's business connectivity market review, which is expected in the second quarter of 2017.

Fixed Voice Termination

We have been designated as a provider with Significant Market Power on fixed voice termination. As a result, the rates that we charge other providers for termination on our network are subject to regulation. This requires, amongst other things, the provision of termination on fair and reasonable terms, conditions and charges, which must be no higher than BT's regulated charges, unless certain conditions are met.

Call Origination and Call Transit Services

ComReg completed its review of the wholesale call transit and call origination markets in June 2015. Eir was considered to have significant market power in the market for call origination and wholesale line rental. However, ComReg deemed that Eir no longer had significant market power in the market for call transit. On that basis, Eir remains subject to regulatory obligations in its provision of wholesale call origination and wholesale line rental, but not with respect to its provision of call transit services.

Mobile Telephony Services

As an MVNO in Ireland and the U.K., we are subject to E.U. regulations relating to retail prices for roaming services. These regulations set limits on certain wholesale and retail tariffs for international mobile voice roaming, SMS tariffs and data roaming within the E.U., provide for greater levels of transparency of retail pricing information, impose measures to guard against bill shock in respect of data roaming and set maximum roaming rates within the E.U. A new regulation, effective June 2017, abolishes roaming tariffs in the E.U. (subject to addressing inconsistencies in underlying wholesale charges). Until then, roaming surcharges have been reduced significantly since April 2016. Wholesale charges applicable to international mobile roaming are the subject of a European Commission legislative proposal dated June 15, 2016. This proposal has been agreed in principle and is expected to obtain formal ratification in the first or second quarter of 2017.

Mobile termination charges applied by MNOs are regulated by Ofcom in the U.K. and ComReg in Ireland under a significant market power charge control condition. In the U.K., under our MVNO agreement with EE these changes in mobile termination charges are passed on to us. In March 2015, Ofcom completed its review of mobile termination charges for the period of 2015-2018 and concluded that rates should reduce to approximately half of their current levels by the end of this period. As a result we have experienced both a reduction in revenue from such charges and a reduction in cost.

Regulation Requiring Co-operation With Law Enforcement

Telecommunications operators are subject to various laws that can require them to store and disclose customer data to law enforcement and the security services. In the U.K., these laws are in the process of being updated. A new Investigatory Powers Act came into effect at the end of 2016 with transitional provisions covering most of 2017. In Ireland, there is a requirement to disclose customer data to law enforcement and the security services under various laws which may be updated in the near future, although draft bills and/or bills proposing amendments have yet to be published.

Non-industry Specific Regulation

Our business activities are subject to certain environmental and health and safety laws and regulations. Failure to comply with these laws and regulations may result in us incurring fines or other penalties and we may incur expenditure to account for these fines or penalties, maintain compliance and/or undertake any necessary remediation. In addition, any breach of the aforementioned laws and/or regulations by our affiliates, vendors and/or contractors could result in liability for us.

Legal Proceedings

From time to time, we have become involved in litigation relating to claims arising out of our operations in the normal course of business. For additional information, see note 16 to our consolidated financial statements included in Part II of this annual report.

VAT Matters

Our application of value-added taxes (**VAT**) with respect to certain revenue generating activities has been challenged by the U.K. tax authorities. We have estimated our maximum exposure in the event of an unfavorable outcome to be £46.6 million as of December 31, 2016. No portion of this exposure has been accrued by our company as the likelihood of loss is not considered to be probable. A court hearing was held at the end of September 2014 in relation to the U.K. tax authorities' challenge and the timing of the court's decision is uncertain.

On March 19, 2014, the U.K. government announced a change in legislation with respect to the charging of VAT in connection with prompt payment discounts such as those that we offer to our fixed-line telephony customers. This change, which took effect on May 1, 2014, impacted our company and some of our competitors. The U.K. tax authority issued a decision in the fourth quarter of 2015 challenging our application of the prompt payment discount rules prior to the May 1, 2014 change in legislation. We have appealed this decision. As part of the appeal process, we were required to make aggregate payments of £67.0 million, which included the challenged amount of £63.7 million and related interest of £3.3 million. The aggregate amount paid does not include penalties, which could be significant in the unlikely event that penalties were to be assessed. This matter will likely be subject to court proceedings that could delay the ultimate resolution for an extended period of time.

Regulatory Developments

For a description of current regulatory developments in the E.U., the U.K. and Ireland that affect our business, see "*Regulatory Matters*" section of this annual report.

Other

In addition to the foregoing items, we have contingent liabilities related to matters arising in the ordinary course of business including (i) legal proceedings, (ii) issues involving VAT and wage, property, withholding and other tax issues and (iii) disputes over interconnection, programming, copyright and channel carriage fees. We do not believe any of these litigation matters alone or in the aggregate will have a material adverse effect on our financial position or results of operations.

Patents, Trademarks, Copyrights and Licenses

We do not have any material patents or copyrights nor do we believe that patents play a material role in our business. We own or have the right to use registered trademarks, which in some cases are, and in others may be, of material importance to our business. This includes the exclusive right to use the "Virgin" name and logo under licenses from Virgin Enterprises Limited in connection with our corporate activities and the activities of our consumer and business operations. These licenses, which expire in April 2036, are exclusive to us within the U.K. and Ireland, and are subject to renewal on terms to be agreed. They entitle us to use the "Virgin" name for the television, broadband internet, fixed-line telephony and mobile telephony services we provide to our consumer and business customers, and in connection with the sale of certain communications equipment, such as set-top boxes and cable modems.

Our license agreements provide for an annual royalty of 0.25% of certain consumer, business and content revenues, subject to a minimum annual royalty, subject to inflationary adjustments, of £8.5 million in relation to our consumer operations, and £1.5 million in relation to our business operations.

Under the agreements we have worldwide exclusivity over the name "Virgin Media" and "Virgin Media Inc." We are also licensed to use the name "Virgin Media Business" for the provision of business communications services.

Properties

We own and lease administrative facilities, operational network facilities and retail facilities throughout the U.K. and Ireland. We lease our U.K. headquarters in Hook, Hampshire.

We own or lease the fixed assets necessary for the operation of our businesses, including office space, transponder space, headend facilities, rights of way, cable television and telecommunications distribution equipment, telecommunications switches and customer premises equipment and other property necessary for our operations. The physical components of our broadband network require maintenance and periodic upgrades to support the new services and products we introduce. Subject to these maintenance and upgrade activities, our management believes that our current facilities are suitable and adequate for our business operations for the foreseeable future.

Employees

As of December 31, 2016, we had approximately 14,700 full-time equivalent employees, including contractors and temporary employees. There are no employees at Virgin Media covered by collective bargaining or recognition agreements. For employee consultation purposes, we work with and recognize our National and Divisional Employee Voice Forums.

MANAGEMENT

Tom Mockridge, 61, became our Chief Executive Officer in June 2013. Prior to joining Virgin Media, Mr. Mockridge held a variety of senior roles at various News Corporation group companies over the span of 22 years. Most recently, Mr. Mockridge was the CEO of News International from July 2011 until the end of 2012. Prior to his role at News International, Mr. Mockridge was the Managing Director of News Corporation's European television operations from 2008 and was subsequently appointed Deputy Chairman of Sky Deutschland AG's Supervisory Board and Deputy Chairman of Sky. Prior to this, Mr. Mockridge served as the first CEO of Sky Italia following its creation through a merger. In his earlier career, Mr. Mockridge held senior roles at News Corporation companies in Australia and Hong Kong, and began his career as a journalist in his native New Zealand.

Robert Dunn, 50, was appointed Chief Financial Officer in June 2013. Mr. Dunn was Managing Director of UPC Netherlands B.V. from January 2011 to May 2013. Mr. Dunn joined United Pan-Europe Communications NV in May 2000 where he was Managing Director of Finance and Accounting. In January 2001, he became Chief Financial Officer of UPC Distribution, the cable television and triple-play division of UPC. Later he became managing director of Finance and Accounting of UPC Polska Sp Zoo and then served as Managing Director of UPC Ireland B.V. from 2006 to 2010. He earlier served as Group Controller of Impress Packaging Group B.V. from May 1997 to May 2000. He also worked with Price Waterhouse, London for nine years from October 1988.

Rob Evans, 51, became our Chief Information, Network and Technology Officer in April 2015 and effective March 1, 2017, became our Managing Director for Project Lightning. Prior to this, Mr. Evans served as our Executive Director of Engineering and Supply Chain beginning in 2009. From 2006 to 2009, Mr. Evans was the Vice President of Network, Data Centres and Global Operations with BP International. Prior to this, he was Vice President of Network Engineering at Cable & Wireless from 2000 to 2006. Mr. Evans has previously held senior management roles with Schlumberger in the United States and with Hong Kong Telecom in Hong Kong and Macau. In his early career, Mr. Evans worked at STC Submarine Systems and as a technical product manager with Cable & Wireless in Europe.

Dana Strong, 46. Virgin Media will appoint Dana Strong as President and COO reporting to Virgin Media's Chief Executive Officer, Tom Mockridge. Ms. Strong's responsibilities will include end-to-end responsibility for the consumer business spanning installations, customer care, product development and marketing. Ms. Strong has held a variety of previous senior management roles at Liberty Global and its subsidiaries including Chief Transformation Officer at Liberty Global and Managing Director, UPC Ireland.

Catherine Lynch, 48, joined us in January 2017 as our Chief People Officer. Prior to this, Mrs. Lynch served as Group HR Director of financial services company, Towergate. Mrs. Lynch previously served in various senior HR and operational roles for Barclaycard, Santander, Sainsbury's and Tesco.

Tony Hanway, 49, became the Chief Executive Officer of Virgin Media Ireland in October 2015. Prior to joining Virgin Media, Mr. Hanway held a number of senior roles at O2 Telefonica, including CEO of O2 Ireland from 2011 to 2014. He also served as Chief Commercial Officer of Telefonica O2 Deutschland and Consumer Director of O2 Czech Republic where he was responsible for the Consumer team in Fixed and Mobile telephony. Prior to this, Mr. Hanway held senior roles with AOL UK from 1998 to 2005 where he served as Vice President of Customer Care and Managing Director of AOL Europe Time Warner Operations Ltd. In his early career Mr. Hanway held positions with AIB Bank (UK) and Gateway Computers.

Mine Hifzi, 50, became our General Counsel in February 2014. Prior to joining us, Ms. Hifzi was Senior Vice President, Commercial and Legal Affairs, International at Scripps Networks Interactive Inc., which she joined in July 2012. Previously, Ms. Hifzi served as Senior Vice President and General Counsel, International, of Discovery Communication Inc., where she held roles for over 13 years. Ms. Hifzi is qualified as a solicitor in England and Wales.

Peter Kelly, 53, became the Managing Director for our B2B division in September 2013. Prior to joining Virgin Media, Mr. Kelly was Enterprise Director at Vodafone UK, where he served from 2008 and was responsible for managing a team of over 1,500 people. Prior to that, Mr. Kelly was President, Enterprise, EMEA at Nortel.

Brigitte Trafford, 51, became our Chief Corporate Affairs Officer in March 2014. Prior to coming to Virgin Media, Ms. Trafford served as the Director of Corporate Affairs at ICAP plc beginning in 2011. Previously, Ms. Trafford was Group Communications Director at Lloyds Banking Group, where she served from 2010 to 2011. She also founded a strategic communications consultancy, Burghley Communications in 2009. In addition, Ms. Trafford was Group Communications Director and a member of the Management Board of ITV from 2004 to 2007. Ms. Trafford also held senior roles at M: Communications and Dow Jones & Company, Inc., publishers of The Wall Street Journal.

PRINCIPAL SHAREHOLDER

Virgin Media is indirectly wholly-owned by Liberty Global. Liberty Global is the world's largest international TV and broadband company with operations in more than 30 countries across Europe, Latin America and the Caribbean. Liberty Global invests in the infrastructure that empowers its customers to make the most of the digital revolution. Its scale and commitment to innovation enables it to develop market-leading products delivered through next-generation networks that connected its 25 million customers subscribing to over 50 million television, broadband internet and telephony services as of December 31, 2016. Liberty Global also served over 10 million mobile subscribers and offered WiFi services across five million access points. Liberty Global's consumer brands are Virgin Media, Unitymedia, Telenet, UPC, VTR, Flow, Liberty, Más Móvil, and BTC. In addition, Liberty Global also owns 50% of VodafoneZiggo, a Dutch joint venture.

RISK FACTORS

In addition to the information contained in this annual report, you should consider the following risk factors in evaluating our results of operations, financial condition, business and operations.

The risk factors described in this section have been separated into two groups:

- risks relating to our industry and our business; and
- risks relating to our indebtedness, taxes and other financial matters.

Although we describe below and elsewhere in this annual report the risks we consider to be the most material, there may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our results of operations, financial condition, business or operations in the future. In addition, past financial performance may not be a reliable indicator of future performance and historical trends should not be used to anticipate results or trends in future periods.

If any of the events described below were to occur, our businesses, prospects, financial condition, results of operations and/or cash flows could be materially adversely affected.

Risks Relating to Our Industry and Our Business

We operate in highly competitive markets, and there is a risk that we will not be able to effectively compete with other service providers. The markets for cable television, broadband internet, fixed-line telephony and mobile services in which we operate are highly competitive and, in certain markets, we compete with established companies that hold positions of market power in these and/or closely related markets. We face competition from these companies, other established companies and potential new entrants. Technological advances may increase competition or alter the competitive dynamics of markets in which we operate. For example, we face increasing competition from video services provided by, or over the networks of, the incumbent telecommunications operator and other service providers. As the availability and speed of broadband internet increases, we also face competition from OTT video content providers utilizing our or our competitors' high-speed internet connections. In addition, continued consolidation within the media industry may permit more competitors to offer "triple-play" bundles of digital television, fixed-line telephony and broadband services, or "quad-play" bundles including mobile telephony services.

In order to compete effectively, we may be required to reduce the prices we charge for our services or increase the value of our services without being able to recoup associated costs. We may also need to pursue legal and regulatory actions. In addition, some of our competitors offer services that we are unable to offer. We expect the level and intensity of competition to continue to increase from both existing competitors and new market entrants as a result of changes in the regulatory framework of the industries in which we operate, advances in technology, the influx of new market entrants and strategic alliances and cooperative relationships among industry participants. Increased competition may lead to a decrease in our revenue, increased costs, increased customer churn or a reduction in the rate of customer acquisition, which could have an adverse effect on our business, financial condition, results of operations and cash flows.

The markets in which we compete are subject to rapid and significant changes in technology, and the effect of technological changes on our businesses cannot be predicted. Technology in the video, telecommunications and data services industries is changing rapidly, including advances in current technologies and the emergence of new technologies. For example, advances in current technologies, such as VoIP (over fixed and mobile technologies), 3D TV, Ultra HD /4K TV, mobile instant messaging, WiFi, Wi-Max, LTE, IPTV, or the emergence of new technologies, such as white space technologies (which use portions of the old analog television spectrum), or the availability to our competitors of 4G spectrum and technology, may result in our core offerings becoming less competitive or render our existing products and services obsolete. We may not be able to develop new products and services, or keep up with trends in the technology market, at the same rate as our competitors (or at all). The pace of change may be such that we fail to seize opportunities to become market disrupters or to adequately respond to market disrupters. A lack of market acceptance of new products and services that we may offer, or the development of significant competitive products or services by others, could have an adverse effect on our business, financial condition, results of operations or cash flows.

Our property and equipment additions may not generate a positive return. The video, broadband internet and telephony businesses in which we operate are capital intensive. Significant additions to our property and equipment are required to add customers to our networks and to upgrade our broadband communications networks and customer premises equipment (**CPE**) to enhance our service offerings and improve the customer experience, including expenditures for equipment and labor costs. Significant competition, the introduction of new technologies, the expansion of existing technologies, such as fiber-to-the-home/-cabinet/-building/-node and advanced DSL technologies, or adverse regulatory developments could cause us to decide to undertake previously unplanned upgrades of our networks and CPE. In addition, no assurance can be given that any future upgrades or extensions of our network (including the Network Extension) will generate a positive return or that we will have adequate capital available to finance such future upgrades or extensions. If we are unable to, or elect not to, pay for costs associated with adding new customers, expanding or upgrading our networks or making our other planned or unplanned additions to our property and equipment, our growth could be limited and our competitive position could be harmed.

Adverse economic developments could reduce customer spending for our cable television, broadband, fixed-line telephony and mobile services and increase churn. Most of our revenue is derived from customers who could be impacted by adverse economic developments globally, in Europe, the U.K. and Ireland. Ongoing struggles in Europe related to sovereign debt issues, among other things, has contributed to a challenging economic environment. Accordingly, unfavorable economic conditions may impact a significant number of our customers and, as a result, it may be (i) more difficult for us to attract new customers, (ii) more likely that customers will downgrade or disconnect their services and (iii) more difficult for us to maintain average monthly subscription revenue per average cable RGU or mobile subscriber, as applicable (**ARPU**) at existing levels. The countries in which we operate may also seek new or increased revenue sources due to fiscal deficits. Such actions may further adversely affect our company. Accordingly, our ability to increase, or, in certain cases, maintain, our revenue, ARPUs, RGUs, Segment OCF, Segment OCF margins and liquidity could be materially adversely affected if the economic environment in Europe, the U.K. or Ireland remains uncertain or declines (including as a result of the U.K.'s vote to leave the E.U.). We are currently unable to predict the extent of any of these potential adverse effects. As we use the term, **Segment OCF** is defined as operating income before depreciation and amortization, share-based compensation, related-party fees and allocations, provisions and provision releases related to significant litigation and impairment, restructuring and other operating items. For a description of the risks associated with the U.K.'s vote to leave the E.U., see "*The U.K. referendum advising for the exit of the U.K. from the E.U. could have a material adverse effect on our business, financial condition or results of operations*" below.

Our fixed-line telephony revenue is declining and unlikely to improve. Fixed-line telephony usage is in decline across the industry, with the rate of decline in lines used by businesses being nearly twice as high as that in the residential fixed-line telephony market. There is a risk that business and residential customers will migrate from using fixed-line telephony to using other forms of telephony, such as VoIP, or mobile. There is no assurance that our fixed-line customers will migrate to our mobile phones and they may eventually shift to other providers of mobile telephony services. Such a migration could have a material adverse effect on our results of operations, revenue and financial condition.

A failure in our network and information systems, whether caused by a natural failure or a security breach, could significantly disrupt our operations. Certain network and information systems are critical to our business activities. Network and information systems may be affected by cyber security incidents that can result from deliberate attacks or system failures. These may include, but are not limited to computer hackings, computer viruses, worms or other destructive or disruptive software, or other malicious activities. Our network and information systems may also be the subject of power outages, fire, natural disasters, terrorist attacks, war or other similar events. Theft of metals is particularly acute in the U.K. due to high prices for scrap metal, and our network is not immune to such thefts. Such events could result in a degradation of, or disruption to, our cable and non-cable services, and could prevent us from billing and collecting revenue due to us or could damage our equipment and data or could result in damage to our reputation. Disruption to services could result in excessive call volumes to call centers that may not be able to cope with such volume, which could in turn have a material adverse effect on our reputation and brand. Our plans for recovery from, and resilience to, such challenges may not be sufficient. The amount and scope of insurance we maintain against losses resulting from these events may not be sufficient to cover our losses or otherwise adequately compensate us for any disruptions to our business that may result.

Sustained or repeated failures of our own or third-party systems that interrupt our ability to provide services to our customers, prevent us from billing and collecting revenue, or that otherwise prevent us from meeting our obligations in a timely manner, could materially adversely affect our reputation and result in a loss of customers and revenue. These network and information systems-related events could also require significant expenditures to repair or replace damaged networks or information systems or to protect them from similar events in the future. Further, any security breaches, such as misappropriation, misuse, penetration by viruses, worms or other destructive or disruptive software, leakage, falsification or accidental release or loss of information maintained in our information technology systems and networks or those of our business partners (including customer, personnel and vendor data) could damage our reputation, result in legal and/or regulatory action against us, and require us to expend significant capital and other resources to remedy any such security breach. As a result of the increasing awareness concerning the importance of safeguarding personal information, the potential misuse of such information and legislation that has been adopted or is being considered regarding the protection, privacy and security of personal information, the liability associated with information-related risks is increasing, particularly for businesses like ours that handle a large amount of personal customer data. The occurrence of any such network or information system-related events or security breaches could have a material adverse effect on our business and results of operations.

Unauthorized access to our network resulting in piracy could result in a loss of revenue. We rely on the integrity of our technology to ensure that our services are provided only to identifiable paying customers. Increasingly sophisticated means of illicit piracy of television, broadband and telephony services are continually being developed in response to evolving technologies. Furthermore, billing and revenue generation for our pay television services rely on the proper functioning of our encryption systems. While we continue to invest in measures to manage unauthorized access to our networks, any such unauthorized access to our cable television service could result in a loss of revenue, and any failure to respond to security breaches could raise concerns under our agreements with content providers, all of which could have a material adverse effect on our business and results of operations.

We depend on third-party suppliers and licensors to supply necessary equipment, software and certain services required for our businesses. We rely on third-party vendors for the equipment, software and services that we require in order to provide services to our customers. Our suppliers often conduct business worldwide and their ability to meet our needs is subject to various risks, including political and economic instability, natural calamities, interruptions in transportation systems, terrorism and labor issues. As a result, we may not be able to obtain the equipment, software and services required for our businesses on a timely basis or on satisfactory terms. Any shortfall in customer premises equipment could lead to delays in connecting customers to our services and, accordingly, could adversely impact our ability to maintain or increase our RGUs, revenue and cash flows. Also, if demand exceeds the suppliers' and licensors' capacity or if they experience financial difficulties, the ability of our businesses to provide some services may be materially adversely affected, which in turn could affect our businesses' ability to attract and retain customers. Although we actively monitor the creditworthiness of our key third-party suppliers and licensors, the financial failure of a key third-party supplier or licensor could disrupt our operations and have an adverse impact on our revenue and cash flows. We rely upon intellectual property that is owned or licensed by us to use various technologies, conduct our operations and sell our products and services. Legal challenges could be made against our use of our or our licensed intellectual property rights (such as trademarks, patents and trade secrets) and we may be required to enter into licensing arrangements on unfavorable terms, incur monetary damages or be enjoined from use of the intellectual property rights in question.

Our consumer mobile services rely on the radio access networks of third-party wireless network providers to carry our mobile communications traffic. Our services to mobile customers rely on the use of MVNO arrangements in which we utilize the radio access networks of third-party wireless network providers to carry our mobile communications traffic. If any of our MVNO arrangements are terminated, or if the respective third-party wireless network provider fails to provide the services required under an MVNO arrangement, or if a third-party wireless network provider fails to deploy and maintain its network, and we are unable to find a replacement network operator on a timely and commercial basis or at all, we could be prevented from continuing the mobile services relying on such MVNO arrangement. Additionally, as our MVNO arrangements come to term, we may not be able to renegotiate renewal or replacement MVNO arrangements on the same or more favorable terms.

The "Virgin" brand is not under our control and the activities of Virgin Group and other licensees could have a material adverse effect on the goodwill of customers towards us as a licensee. The "Virgin" brand is integral to our corporate identity. We are reliant on the general goodwill of consumers towards the Virgin brand. Consequently, adverse publicity in relation to Virgin Group or its principals, particularly Sir Richard Branson who is closely associated with the brand, or in relation to another licensee of the "Virgin" name and logo (particularly in the U.K.) could have a material adverse effect on our reputation, business and results of operations. In addition, the licenses from Virgin Enterprises Limited can be terminated in certain circumstances. For example, Virgin Enterprises Limited can terminate the licenses, after providing us with an opportunity to cure, (i) if we or any of our affiliates commit persistent and material breaches or a flagrant and material breach of the licenses, (ii) if Virgin Enterprises Limited has reasonable grounds to believe that the use (or lack of use) of the licensed trademarks by us has been or is likely to result in a long-term and material diminution in the value of the "Virgin" brand, or (iii) if a third party who is not (or one of whose directors is not) a "fit and proper person," such as a legally disqualified director or a bankrupt entity, acquires "control" of Liberty Global. Such a termination could have a material adverse effect on our business and results of operations.

We depend almost exclusively on our relationships with third-party programming providers and broadcasters for programming content, and a failure to acquire a wide selection of popular programming on acceptable terms could adversely affect our business. We enter into agreements for the provision of television programs and channels distributed via our entertainment service with program providers, such as public and commercial broadcasters, or providers of pay or on-demand television. We have historically obtained a significant amount of our premium programming and some of our basic programming and pay per view sporting events from Sky. Sky is also one of our main competitors in the television services business. Sky is a leading supplier of programming to pay television platforms in the U.K. and is the exclusive supplier of some programming, including its Sky Sports channels and Sky Cinema channels, which are the most popular premium subscription sports and film channels available in the U.K.

In 2010, Ofcom imposed new license conditions on Sky that provided for a WMO obligation that regulated (or set a fair, reasonable and non-discriminatory requirement for) the price and terms of supply of certain of Sky's Sports Channels. On December 19, 2014, Ofcom launched a consultation to review the WMO remedy and consider whether it remained an appropriate remedy. On November 19, 2015, Ofcom issued its final statement concluding that the WMO was no longer appropriate and removed the WMO obligation from Sky. On January 19, 2016, BT lodged an appeal to the CAT against Ofcom's decision of November 19, 2015. On February 18, 2016, Sky was given permission to intervene in BT's appeal with a hearing held between October 3 and October 14, 2016. On December 21, 2016, the CAT dismissed BT's appeal on all grounds. On January 11, 2017, BT applied to the CAT for permission to appeal. On February 2, 2017, the CAT denied BT's application. BT has requested permission to appeal from the Court of Appeal. The removal of the WMO requirement may have a material adverse effect on our business if Sky considers itself unconstrained in the supply and pricing of its programming following the expiry of our current carriage agreements.

In August 2013, BT launched its own premium BT Sport channels, providing a range of sports content including football (soccer) from the English Premier League and, from the 2015/2016 football (soccer) season, exclusive rights to the UEFA Champions League and the UEFA Europa League. The BT Sport channels are available on our digital cable network, however, the cost to obtain such channels was a significant driver of our increased programming costs for 2014, and there can be no assurance that we will be able to continue carriage of such channels at a reasonable cost after the current contract ends in 2018.

Other significant programming suppliers include the BBC, ITV, Channel 4, UKTV, Viacom Inc. (including Five), Discovery Communications Inc., Disney, NBC/Universal and Turner, a division of Time Warner Inc. Our dependence on these and other suppliers for television programming could have a material adverse effect on our ability to provide attractive programming at a reasonable cost. Any loss of programs could negatively affect the quality and variety of the programming delivered to our customers. In addition, there is the risk that suppliers will become exclusive providers to other platforms, including Sky, which reduces our ability to offer the same or similar content to our customers. All of these factors could have a material adverse effect on our business and increase customer churn.

We do not insure the underground portion of our cable network and various pavement-based electronics associated with our cable network. Our cable network is one of our key assets. However, we do not insure the underground portion of our cable network or various pavement-based electronics associated with our cable network. Almost all our cable network is constructed underground. As a result, any catastrophe that affects our underground cable network or our pavement-based electronics could prevent us from providing services to our customers and result in substantial uninsured losses that would have a material adverse effect on our business and results of operations.

We are subject to significant regulation, and changes in U.K. and E.U. laws, regulations, governmental policy affecting the conduct of our business, or other risks relating to claims, may have a material adverse effect on our ability to set prices, enter new markets or control our costs. Our principal business activities are regulated and supervised by Ofcom and the CMA among other regulators. Regulatory change is an ongoing process in the communications sector at both the U.K. and E.U. level. Changes in laws, regulations or governmental policy affecting our activities and those of our competitors could significantly influence how we operate our business and introduce new products and services. For example, regulatory changes relating to our activities and those of our competitors, such as changes relating to third party access to infrastructure, the costs of interconnection with other networks, our relationships with third-party programming providers and broadcasters, the prices of competing products and services, or any change in policy allowing more favorable conditions for other operators, could adversely affect our ability to set prices, enter new markets or control our costs. In particular, following the transposition of recent amendments to European directives into U.K. law, Ofcom may attempt to use the non-significant market power access provisions to require us to make available access to our ducts. In addition, Ofcom may look to impose regulation on the cable network, which is currently unregulated. Ofcom is in the process of considering if and how new rules on switching of service might be extended to providers other than those operating over the BT network. Such regulation would allow customers to switch with greater ease to another provider without a dependency on the existing provider.

In July 2013, the U.K. government published a white paper reviewing U.K. Communications legislation. This included a plan to review the balance of payments between public service broadcasters and pay-TV providers, including us, which could lead to changes in the law governing payments for the rights to retransmit public service programming. A resulting consultation seeking evidence on the balance of payments between television platforms and public service broadcasters was published in March 2015. That consultation closed in May 2015, with the government publishing its conclusions on July 5, 2016 that, whilst certain legislation relating to the existing net zero payment arrangement will be removed, there should continue to be no net payments between all platform operators and the public service broadcasters (with the government stating that it may seek to legislate to achieve that outcome, if necessary). Legislative changes are expected in the first half of 2017. Any amendments requiring us to pay fees for such content would increase our operating costs and could have an adverse effect on our business, financial condition and results of operations.

Our ability to introduce new products and services may also be affected if we cannot predict how existing or future laws, regulations or policies would apply to such products or services. In addition, our business and the industry in which we operate are subject to investigation by regulators and claims brought by private parties, which could lead to enforcement actions, fines and penalties or the assertion of private litigation claims and damages. Any such action could harm our reputation and result in increased costs to the business. With respect to private litigation, we are subject to an ongoing lawsuit in state court in New Jersey entitled Musashi, L.L.C. and W.R. Huff Asset Management Co., L.L.C. v. Virgin Media Inc. The plaintiffs in that case assert various claims that we believe to be baseless and without merit, including, among others, a purported indemnification claim for losses (including lost profits and lost business opportunity) and expenses that such plaintiffs claim to have incurred in connection with disputes, regulatory proceedings and client terminations relating to the plaintiffs' decision not to share with its clients fees received by plaintiffs in 2004 for services allegedly performed for us or our predecessors. While we believe the case is wholly without merit, a trial in such matter is scheduled for April 2017. We cannot predict the outcome of these proceedings including what, if any, impact a final determination in such proceedings would have on our financial condition or liquidity.

We are also subject to accreditation requirements with respect to certain of our B2B products and services provided to public sector organizations in the U.K. We have security accreditations across a range of B2B products and services for public sector organizations in the U.K., which are granted subject to periodic reviews of our policies and procedures by U.K. governmental entities. If we were to fail to maintain an accreditation or to obtain a new one when required, it could impact our ability to provide certain offerings to the public sector.

The U.K. referendum advising for the exit of the U.K. from the E.U. could have a material adverse effect on our business, financial condition, results of operations or liquidity. On June 23, 2016, the U.K. held a referendum in which voters approved, on an advisory basis, an exit from the E.U., commonly referred to as "**Brexit**". The terms of any withdrawal are subject to a negotiation period that could last at least two years after the British government formally initiates a withdrawal process pursuant to Article 50 of the Treaty on Europe. The British government has indicated that it plans to trigger Article 50 and commence negotiations to determine the terms of the U.K.'s withdrawal from the E.U. by the end of March 2017. A withdrawal could, among other outcomes, disrupt the free movement of goods, services, people and capital between the U.K. and the E.U., undermine bilateral cooperation in key geographic areas and significantly disrupt trade between the U.K. and the E.U. or other nations as the U.K. pursues independent trade relations. The initial impact of the announcement of Brexit caused significant volatility in global capital markets.

The potential impacts, if any, of the uncertainty relating to Brexit or the resulting terms of the withdrawal of the U.K. from the E.U. on customer behavior, economic conditions, interest rates, currency exchange rates, availability of capital or other matters are unclear. Examples of the impact Brexit could have on our business, financial condition or results of operations include:

- changes in foreign currency exchange rates and disruptions in the capital markets;
- legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws and directives to replace or replicate, or where previously implemented by enactment of U.K. laws or regulations, to retain, amend or repeal;
- uncertainty as to the terms of the U.K.'s withdrawal from, and future relationship with, the E.U. in terms of the impact on the free movement of our services, capital and employees;

- global economic uncertainty, which may cause our customers to reevaluate what they are willing to spend on our products and services; and
- various geopolitical forces may impact the global economy and our business, including, for example, other E.U. member states proposing referendums to, or electing to, exit the E.U.

Risks Relating to Our Indebtedness, Taxes and Other Financial Matters

We have substantial indebtedness that may have a material adverse effect on our available cash flow, our ability to obtain additional financing if necessary in the future, our flexibility in reacting to competitive and technological changes and our operations. We have a substantial amount of indebtedness. As of December 31, 2016, the outstanding principal amount of our consolidated third-party debt, together with our capital lease obligations, aggregated £12,145.9 million, including £1,049.4 million that is classified as current in our consolidated balance sheet.

Our ability to pay principal and interest on or to refinance the outstanding indebtedness depends upon our operating performance, which will be affected by, among other things, general economic, financial, competitive, regulatory and other factors, some of which are beyond our control. Moreover, we may not be able to refinance or redeem such debt on commercially reasonable terms, on terms acceptable to us, or at all.

The level of our indebtedness could have important consequences, including the following:

- a substantial portion of our cash flow from operations will have to be dedicated to the payment of interest and principal on existing indebtedness, thereby reducing the funds available for other purposes;
- our ability to obtain additional financing in the future for working capital, capital expenditures, product development, acquisitions or general corporate purposes may be impaired;
- our flexibility in planning for, or reacting to, changes in our business, the competitive environment and the industry in which we operate, and to technological and other changes may be limited;
- we may be placed at a competitive disadvantage as compared to our competitors that are not as highly leveraged;
- our substantial degree of leverage could make us more vulnerable in the event of a downturn in general economic conditions or adverse developments in our business; and
- we are exposed to risks inherent in interest rate and foreign exchange rate fluctuations.

Any of these or other consequences or events could have a material adverse effect on our ability to satisfy our debt obligations, which could adversely affect our business and operations.

We may not be able to fund our debt service obligations in the future. We have significant principal payments that could require a partial or comprehensive refinancing of our VM Credit Facilities and other debt instruments. Certain tranches of our VM Credit Facilities have a term of five to nine years. In addition, certain series of our Senior Secured Notes and Senior Notes mature between 2021 and 2029. See note 8 to our consolidated financial statements included in Part II of this annual report.

Our ability to implement such a refinancing successfully would be significantly dependent on stable debt capital markets. In addition, we may not achieve or sustain sufficient cash flow in the future for the payment of principal or interest on our indebtedness when due. Consequently, we may be forced to raise cash or reduce expenses by doing one or more of the following:

- raising additional debt;
- restructuring or refinancing our indebtedness prior to maturity, and/or on unfavorable terms;
- selling or disposing of some of our assets, possibly on unfavorable terms;

- issuing equity or equity-related instruments that will dilute the equity ownership interest of existing stockholders; or

- foregoing business opportunities, including the introduction of new products and services, acquisitions and joint ventures.

We cannot be sure that any of, or a combination of, the above actions would be sufficient to fund our debt service obligations, particularly in times of turbulent capital markets.

The covenants under our debt agreements place certain limitations on our ability to finance future operations and how we manage our business. The agreements that govern our indebtedness contain financial maintenance tests and restrictive covenants that restrict our ability to incur additional debt and limit the discretion of our management over various business matters. For example, the financial maintenance tests include leverage ratios, and the restrictive covenants impact our ability to:

- pay dividends or make other distributions, or redeem or repurchase equity interests or subordinated obligations;

- make investments;

- sell assets, including the capital stock of subsidiaries;

- enter into certain sale and leaseback transactions and certain vendor financing arrangements;

- create liens;

- enter into agreements that restrict some of our subsidiaries' ability to pay dividends, transfer assets or make related-party loans;

- merge or consolidate or transfer all or substantially all of our assets; and

- enter into certain transactions with affiliates.

These limitations are subject to significant exceptions and qualifications, including the ability to pay dividends, make investments or to make significant prepayments of shareholder debt. However, these covenants could limit our ability to finance our future operations and capital needs and our ability to pursue business opportunities and activities that may be in our interest. In addition, our ability to comply with the provisions of our debt instruments may be affected by events beyond our control.

If we breach any of these covenants, or are unable to comply with the required financial ratios, we may be in default under our debt instruments. A significant portion of our indebtedness may then become immediately due and payable, and we may not have sufficient assets to repay amounts due thereunder. In addition, any default under these facilities could lead to an event of default and acceleration under other debt instruments that contain cross default or cross acceleration provisions, including the indentures governing the Senior Secured Notes and the Senior Notes.

These restrictions could also materially adversely affect our ability to finance future operations or capital needs or to engage in other business activities that may be in our best interests. We may also incur other indebtedness in the future that may contain financial or other covenants more restrictive than those applicable under our current indebtedness.

We are a holding company dependent upon cash flow from subsidiaries to meet our obligations. Virgin Media Inc. and a number of its subsidiaries are holding companies with no independent operations or significant assets other than investments in their subsidiaries. Each of these holding companies depends upon the receipt of sufficient funds from its subsidiaries to meet its obligations.

The terms of our senior credit facility and other indebtedness limit the payment of dividends, loan repayments and other distributions to or from these companies under certain circumstances. Various agreements governing our debt may restrict and, in some cases, may also prohibit the ability of these subsidiaries to move cash within their restricted group. Applicable tax laws may also subject such payments to further taxation.

Applicable law may also limit the amounts that some of our subsidiaries will be permitted to pay as dividends or distributions on their equity interests or as loans, or even prevent such payments.

We are subject to currency and interest rate risks. We are subject to currency exchange rate risks because substantially all of our revenues and operating expenses are paid in pounds sterling, but we pay interest and principal obligations with respect to portions of our indebtedness in U.S. dollars and euros. To the extent that the pound sterling declines in value against the United States (**U.S.**) dollar and the euro (including as a result of the U.K's vote to leave the E.U., as discussed below), the effective cost of servicing our U.S. dollar and euro-denominated debt will be higher. Changes in the exchange rate result in foreign currency gains or losses.

We are also subject to interest rate risks as we have certain interest determined on a variable basis, either through unhedged variable rate debt or derivative hedging contracts. We also incur costs in U.S. dollars and euros in the ordinary course of our business, including for customer premises equipment and network maintenance services. Any deterioration in the value of the pound sterling relative to the U.S. dollar or the euro could cause an increase in the effective cost of purchases made in these currencies as only part of these exposures are hedged.

As a result of the June 23, 2016 referendum by British voters to exit the E.U., global markets and foreign currencies have been adversely impacted. In particular, the value of the pound sterling has sharply declined as compared to the U.S. dollar, the euro and other currencies. This volatility in foreign currencies is expected to continue as the U.K. negotiates and executes its exit from the E.U. but it is uncertain over what time period this will occur. A significantly weaker pound sterling compared to the U.S. dollar could, in addition to the consequences discussed above, have a significant negative effect on our business, financial condition and results of operations. For a description of the risks associated with the U.K.'s vote to leave the E.U., see "*Risks Relating to Our Industry and Our Business-The U.K. referendum advising for the exit of the U.K. from the E.U. could have a material adverse effect on our business, financial condition or results of operations*" above.

We are subject to tax in more than one tax jurisdiction and our structure poses various tax risks. We are subject to taxation in multiple jurisdictions, in particular the U.S., the U.K. and Ireland. Our effective tax rate and tax liability will be affected by a number of factors in addition to our operating results, including the amount of taxable income in particular jurisdictions, the tax rates in those jurisdictions, tax treaties between jurisdictions, the manner in which and extent to which we transfer funds to and repatriate funds from our subsidiaries, accounting standards and changes in accounting standards, and future changes in the law. We may incur losses in one jurisdiction that cannot be offset against income earned in a different jurisdiction and so we may pay income taxes in one jurisdiction for a particular period even though on an overall basis we incur a net loss for that period.

Although substantially all of our revenue and operating income is generated outside the U.S., the majority of our subsidiaries remain subject to potential current U.S. income tax on their income as they are owned through U.S. corporations. Our worldwide effective tax rate is reduced under a provision in U.S. tax law that defers the imposition of U.S. tax on certain foreign active income until that income is repatriated to the U.S. for a majority of our subsidiaries. Any repatriation of assets through our U.S. ownership currently held by these jurisdictions or recognition of income that fails to meet the U.S. tax requirements related to deferral of U.S. income tax may result in a higher effective tax rate for our company. This includes what is typically referred to as "Subpart F Income," which generally includes, but is not limited to, such items as interest, dividends, royalties, gains from the disposition of certain property, certain currency exchange gains in excess of currency exchange losses, and certain related party sales and services income. While the company may mitigate this increase in its effective tax rate through claiming a foreign tax credit against its U.S. federal income taxes or potentially have foreign or U.S. taxes reduced under applicable income tax treaties, we are subject to various limitations on claiming foreign tax credits or we may lack treaty protections that will potentially limit any reduction of the increased effective tax rate.

We may have exposure to additional tax liabilities. We are subject to income taxes as well as non-income based taxes in multiple jurisdictions, such as payroll, sales, use, value-added, net worth, property and goods and services taxes, mainly in the U.K., U.S. and Ireland. Significant judgment is required in determining our worldwide provision for income taxes and other tax liabilities. In the ordinary course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. We are subject to audit by tax authorities in all jurisdictions in which we operate. Although we believe that our tax estimates are reasonable, (i) there is no assurance that the final determination of tax audits or tax disputes will not be different from what is reflected in our historical income tax provisions, expense amounts for non-income based taxes and accruals and (ii) any material differences could have an adverse effect on our financial position and results of operations in the period or periods for which determination is made.

On March 19, 2014, the U.K. government announced a change in legislation with respect to the charging of VAT in connection with prompt payment discounts such as those that we offer to our fixed-line telephony customers. This change, which took effect on May 1, 2014, impacted our company and some of our competitors. The U.K. tax authority issued a decision in the fourth quarter of 2015 challenging our application of the prompt payment discount rules prior to the May 1, 2014 change in legislation. We have appealed this decision. As part of the appeal process, we were required to make aggregate payments of £67.0 million, which included the challenged amount of £63.7 million and related interest of £3.3 million. The aggregate amount paid does not include penalties, which could be significant in the unlikely event that penalties were to be assessed. This matter will likely be subject to court proceedings that could delay the ultimate resolution for an extended period of time.

We have agreed with the Valuation Office Agency to an increase in the rateable value of our existing network and other assets in the U.K. that is scheduled to become effective on April 1, 2017. This increase will affect the amount we pay for network infrastructure charges as the annual amount payable to the U.K. government is calculated by applying a percentage multiplier to the rateable value of assets. This proposed change, together with a similar proposed change in Ireland, would result in significant increases in our network infrastructure charges. We estimate that the aggregate amount of these increases will be approximately £30 million during 2017 and will build to a maximum aggregate increase of up to £100 million in 2021. We continue to believe that the proposed increases are excessive, and we retain the right of appeal should more favorable agreements be reached with other operators. The rateable value of network and other assets constructed under our Network Extension program remains subject to review by the Valuation Office Agency.

Adverse changes in our financial outlook may result in negative or unexpected tax consequences which could adversely affect our net income. Future adverse changes in the underlying profitability and financial outlook of our operations could cause us to establish a valuation allowance on our deferred tax assets, which could materially and adversely affect our consolidated balance sheets and statements of operations. A change in this valuation allowance will not result in any change to the amount of cash payments we make to the tax authorities.

Strategic transactions present many risks, and we may not realize the financial and strategic goals that were contemplated at the time of any transaction. From time to time we have made acquisitions, dispositions and have entered into other strategic transactions, such as the VM Ireland Acquisition. In connection with such transactions, we may incur unanticipated expenses, fail to realize anticipated benefits and synergies, have difficulty integrating the combined businesses, disrupt relationships with current and new employees, customers and suppliers, incur significant indebtedness, or experience delays or fail to proceed with announced transactions. These factors could have a material adverse effect on our business and/or our reputation.

Risks Relating to Our Management, Principal Shareholder and Related Parties

The loss of certain key personnel could harm our business. We have experienced employees at both the corporate and operational levels who possess substantial knowledge of our business and operations. There can be no assurance that we will be successful in retaining the services of these employees or that we would be successful in hiring and training suitable replacements without undue costs or delays. As a result, the loss of any of these key employees could cause significant disruptions in our business operations, which could materially adversely affect our results of operations.

The interests of Liberty Global, our indirect parent company, may conflict with our interests. Liberty Global is our parent, indirectly owning all of the voting interests in us. When business opportunities, or risks and risk allocation arise, the interests of Liberty Global (or other Liberty Global controlled entities) may be different from, or in conflict with, our interests on a stand-alone basis. Because we are indirectly controlled by the parent entity, Liberty Global may allocate certain or all of its risks to us and there can be no assurance that Liberty Global will permit us to pursue certain business opportunities.

Independent Auditors' Report

The Board of Directors
Virgin Media Inc.:

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of Virgin Media Inc. and its subsidiaries, which comprise the consolidated balance sheets as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, owners' equity and cash flows for the years ended December 31, 2016, 2015 and 2014, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Virgin Media Inc. and its subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for the years ended December 31, 2016, 2015 and 2014 in accordance with U.S. generally accepted accounting principles.

Emphasis of Matter

As disclosed in note 1 and note 4, the consolidated statements of operations, comprehensive loss, owners' equity and cash flows for the year ended December 31, 2014 have been adjusted to give retrospective effect to a transaction accounted for as a common control transfer. Our conclusion is not modified with respect to this matter.

/s/ KPMG LLP

London, England
March 28, 2017

VIRGIN MEDIA INC.
CONSOLIDATED BALANCE SHEETS

	December 31, 2016	December 31, 2015
	in millions	
ASSETS		
Current assets:		
Cash and cash equivalents	£ 22.1	£ 20.2
Trade receivables, net	544.9	494.6
Related-party receivables (note 12)	60.1	45.4
Derivative instruments (notes 5 and 12)	95.8	61.2
Prepaid expenses (note 12)	41.2	39.1
Other current assets	53.0	37.6
Total current assets	817.1	698.1
Property and equipment, net (note 7)	5,964.5	5,861.2
Goodwill (note 7)	6,004.3	5,966.6
Intangible assets subject to amortization, net (note 7)	1,224.6	1,604.1
Deferred income taxes (note 9)	1,437.3	1,430.7
Related-party notes receivable (note 12)	4,687.2	3,385.1
Other assets, net (notes 5, 12 and 14)	1,198.2	452.4
Total assets	£ 21,333.2	£ 19,398.2

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

VIRGIN MEDIA INC.
CONSOLIDATED BALANCE SHEETS — (Continued)

	December 31, 2016	December 31, 2015
	in millions	
LIABILITIES AND OWNERS' EQUITY		
Current liabilities:		
Accounts payable (note 12)	£ 372.7	£ 345.8
Deferred revenue and advanced payments from subscribers and others	375.5	383.0
Current portion of debt and capital lease obligations (note 8):		
Third-party	1,049.4	745.9
Related-party (note 12)	45.7	—
Accrued interest	187.7	183.6
Accrued capital expenditures (note 12)	173.9	100.9
Value-added taxes (**VAT**) payable	95.9	111.5
Derivative instruments (note 5)	44.6	101.2
Other current liabilities (notes 12 and 13)	457.5	356.7
Total current liabilities	2,802.9	2,328.6
Long-term debt and capital lease obligations (note 8):		
Third-party	11,021.7	9,357.4
Related-party (note 12)	—	72.0
Other long-term liabilities (notes 5, 9, 13 and 14)	304.9	180.8
Total liabilities	14,129.5	11,938.8
Commitments and contingent liabilities (notes 5, 8, 9, 13, 14 and 16)		
Owners' equity:		
Parent's equity:		
Additional paid-in capital	8,397.5	8,359.7
Accumulated deficit	(1,224.9)	(943.0)
Accumulated other comprehensive earnings, net of taxes	90.6	90.9
Total parent's equity	7,263.2	7,507.6
Noncontrolling interest	(59.5)	(48.2)
Total owners' equity	7,203.7	7,459.4
Total liabilities and owners' equity	£ 21,333.2	£ 19,398.2

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

VIRGIN MEDIA INC.
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year ended December 31,		
	2016	2015	2014
		in millions	
Revenue (note 17)	£ 4,806.1	£ 4,618.4	£ 4,496.9
Operating costs and expenses (exclusive of depreciation and amortization, shown separately below):			
Programming and other direct costs of services (note 12)	1,436.1	1,354.5	1,282.9
Other operating (note 12)	617.1	629.3	671.8
Selling, general and administrative (**SG&A**) (notes 11 and 12)	616.8	600.8	610.7
Related-party fees and allocations, net (note 12)	110.9	87.6	36.6
Depreciation and amortization	1,650.8	1,557.8	1,608.1
Impairment, restructuring and other operating items, net (note 13)	26.4	10.9	12.7
	4,458.1	4,240.9	4,222.8
Operating income	348.0	377.5	274.1
Non-operating income (expense):			
Interest expense:			
Third-party	(583.6)	(510.5)	(457.1)
Related-party (note 12)	(4.2)	(5.7)	(52.0)
Interest income – related-party (note 12)	289.6	246.5	229.7
Realized and unrealized gains on derivative instruments, net (notes 5 and 12)	665.8	253.1	48.6
Foreign currency transaction losses, net	(950.2)	(271.8)	(152.0)
Gains (losses) on debt modification and extinguishment, net (note 8)	(62.9)	(29.4)	20.1
Realized and unrealized losses due to changes in fair values of certain debt, net (note 8)	(4.5)	—	—
Other income (expense), net	2.6	(0.4)	1.4
	(647.4)	(318.2)	(361.3)
Earnings (loss) before income taxes	(299.4)	59.3	(87.2)
Income tax benefit (expense) (note 9)	13.8	(201.2)	(21.4)
Net loss	(285.6)	(141.9)	(108.6)
Net loss (earnings) attributable to noncontrolling interest	3.7	5.5	(0.6)
Net loss attributable to parent	£ (281.9)	£ (136.4)	£ (109.2)

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

VIRGIN MEDIA INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Year ended December 31,		
	2016	2015	2014
		in millions	
Net loss	£ (285.6)	£ (141.9)	£ (108.6)
Other comprehensive earnings (loss), net of taxes (note 15):			
Foreign currency translation adjustments	(2.9)	37.3	(62.9)
Pension-related adjustments and other	(6.3)	9.1	(32.3)
Other comprehensive earnings (loss)	(9.2)	46.4	(95.2)
Comprehensive loss	(294.8)	(95.5)	(203.8)
Comprehensive loss (earnings) attributable to noncontrolling interest	12.6	1.0	(1.4)
Comprehensive loss attributable to parent	£ (282.2)	£ (94.5)	£ (205.2)

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

VIRGIN MEDIA INC.
CONSOLIDATED STATEMENTS OF OWNERS' EQUITY

	Parent's Equity					
	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive earnings, net of taxes	Total parent's equity	Non-controlling interest	Total owners' equity
			in millions			
Balance at January 1, 2014	£ 9,477.4	£ (697.4)	£ 145.0	£ 8,925.0	£ (55.6)	£ 8,869.4
Net loss	—	(109.2)	—	(109.2)	0.6	(108.6)
Other comprehensive loss, net of taxes (note 15)	—	—	(96.0)	(96.0)	0.8	(95.2)
Contribution of tax assets (note 12)	147.4	—	—	147.4	—	147.4
Share-based compensation (note 11)	28.8	—	—	28.8	—	28.8
Capital charge in connection with the exercise or vesting of share-based incentive awards (note 12)	(28.8)	—	—	(28.8)	—	(28.8)
Conversion of related-party loans receivable and related accrued interest to equity (note 12)	(392.6)	—	—	(392.6)	—	(392.6)
Deemed contribution of technology-related services (note 12)	8.8	—	—	8.8	4.8	13.6
Balance at December 31, 2014	£ 9,241.0	£ (806.6)	£ 49.0	£ 8,483.4	£ (49.4)	£ 8,434.0

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

VIRGIN MEDIA INC.
CONSOLIDATED STATEMENTS OF OWNERS' EQUITY — (Continued)

	Parent's Equity					
	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive earnings, net of taxes	Total parent's equity	Non-controlling interest	Total owners' equity
			in millions			
Balance at January 1, 2015	£ 9,241.0	£ (806.6)	£ 49.0	£ 8,483.4	£ (49.4)	£ 8,434.0
Net loss	—	(136.4)	—	(136.4)	(5.5)	(141.9)
Other comprehensive earnings, net of taxes (note 15)	—	—	41.9	41.9	4.5	46.4
Consideration issued in connection with the VM Ireland Acquisition (notes 1 and 4)	(993.8)	—	—	(993.8)	—	(993.8)
Deemed contribution in connection with elimination of the VM Ireland Note (note 4)	470.0	—	—	470.0	—	470.0
Conversion of related-party loans receivable and related accrued interest to equity (note 12)	(467.2)	—	—	(467.2)	—	(467.2)
Contribution of tax assets (note 12)	105.5	—	—	105.5	—	105.5
Share-based compensation (note 11)	24.2	—	—	24.2	0.5	24.7
Capital charge in connection with the exercise or vesting of share-based incentive awards (note 12)	(24.1)	—	—	(24.1)	(0.5)	(24.6)
Deemed contribution of technology-related services (note 12)	4.1	—	—	4.1	2.2	6.3
Balance at December 31, 2015	£ 8,359.7	£ (943.0)	£ 90.9	£ 7,507.6	£ (48.2)	£ 7,459.4

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

VIRGIN MEDIA INC.
CONSOLIDATED STATEMENTS OF OWNERS' EQUITY — (Continued)

	Parent's Equity					
	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive earnings, net of taxes	Total parent's equity	Non-controlling interest	Total owners' equity
	in millions					
Balance at January 1, 2016	£ 8,359.7	£ (943.0)	£ 90.9	£ 7,507.6	£ (48.2)	£ 7,459.4
Net loss	—	(281.9)	—	(281.9)	(3.7)	(285.6)
Other comprehensive loss, net of taxes (note 15)	—	—	(0.3)	(0.3)	(8.9)	(9.2)
Share-based compensation (note 11)	28.8	—	—	28.8	0.3	29.1
Contribution of tax assets (note 12)	24.8	—	—	24.8	—	24.8
Capital charge in connection with the exercise or vesting of share-based incentive awards (note 12)	(19.5)	—	—	(19.5)	(0.3)	(19.8)
Deemed contribution of technology-related services (note 12)	2.5	—	—	2.5	1.3	3.8
Other	1.2	—	—	1.2	—	1.2
Balance at December 31, 2016	£ 8,397.5	£ (1,224.9)	£ 90.6	£ 7,263.2	£ (59.5)	£ 7,203.7

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

VIRGIN MEDIA INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31,		
	2016	2015	2014
		in millions	
Cash flows from operating activities:			
Net loss	£ (285.6)	£ (141.9)	£ (108.6)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Share-based compensation expense	31.0	35.5	33.8
Related-party fees and allocations, net	110.9	87.6	36.6
Depreciation and amortization	1,650.8	1,557.8	1,608.1
Impairment, restructuring and other operating items, net	26.4	10.9	12.7
Amortization of deferred financing costs and non-cash interest	10.7	11.1	16.8
Realized and unrealized gains on derivative instruments, net	(665.8)	(253.1)	(48.6)
Foreign currency transaction losses, net	950.2	271.8	152.0
Losses (gains) on debt modification and extinguishment, net	62.9	29.4	(20.1)
Realized and unrealized losses due to changes in fair values of certain debt, net	4.5	—	—
Deferred income tax expense (benefit)	(15.3)	198.1	18.9
Changes in operating assets and liabilities, net of the effect of acquisitions and dispositions:			
Receivables and other operating assets	(54.1)	(123.0)	38.7
Payables and accruals	(21.3)	(57.9)	(57.9)
Net cash provided by operating activities	1,805.3	1,626.3	1,682.4
Cash flows from investing activities:			
Advances to related parties, net	(1,416.7)	(887.5)	(1,005.6)
Capital expenditures	(559.7)	(580.2)	(650.8)
Cash paid in connection with other acquisitions, net of cash acquired	(34.1)	(57.2)	—
Cash paid in connection with the VM Ireland Acquisition	—	(993.8)	—
Other investing activities, net	0.7	10.5	(10.1)
Net cash used by investing activities	£ (2,009.8)	£ (2,508.2)	£ (1,666.5)

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

VIRGIN MEDIA INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS — (Continued)

	Year ended December 31,		
	2016	2015	2014
		in millions	
Cash flows from financing activities:			
Borrowings of third-party debt	£ 5,686.2	£ 3,587.2	£ 2,146.4
Repayments and repurchases of third-party debt and capital lease obligations	(5,428.0)	(2,766.1)	(2,286.2)
Payment of financing costs and debt premiums	(53.0)	(28.7)	(89.3)
Net cash received (paid) related to derivative instruments	30.4	(17.9)	(27.1)
Net borrowings (repayments) of related-party notes	(26.3)	69.6	(64.7)
Other financing activities, net	(6.0)	19.0	(0.5)
Net cash provided (used) by financing activities	203.3	863.1	(321.4)
Effect of exchange rate changes on cash and cash equivalents	3.1	2.4	(1.9)
Net increase (decrease) in cash and cash equivalents	1.9	(16.4)	(307.4)
Cash and cash equivalents:			
Beginning of period	20.2	36.6	344.0
End of period	£ 22.1	£ 20.2	£ 36.6
Cash paid for interest	£ 590.8	£ 461.6	£ 410.9
Net cash paid for taxes	£ 6.3	£ 4.6	£ 0.5

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

(1) Basis of Presentation

General

Virgin Media Inc. (**Virgin Media**) is a provider of video, broadband internet, fixed-line telephony and mobile services to consumers and businesses in the United Kingdom (**U.K.**) and Ireland. Virgin Media became a wholly-owned subsidiary of Liberty Global plc (**Liberty Global**) as a result of a series of mergers that were completed on June 7, 2013 (the **LG/VM Transaction**). In these notes, the terms "we," "our," "our company" and "us" may refer, as the context requires, to Virgin Media or collectively to Virgin Media and its subsidiaries.

On July 1, 2015, Liberty Global completed the approved steps of the "**LiLAC Transaction**" whereby Liberty Global (i) reclassified its then outstanding Class A, Class B and Class C Liberty Global ordinary shares into corresponding classes of new Liberty Global ordinary shares (collectively, the **Liberty Global Shares**) and (ii) capitalized a portion of its share premium account and distributed as a dividend (or a "bonus issue" under U.K. law) its LiLAC Class A, Class B and Class C ordinary shares (collectively, the **LiLAC Shares**). In these notes, the term "**Old Liberty Global Shares**" refers to Liberty Global's previously-outstanding Class A, Class B and Class C Liberty Global ordinary shares. Pursuant to the LiLAC Transaction, each holder of Class A, Class B and Class C Old Liberty Global Shares remained a holder of the same amount and class of Liberty Global Shares and received one share of the corresponding class of LiLAC Shares for each 20 Old Liberty Global Shares held as of the record date for such distribution.

During the first quarter of 2015, Liberty Global undertook various financing transactions in connection with certain internal reorganizations of its broadband and wireless communications businesses in Europe. As part of these reorganizations, on February 12, 2015, we acquired a 65.0% controlling interest in Virgin Media Ireland Ltd. (**VM Ireland**) and its subsidiaries from a subsidiary of Liberty Global outside of the Virgin Media borrowing group (the **VM Ireland Acquisition**). The remaining 35.0% noncontrolling interest in VM Ireland was acquired by another subsidiary of Liberty Global outside of the Virgin Media borrowing group. We accounted for the VM Ireland Acquisition as a common control transfer at carryover basis and give effect to this transaction for all periods presented. For additional information regarding the common control transaction, see note 4.

Unless otherwise indicated, convenience translations into pound sterling are calculated as of December 31, 2016.

These consolidated financial statements reflect our consideration of the accounting and disclosure implications of subsequent events through March 28, 2017, the date of issuance.

Alignment of Accounting Policies

Our accounting policy is to generally defer upfront installation fees on our business-to-business (**B2B**) contracts and recognize the associated revenue over the contractual term of the arrangement. Prior to the LG/VM Transaction, we generally treated installation fees received from customers with B2B contracts as a separate deliverable and recognized revenue upon completion of the installation activity in an amount that was based on the relative standalone selling price methodology.

The following table provides a rollforward of our deferred revenue for installation services provided to customers with B2B contracts during 2016 (in millions):

Balance at January 1, 2016	£	78.5
Amounts deferred for completed installation services (a)		6.8
Amortization of deferred revenue over contract life		(9.9)
Balance at March 31, 2016		75.4
Amounts deferred for completed installation services (a)		8.0
Amortization of deferred revenue over contract life		(10.6)
Balance at June 30, 2016		72.8
Amounts deferred for completed installation services (a)		7.3
Amortization of deferred revenue over contract life		(10.4)
Balance at September 30, 2016		69.7
Amounts deferred for completed installation services (a)		8.0
Amortization of deferred revenue over contract life		(10.6)
Balance at December 31, 2016	£	67.1

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(a) Represents amounts that would have been recognized upfront as installation revenue prior to the LG/VM Transaction, but were deferred under Liberty Global's policy.

(2) Accounting Changes and Recent Accounting Pronouncements

Accounting Changes

In April 2015, the Financial Accounting Standards Board (**FASB**) issued Accounting Standards Update (**ASU**) No. 2015-03, *Simplifying the Presentation of Debt Issuance Costs* (**ASU 2015-03**), which requires debt issuance costs related to a recognized debt liability to be presented on the balance sheet as a reduction of debt, similar to the presentation of debt discounts. ASU 2015-03 is effective for annual reporting periods beginning after December 15, 2015. We adopted ASU 2015-03 on January 1, 2016 and, accordingly, deferred financing costs are presented as a reduction of debt in our December 31, 2016 and 2015 consolidated balance sheets. Prior to the adoption of ASU 2015-03, we presented deferred financing costs in other assets, net.

Recent Accounting Pronouncements

ASU 2014-09

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (**ASU 2014-09**), which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. ASU 2014-09, as amended by ASU No. 2015-14, will replace existing revenue recognition guidance when it becomes effective for annual reporting periods beginning after December 15, 2018. This new standard permits the use of either the retrospective or cumulative effect transition method. We will adopt ASU 2014-09 effective January 1, 2018 using the cumulative effect transition method. While we are continuing to evaluate the effect that ASU 2014-09 will have on our consolidated financial statements, we have identified a number of our current revenue recognition policies that will be impacted by ASU 2014-09, including the accounting for (i) time-limited discounts and free periods provided to our customers and (ii) certain up-front fees charged to our customers. These impacts are discussed below:

- When we enter into contracts to provide services to our customers, we often provide time-limited discounts or free service periods. Under current accounting rules, we recognize revenue net of discounts during the promotional periods and do not recognize any revenue during free service periods. Under ASU 2014-09, revenue recognition will be accelerated for these contracts as the impact of the discount or free service period will be recognized uniformly over the total contractual period.

- When we enter into contracts to provide services to our customers, we often charge installation or other up-front fees. Under current accounting rules, installation fees related to services provided over our cable networks are recognized as revenue in the period during which the installation occurs to the extent these fees are equal to or less than direct selling costs. Under ASU 2014-09, these fees will generally be deferred and recognized as revenue over the contractual period, or longer if the up-front fee results in a material renewal right.

As the above revenue recognition changes have offsetting impacts and both result in a relatively minor shift in the timing of revenue recognition, we currently do not expect ASU 2014-09 to have a material impact on our reported revenue.

ASU 2014-09 will also impact our accounting for certain upfront costs directly associated with obtaining and fulfilling customer contracts. Under our current policy, these costs are expensed as incurred unless the costs are in the scope of another accounting topic that allows for capitalization. Under ASU 2014-09, the upfront costs that are currently expensed as incurred will be recognized as assets and amortized to other operating expenses over a period that is consistent with the transfer to the customers of the goods or services to which the assets relate, which we have generally interpreted to be the expected customer life. The impact of the accounting change for these costs will be dependent on numerous factors, including the number of new subscriber contracts added in any given period, but we expect the adoption of this accounting change will initially result in the deferral of a significant amount of operating and selling costs.

The ultimate impact of adopting ASU 2014-09 for both revenue recognition and costs to obtain and fulfill contracts will depend on the promotions and offers in place during the period leading up to and after the adoption of ASU 2014-09.

ASU 2016-02

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (**ASU 2016-02**), which, for most leases, will result in lessees recognizing lease assets and lease liabilities on the balance sheet with additional disclosures about leasing arrangements. ASU 2016-02 requires lessees and lessors to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. The modified retrospective approach also includes a number of optional practical expedients an entity may elect to apply. ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2019, with early adoption permitted. Although we are currently evaluating the effect that ASU 2016-02 will have on our consolidated financial statements, we expect the adoption of this standard will increase the number of leases to be accounted for as capital leases in our consolidated balance sheet.

ASU 2016-09

In March 2016, the FASB issued ASU No. 2016-09, *Compensation — Stock Compensation, Improvements to Employee Share-Based Payment Accounting* (**ASU 2016-09**), which simplifies several aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or liabilities and classification within the statement of cash flows. ASU 2016-09 is effective for annual reporting periods beginning after December 15, 2017, with early adoption permitted. ASU 2016-09 will result in, among other matters, the immediate recognition for financial reporting purposes of excess tax benefits that currently are not recognized until such time as these tax benefits can be realized as a reduction of income taxes payable.

ASU 2017-04

In January 2017, the FASB issued ASU No. 2017-04, *Simplifying the Test for Goodwill Impairment* (**ASU 2017-04**), which eliminates the requirement to estimate the implied fair value of a reporting unit's goodwill as determined following the procedure that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. Instead, a company should recognize any goodwill impairment by comparing the fair value of a reporting unit to its carrying amount. ASU 2017-04 is effective for annual reporting periods beginning after December 15, 2021, with early adoption permitted. We expect the adoption of ASU 2017-04 to reduce the complexity surrounding the evaluation of our goodwill for impairment.

(3) Summary of Significant Accounting Policies

Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States (**U.S. GAAP**) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Estimates and assumptions are used in accounting for, among other things, the valuation of acquisition-related assets and liabilities, allowances for uncollectible accounts, programming and copyright expenses, deferred income taxes and related valuation allowances, loss contingencies, fair value measurements, impairment assessments, capitalization of internal costs associated with construction and installation activities, useful lives of long-lived assets, share-based compensation and actuarial liabilities associated with certain benefit plans. Actual results could differ from those estimates.

Reclassifications

Certain prior year amounts have been reclassified to conform to the current year presentation, including the reclassification of deferred financing costs from other long-term assets to long-term debt and capital lease obligations and the reclassification of certain costs between programming and other direct costs of services, other operating and SG&A expenses. For additional information regarding the change in the classification of deferred financing costs, see *"Accounting Changes"* in note 2.

Principles of Consolidation

The accompanying consolidated financial statements include our accounts and the accounts of all voting interest entities where we exercise a controlling financial interest through the ownership of a direct or indirect controlling voting interest and variable interest entities for which our company is the primary beneficiary. All significant intercompany accounts and transactions have been eliminated in consolidation.

Cash and Cash Equivalents and Restricted Cash

Cash equivalents consist of money market funds and other investments that are readily convertible into cash and have maturities of three months or less at the time of acquisition. We record money market funds at the net asset value reported by the investment manager as there are no restrictions on our ability, contractual or otherwise, to redeem our investments at the stated net asset value reported by the investment manager.

Restricted cash consists of cash held in restricted accounts, including cash held as collateral for debt and other compensating balances. Restricted cash amounts that are required to be used to purchase long-term assets or repay long-term debt are classified as long-term assets. All other cash that is restricted to a specific use is classified as current or long-term based on the expected timing of the disbursement. At December 31, 2016 and 2015, our restricted cash balances were not material.

Our significant non-cash investing and financing activities are disclosed in our consolidated statements of owners' equity and in notes 7, 8 and 12.

Cash Flow Statement

For purposes of determining the classification of cash flows in our consolidated statements of cash flows, payments or receipts on related-party loans are first applied to principal (included as cash flows from financing activities) and then to capitalized interest (included as cash flows from operating activities). In addition, interest-bearing cash advances to related parties and repayments thereof are classified as investing activities. All other related-party borrowings, advances and repayments are reflected as financing activities.

For purposes of our consolidated statements of cash flows, expenses financed by an intermediary are treated as hypothetical operating cash outflows and hypothetical financing cash inflows when the expenses are incurred. When we pay the financing intermediary, we record financing cash outflows in our consolidated statements of cash flows.

Trade Receivables

Our trade receivables are reported net of an allowance for doubtful accounts. Such allowance aggregated £23.8 million and £12.0 million at December 31, 2016 and 2015, respectively. The allowance for doubtful accounts is based upon our assessment of probable loss related to uncollectible accounts receivable. We use a number of factors in determining the allowance, including, among other things, collection trends, prevailing and anticipated economic conditions and specific customer credit risk. The allowance is maintained until either payment is received or the likelihood of collection is considered to be remote.

Concentration of credit risk with respect to trade receivables is limited due to the large number of customers. We also manage this risk by disconnecting services to customers whose accounts are delinquent.

Financial Instruments

Due to the short maturities of cash and cash equivalents, restricted cash, short-term liquid investments, trade and other receivables, other current assets, accounts payable, accrued liabilities and other accrued and current liabilities, their respective carrying values approximate their respective fair values. For information regarding the fair values of our derivatives and debt, see notes 5 and 8, respectively. For information regarding how we arrive at certain of our fair value measurements, see note 6.

Derivative Instruments

All derivative instruments, whether designated as hedging relationships or not, are recorded on the balance sheet at fair value. If the derivative instrument is not designated as a hedge, changes in the fair value of the derivative instrument are recognized in earnings. If the derivative instrument is designated as a cash flow hedge, the effective portions of changes in the fair value of the derivative instrument are recorded in other comprehensive earnings or loss and subsequently reclassified into our consolidated statements of operations when the hedged forecasted transaction affects earnings. Ineffective portions of changes in the fair value of cash flow hedges are recognized in earnings. With the exception of a limited number of our foreign currency forward contracts, we do not apply hedge accounting to our derivative instruments.

The net cash received or paid related to our derivative instruments is classified as an operating, investing or financing activity in our consolidated statements of cash flows based on the objective of the derivative instrument and the classification of the applicable underlying cash flows. For derivative contracts that are terminated prior to maturity, the cash paid or received upon termination that relates to future periods is classified as a financing activity in our consolidated statement of cash flows.

For information regarding our derivative instruments, see note 5.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. We capitalize costs associated with the construction of new cable transmission and distribution facilities and the installation of new cable services. Capitalized construction and installation costs include materials, labor and other directly attributable costs. Installation activities that are capitalized include (i) the initial connection (or drop) from our cable system to a customer location, (ii) the replacement of a drop and (iii) the installation of equipment for additional services, such as digital cable, telephone or broadband internet service. The costs of other customer-facing activities, such as reconnecting customer locations where a drop already exists, disconnecting customer locations and repairing or maintaining drops, are expensed as incurred. Interest capitalized with respect to construction activities was not material during any of the periods presented.

Capitalized internal-use software is included as a component of property and equipment. We capitalize internal and external costs directly associated with the development of internal-use software. We also capitalize costs associated with the purchase of software licenses. Maintenance and training costs, as well as costs incurred during the preliminary stage of an internal-use software development project, are expensed as incurred.

Depreciation is computed using the straight-line method over the estimated useful life of the underlying asset. Equipment under capital leases is amortized on a straight-line basis over the shorter of the lease term or estimated useful life of the asset. Useful lives used to depreciate our property and equipment are assessed periodically and are adjusted when warranted. The useful lives of cable distribution systems that are undergoing a rebuild are adjusted such that property and equipment to be retired will be fully depreciated by the time the rebuild is completed. For additional information regarding the useful lives of our property and equipment, see note 7.

Additions, replacements and improvements that extend the asset life are capitalized. Repairs and maintenance are charged to operations.

We recognize a liability for asset retirement obligations in the period in which it is incurred if sufficient information is available to make a reasonable estimate of fair values. Asset retirement obligations may arise from the loss of rights of way that we obtain from local municipalities or other relevant authorities. Under certain circumstances, the authorities could require us to remove our network equipment from an area if, for example, we were to discontinue using the equipment for an extended period of time or the authorities were to decide not to renew our access rights. However, because the rights of way are integral to our ability to deliver broadband communications services to our customers, we expect to conduct our business in a manner that will allow us to maintain these rights for the foreseeable future. In addition, we have no reason to believe that the authorities will not renew our rights of way and, historically, renewals have been granted. We also have obligations in lease agreements to restore the property to its original condition or remove our property at the end of the lease term.

As of December 31, 2016 and 2015, the recorded value of our asset retirement obligations was £31.8 million and £29.9 million, respectively.

Intangible Assets

Our primary intangible assets relate to goodwill and customer relationships. Goodwill represents the excess purchase price over the fair value of the identifiable net assets acquired in a business combination. Customer relationships are initially recorded at their fair values in connection with business combinations.

Goodwill is not amortized, but instead is tested for impairment at least annually. Intangible assets with finite lives are amortized on a straight-line basis over their respective estimated useful lives to their estimated residual values, and reviewed for impairment.

For additional information regarding the useful lives of our intangible assets, see note 7.

Impairment of Property and Equipment and Intangible Assets

When circumstances warrant, we review the carrying amounts of our property and equipment and our intangible assets (other than goodwill) to determine whether such carrying amounts continue to be recoverable. Such changes in circumstance may include (i) an expectation of a sale or disposal of a long-lived asset or asset group, (ii) adverse changes in market or competitive conditions,

(iii) an adverse change in legal factors or business climate in the markets in which we operate and (iv) operating or cash flow losses. For purposes of impairment testing, long-lived assets are grouped at the lowest level for which cash flows are largely independent of other assets and liabilities, generally at or below the reporting unit level (see below). If the carrying amount of the asset or asset group is greater than the expected undiscounted cash flows to be generated by such asset or asset group, an impairment adjustment is recognized. Such adjustment is measured by the amount that the carrying value of such asset or asset group exceeds its fair value. We generally measure fair value by considering (a) sale prices for similar assets, (b) discounted estimated future cash flows using an appropriate discount rate and/or (c) estimated replacement cost. Assets to be disposed of are recorded at the lower of their carrying amount or fair value less costs to sell.

We evaluate goodwill for impairment at least annually on October 1 and whenever facts and circumstances indicate that the carrying amounts of goodwill may not be recoverable. For impairment evaluations with respect to goodwill, we first make a qualitative assessment to determine if goodwill may be impaired. If it is more-likely-than-not that a reporting unit's fair value is less than its carrying value, we then compare the fair value of the reporting unit to its respective carrying amount. A reporting unit is an operating segment or one level below an operating segment (referred to as a "component"). We have identified one reporting unit to which all goodwill is assigned. If the carrying value of a reporting unit were to exceed its fair value, we would then compare the implied fair value of the reporting unit's goodwill to its carrying amount, and any excess of the carrying amount over the fair value would be charged to operations as an impairment loss.

Income Taxes

Income taxes are accounted for under the asset and liability method. We recognize deferred tax assets and liabilities for the future tax consequences attributable to differences between the financial statement carrying amounts and income tax basis of assets and liabilities and the expected benefits of utilizing net operating loss and tax credit carryforwards, using enacted tax rates in effect for each taxing jurisdiction in which we operate for the year in which those temporary differences are expected to be recovered or settled. We recognize the financial statement effects of a tax position when it is more-likely-than-not, based on technical merits, that the position will be sustained upon examination. Net deferred tax assets are then reduced by a valuation allowance if we believe it is more-likely-than-not such net deferred tax assets will not be realized. Certain of our valuation allowances and tax uncertainties are associated with entities that we acquired in business combinations. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in earnings in the period that includes the enactment date. Deferred tax liabilities related to investments in foreign subsidiaries and foreign corporate joint ventures that are essentially permanent in duration are not recognized until it becomes apparent that such amounts will reverse in the foreseeable future. In order to be considered essentially permanent in duration, sufficient evidence must indicate that the foreign subsidiary has invested or will invest its undistributed earnings indefinitely, or that earnings will be remitted in a tax-free liquidation. Interest and penalties related to income tax liabilities are included in income tax benefit or expense in our consolidated statements of operations.

Virgin Media and its U.K. subsidiaries are part of a U.K. tax group, along with certain other U.K. subsidiaries of Liberty Global. The income taxes of Virgin Media are presented in our consolidated financial statements on a separate return basis for each tax paying entity. For additional information regarding our income taxes, including the tax allocations from Liberty Global see note 9.

Foreign Currency Translation and Transactions

The reporting currency of our company is the pound sterling. The functional currency of our foreign operations generally is the applicable local currency for each foreign subsidiary. Assets and liabilities of foreign subsidiaries (including intercompany balances for which settlement is not anticipated in the foreseeable future) are translated at the spot rate in effect at the applicable reporting date. With the exception of certain material transactions, the amounts reported in our consolidated statements of operations are translated at the average exchange rates in effect during the applicable period. The resulting unrealized cumulative translation adjustment, net of applicable income taxes, is recorded as a component of accumulated other comprehensive earnings or loss in our consolidated statements of owners' equity. With the exception of certain material transactions, the cash flows from our operations in foreign countries are translated at the average rate for the applicable period in our consolidated statements of cash flows. The impacts of material transactions generally are recorded at the applicable spot rates in our consolidated statements of operations and cash flows. The effect of exchange rates on cash balances held in foreign currencies are separately reported in our consolidated statements of cash flows.

Transactions denominated in currencies other than our or our subsidiaries' functional currencies are recorded based on exchange rates at the time such transactions arise. Changes in exchange rates with respect to amounts recorded in our consolidated balance sheets related to these non-functional currency transactions result in transaction gains and losses that are reflected in our consolidated statements of operations as unrealized (based on the applicable period end exchange rates) or realized upon settlement of the transactions.

Revenue Recognition

Service Revenue — Cable Networks. We recognize revenue from the provision of video, broadband internet and fixed-line telephony services over our cable network to customers in the period the related services are provided. Installation revenue (including reconnect fees) related to services provided over our cable network is recognized as revenue in the period during which the installation occurs to the extent these fees are equal to or less than direct selling costs, which costs are expensed as incurred. To the extent installation revenue exceeds direct selling costs, the excess revenue is deferred and amortized over the average expected subscriber life.

Sale of Multiple Products and Services. We sell video, broadband internet, fixed-line telephony and mobile services to our customers in bundled packages at a rate lower than if the customer purchased each product on a standalone basis. Revenue from bundled packages generally is allocated proportionally to the individual services based on the relative standalone price for each respective service.

Mobile Revenue — General. Consideration from mobile contracts is allocated to the airtime service element and the handset service element based on the relative standalone prices of each element. The amount of consideration allocated to the handset is limited to the amount that is not contingent upon the delivery of future airtime services. We offer handsets under a subsidized contract model, whereby upfront revenue recognition is limited to the upfront cash collected from the customer as the remaining monthly fees to be received from the customer, including fees that may be associated with the handset, are contingent upon delivering future airtime services. Our mobile customers may choose to enter into two distinct contractual relationships: (i) a mobile handset contract and (ii) a mobile airtime services contract (**Split-contract Program**). Under the mobile handset contract, the customer takes full title to the handset upon delivery and typically has the option to either (a) pay for the handset in cash upon delivery or (b) pay for the handset in installments over a contractual period. Under these arrangements, the handset installment payments are not contingent upon delivering future airtime services and the consideration allocated to the handset is not limited to the upfront cash collected.

Mobile Revenue — Airtime Services. We recognize revenue from mobile services in the period the related services are provided. Revenue from pre-pay customers is recorded as deferred revenue prior to the commencement of services and revenue is recognized as the services are rendered or usage rights expire.

Mobile Revenue — Handset Revenue. Arrangement consideration allocated to handsets is recognized as revenue when the goods have been delivered and title has passed. For customers under a mobile handset installment contract that is independent of a mobile airtime services contract, revenue is recognized upon delivery only if collectibility is reasonably assured. Our assessment of collectibility is based principally on internal and external credit assessments as well as historical collection information for similar customers. To the extent that collectibility of installment payments from the customer is not reasonably assured upon delivery of the handset, handset revenue is recognized on a cash basis as customer payments are received.

B2B Revenue. We defer upfront installation and certain nonrecurring fees received on B2B contracts where we maintain ownership of the installed equipment. The deferred fees are amortized into revenue on a straight-line basis over the term of the arrangement or the expected period of performance.

Promotional Discounts. For subscriber promotions, such as discounted or free services during an introductory period, revenue is recognized only to the extent of the discounted monthly fees charged to the subscriber, if any.

Subscriber Advance Payments and Deposits. Payments received in advance for the services we provide are deferred and recognized as revenue when the associated services are provided.

Sales and Other VAT. Revenue is recorded net of applicable sales and other VAT.

Share-based Compensation

We recognize all share-based payments from Liberty Global to employees of our subsidiaries, including grants of employee share-based incentive awards based on their grant-date fair values and Liberty Global's estimates of forfeitures. We recognize the grant-date fair value of outstanding awards as a charge to operations over the vesting period. The cash benefits of tax deductions in excess of deferred taxes on recognized share-based compensation expense are reported as a financing cash flow. Payroll taxes incurred in connection with the vesting or exercise of Liberty Global's share-based incentive awards are recorded as a component of share-based compensation expense in our consolidated statements of operations.

We use the straight-line method to recognize share-based compensation expense for Liberty Global's outstanding share-based incentive awards to employees of our subsidiaries that do not contain a performance condition and the accelerated expense attribution method for our outstanding share awards that contain a performance condition and vest on a graded basis.

The grant date fair values for options, share appreciation rights (**SARs**) and performance-based share appreciation rights (**PSARs**) are estimated using the Black-Scholes option pricing model, and the grant-date fair values for restricted share units (**RSUs**) and performance-based restricted share units (**PSUs**) are based upon the closing share price of Liberty Global ordinary shares on the date of grant. Liberty Global calculates the expected life of options and SARs granted by Liberty Global to employees based on historical exercise trends. The expected volatility for Liberty Global options and SARs is generally based on a combination of (i) historical volatilities of Liberty Global ordinary shares for a period equal to the expected average life of the Liberty Global awards and (ii) volatilities implied from publicly-traded Liberty Global options.

For additional information regarding our share-based compensation, see note 11.

Litigation Costs

Legal fees and related litigation costs are expensed as incurred.

(4) <u>Acquisition and Common Control Transfer</u>

2015 Acquisition

On December 7, 2015, we acquired Tullamore Beta Limited, the parent of TV3, a commercial broadcaster in Ireland, for cash consideration of €80 million (£58 million at the transaction date) (the **TV3 Acquisition**). The purchase price was funded through existing liquidity.

Common Control Transfer

As further described in note 1, we completed the VM Ireland Acquisition in February 2015. We accounted for this common control transfer at carryover basis.

In connection with the VM Ireland Acquisition, we (i) paid aggregate cash consideration of €1,341.3 million (£993.8 million at the transaction date) to acquire (a) the controlling interest in VM Ireland, as described in note 1, and (b) another Liberty Global's subsidiary's right to receive €634.3 million (£470.0 million at the transaction date) from a VM Ireland subsidiary pursuant to a promissory note (the **VM Ireland Note**) and (ii) received a €165.6 million (£122.7 million at the transaction date) cash payment from Liberty Global Europe 2 Limited (**LG Europe 2**), our immediate parent, on the 2023 8.5% LG Europe 2 Notes Receivable (as defined and described in note 12). The cash consideration paid in connection with the VM Ireland Acquisition was recorded as a capital transaction during the first quarter of 2015. Following our February 2015 acquisition of the right to receive €634.3 million (£470.0 million at the transaction date) pursuant to the VM Ireland Note, the amounts receivable and payable pursuant to the VM Ireland Note eliminate in consolidation.

(5) Derivative Instruments

In general, we seek to enter into derivative instruments to protect against (i) increases in the interest rates on our variable-rate debt, (ii) foreign currency movements, particularly with respect to borrowings that are denominated in a currency other than the functional currency of the borrowing entity and (iii) equity exposure with respect to the dilutive effects of the VM Convertible Notes (as defined in note 8) which matured in November 2016. In this regard, we have entered into various derivative instruments to manage interest rate exposure and foreign currency exposure with respect to the United States (**U.S.**) dollar (**$**), the euro (**€**), the Indian rupee (**INR**) and the Philippine peso (**PHP**).

The following table provides details of the fair values of our derivative instrument assets and liabilities:

	December 31, 2016			December 31, 2015		
	Current	Long-term (a)	Total	Current	Long-term (a)	Total
	in millions					
Assets:						
Cross-currency and interest rate derivative contracts (b)	£ 80.9	£ 957.2	£ 1,038.1	£ 37.1	£ 272.9	£ 310.0
Foreign currency forward option contracts	2.0	—	2.0	—	—	—
Equity-related derivative instruments (c)	—	—	—	23.5	—	23.5
Foreign currency forward contracts — related-party	12.9	9.6	22.5	0.6	—	0.6
Total	£ 95.8	£ 966.8	£ 1,062.6	£ 61.2	£ 272.9	£ 334.1
Liabilities:						
Cross-currency and interest rate derivative contracts (b)	£ 44.6	£ 193.7	£ 238.3	£ 29.1	£ 26.8	£ 55.9
Equity-related derivative instruments (c)	—	—	—	72.1	—	72.1
Total	£ 44.6	£ 193.7	£ 238.3	£ 101.2	£ 26.8	£ 128.0

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(a) Our long-term derivative assets and liabilities are included in other assets, net, and other long-term liabilities, respectively, in our consolidated balance sheets.

(b) We consider credit risk in our fair value assessments. As of December 31, 2016 and 2015, (i) the fair values of our cross-currency and interest rate derivative contracts that represented assets have been reduced by credit risk valuation adjustments aggregating £44.3 million and £8.2 million, respectively, and (ii) the fair values of our cross-currency and interest rate derivative contracts that represented liabilities have been reduced by credit risk valuation adjustments aggregating £8.9 million and £1.3 million, respectively. The adjustments to our derivative assets relate to the credit risk associated with counterparty nonperformance and the adjustments to our derivative liabilities relate to credit risk associated with our own nonperformance. In all cases, the adjustments take into account offsetting liability or asset positions within a given contract. Our determination of credit risk valuation adjustments generally is based on our and our counterparties' credit risks, as observed in the credit default swap market and market quotations for certain of our debt instruments, as applicable. The changes in the credit risk valuation adjustments associated with our cross-currency and interest rate derivative contracts resulted in net losses of £28.5 million, £11.3 million and £25.3 million during 2016, 2015 and 2014, respectively. These amounts are included in realized and unrealized gains on derivative instruments, net, in our consolidated statements of operations. For further information regarding our fair value measurements, see note 6.

(c) The fair value of our (i) equity-related derivative assets relate to the Virgin Media Capped Calls, as defined and described below, and (ii) equity-related derivative liabilities relates to the derivative embedded in the VM Convertible Notes. The VM Convertible Notes matured in November 2016.

The details of our realized and unrealized gains on derivative instruments, net, are as follows:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Cross-currency and interest rate derivative contracts	£ 640.8	£ 249.6	£ 53.9
Foreign currency forward and option contracts (a)	15.8	(6.7)	0.7
Equity-related derivative instruments (b)	9.2	10.2	(6.0)
Total	£ 665.8	£ 253.1	£ 48.6

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(a) Includes gains or losses associated with related-party derivative instruments with Liberty Global Europe Financing BV (**LGE Financing**), a subsidiary of Liberty Global. For additional information, see note 12.

(b) Primarily represents activity related to the Virgin Media Capped Calls, as defined and described below.

The following table sets forth the classification of the net cash inflows (outflows) of our derivative instruments:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Operating activities	£ 35.0	£ (36.9)	£ (42.0)
Financing activities	30.4	(17.9)	(27.1)
Total	£ 65.4	£ (54.8)	£ (69.1)

Counterparty Credit Risk

We are exposed to the risk that the counterparties to our derivative instruments will default on their obligations to us. We manage these credit risks through the evaluation and monitoring of the creditworthiness of, and concentration of risk with, the respective counterparties. In this regard, credit risk associated with our derivative instruments is spread across a relatively broad counterparty base of banks and financial institutions. Collateral is generally not posted by either party under our derivative instruments. At December 31, 2016, our exposure to counterparty credit risk included derivative assets with an aggregate fair value of £1,036.5 million.

We have entered into derivative instruments under master agreements with each counterparty that contain master netting arrangements that are applicable in the event of early termination by either party to such derivative instrument. The master netting arrangements under each of these master agreements are limited to the derivative instruments governed by the relevant master agreement and are independent of similar arrangements.

Under our derivative contracts, it is generally only the non-defaulting party that has a contractual option to exercise early termination rights upon the default of the other counterparty and to set off other liabilities against sums due upon such termination. However, in an insolvency of a derivative counterparty, under the laws of certain jurisdictions, the defaulting counterparty or its insolvency representatives may be able to compel the termination of one or more derivative contracts and trigger early termination payment liabilities payable by us, reflecting any mark-to-market value of the contracts for the counterparty. Alternatively, or in addition, the insolvency laws of certain jurisdictions may require the mandatory set off of amounts due under such derivative contracts against present and future liabilities owed to us under other contracts between us and the relevant counterparty. Accordingly, it is possible that we may be subject to obligations to make payments, or may have present or future liabilities owed to us partially or fully discharged by set off as a result of such obligations, in the event of the insolvency of a derivative counterparty, even though it is the counterparty that is in default and not us. To the extent that we are required to make such payments, our ability to do so will depend on our liquidity and capital resources at the time. In an insolvency of a defaulting counterparty, we will be an unsecured creditor in respect of any amount owed to us by the defaulting counterparty, except to the extent of the value of any collateral we have obtained from that counterparty.

In addition, where a counterparty is in financial difficulty, under the laws of certain jurisdictions, the relevant regulators may be able to (i) compel the termination of one or more derivative instruments, determine the settlement amount and/or compel, without any payment, the partial or full discharge of liabilities arising from such early termination that are payable by the relevant counterparty or (ii) transfer the derivative instruments to an alternative counterparty.

Details of our Derivative Instruments

In the following tables, we present the details of the various categories of our subsidiary's derivative instruments. The notional amounts of multiple derivative instruments that mature within the same calendar month are shown in the aggregate and interest rates are presented on a weighted average basis. In addition, for derivative instruments that were in effect as of December 31, 2016, we present a single date that represents the applicable final maturity date. For derivative instruments that become effective subsequent to December 31, 2016, we present a range of dates that represents the period covered by the applicable derivative instruments.

Cross-currency and Interest Rate Derivative Contracts

Cross-currency Swaps:

The terms of our outstanding cross-currency swap contracts at December 31, 2016, which are held by our subsidiary, Virgin Media Investment Holdings Limited (**VMIH**), are as follows:

Final maturity date	Notional amount due from counterparty		Notional amount due to counterparty		Interest rate due from counterparty	Interest rate due to counterparty
	in millions					
January 2023	$	400.0	€	339.6	5.75%	4.33%
January 2025	$	1,855.0	£	1,231.6	6 mo. U.S. LIBOR + 2.75%	6 mo. LIBOR + 3.27%
January 2023	$	1,000.0	£	648.6	5.25%	5.32%
January 2025	$	970.0	£	742.6	6 mo. U.S. LIBOR + 2.75%	4.68%
August 2024	$	750.0	£	527.0	5.50%	5.46%
February 2022 (a)	$	688.6	£	429.0	4.93%	5.39%
April 2023 (a)	$	480.0	£	299.1	1.55%	1.78%
February 2022 - April 2023	$	475.0	£	295.6	4.88%	5.32%
October 2022	$	450.0	£	272.0	6.00%	6.43%
January 2021	$	447.9	£	276.7	5.25%	6 mo. LIBOR + 2.06%
January 2022	$	425.0	£	255.8	5.50%	4.86%
January 2022 - January 2025	$	425.0	£	255.8	3 mo. U.S. LIBOR	4.86%
January 2025	$	383.5	£	239.5	6 mo. U.S. LIBOR + 2.75%	5.56%
April 2019	$	191.5	£	122.3	6 mo. U.S. LIBOR + 2.75%	4.45%
April 2019 - January 2025	$	191.5	£	122.3	6 mo. U.S. LIBOR + 2.75%	5.43%
October 2019	$	100.0	£	65.4	7.19%	7.23%
October 2019 - October 2022	$	50.0	£	30.7	6.00%	5.75%
October 2019 - April 2023	$	50.0	£	30.3	6.38%	6.84%
October 2019 (a)	£	30.3	$	50.0	2.14%	2.00%

(a) Unlike the other cross-currency swaps presented in this table, the identified cross-currency swaps do not involve the exchange of notional amounts at the inception and maturity of the instruments. Accordingly, the only cash flows associated with these derivative instruments are interest payments and receipts.

Interest Rate Swaps:

The terms of our outstanding interest rate swap contracts at December 31, 2016, which are held by VMIH, are as follows:

Final maturity date	Notional amount		Interest rate due from counterparty	Interest rate due to counterparty
	in millions			
October 2017	$	1,855.0	1 mo. U.S. LIBOR + 2.75%	6 mo. LIBOR + 2.47%
October 2018	£	1,198.3	6 mo. LIBOR	1.52%
January 2021	£	905.1	6 mo. LIBOR + 0.71%	2.37%
October 2018 - January 2025	£	858.3	6 mo. LIBOR	2.41%
June 2023	£	849.4	6 mo. LIBOR	1.70%
January 2021	£	628.4	5.50%	6 mo. LIBOR + 1.84%
October 2018 - June 2023	£	340.0	6 mo. LIBOR	2.43%
April 2023	£	108.9	6.85%	6 mo. LIBOR + 5.62%
October 2022	£	51.5	6.42%	6 mo. LIBOR + 5.23%
January 2025	£	33.3	6 mo. LIBOR	1.37%

Equity-related Derivative Instruments

Virgin Media Capped Calls. During 2010, we entered into conversion hedges (the **Virgin Media Capped Calls**) in order to offset a portion of the dilutive effects associated with the exchange of certain of our exchangeable notes. During 2013, and in connection with the exchange of certain of our exchangeable notes, we settled 93.8% of the notional amount of the Virgin Media Capped Calls. During 2016, the remaining outstanding notional amount of the Virgin Media Capped Calls was settled for cash proceeds of $36.2 million (£29.3 million).

Interest Rate Caps

The following table summarizes the purchased interest rate cap contract with respect to LIBOR at December 31, 2016, held by Virgin Media Receivables Financing PLC:

Maturity date	Nominal amount		LIBOR cap rate
	in millions		
October 2020 (a)	£	125.0	0.97%

(a) These purchased interest rate caps entitle us to receive payments from the counterparty when the relevant LIBOR exceeds the LIBOR cap rate during the specified observation periods.

Foreign Currency Forward Options

The terms of our outstanding foreign currency forward option contracts at December 31, 2016, which are held by VMIH, are as follows:

Maturity dates	Notional amount	Exchange currency	Weighted Average Strike Price
	in millions		
January 2017 - March 2018	£ 7.0	Indian rupee	INR 95.28
January 2017 - September 2017	£ 15.7	Philippine peso	PHP 66.32

Foreign Currency Forward Contracts – Related-Party

The following table summarizes the foreign currency forward contracts between VMIH and LGE Financing at December 31, 2016:

Maturity dates	Currency purchased forward	Currency sold forward
	in millions	
January 2017 - February 2019	$ 28.1	£ 22.0
March 2017 - December 2017	$ 3.1	£ 2.5

(6) Fair Value Measurements

We use the fair value method to account for (i) our derivative instruments and (ii) certain instruments that we classify as debt. The reported fair values of these instruments as of December 31, 2016 likely will not represent the value that will be paid or received upon the ultimate settlement or disposition of these assets and liabilities. We expect that the values realized generally will be based on market conditions at the time of settlement, which may occur at the maturity of the derivative instrument or at the time of the repayment or refinancing of the underlying debt instrument.

U.S. GAAP provides for a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. Level 1 inputs are quoted market prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date. Level 2 inputs are inputs other than quoted market prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability. We record transfers of assets or liabilities into or out of Levels 1, 2 or 3 at the beginning of the quarter during which the transfer occurred. During 2016, no such transfers were made.

All of our Level 2 inputs (interest rate futures, swap rates and certain of the inputs for our weighted average cost of capital calculations) and certain of our Level 3 inputs (forecasted volatilities and credit spreads) are obtained from pricing services. These inputs, or interpolations or extrapolations thereof, are used in our internal models to calculate, among other items, yield curves, forward interest and currency rates and weighted average cost of capital rates. In the normal course of business, we receive market value assessments from the counterparties to our derivative contracts. Although we compare these assessments to our internal valuations and investigate unexpected differences, we do not otherwise rely on counterparty quotes to determine the fair values of our derivative instruments. The midpoints of applicable bid and ask ranges generally are used as inputs for our internal valuations.

The recurring fair value measurement of our equity-related derivative instruments are based on binomial option pricing models, which require the input of observable and unobservable variables such as exchange-traded equity prices, risk-free interest rates, dividend yields and forecasted volatilities of the underlying equity securities. The valuations of our equity-related derivative instruments are based on a combination of Level 1 inputs (exchange-traded equity prices), Level 2 inputs (interest rate futures and swap rates) and Level 3 inputs (forecasted volatilities). As changes in volatilities could have a significant impact on the overall valuations, we have determined that these valuations fall under Level 3 of the fair value hierarchy. As further described in note 5, our equity-related derivative instruments were settled during 2016.

In order to manage our interest rate and foreign currency exchange risk, we have entered into (i) various derivative instruments and (ii) certain instruments that we classify as debt, as further described in notes 5 and 8. The recurring fair value measurements of these instruments are determined using discounted cash flow models. Most of the inputs to these discounted cash flow models consist of, or are derived from, observable Level 2 data for substantially the full term of these instruments. This observable data includes applicable interest rate futures and swap rates, which are retrieved or derived from available market data. Although we may extrapolate or interpolate this data, we do not otherwise alter this data in performing our valuations. We incorporate a credit risk valuation adjustment in our fair value measurements to estimate the impact of both our own nonperformance risk and the nonperformance risk of our counterparties. Our and our counterparties' credit spreads are Level 3 inputs, and these inputs are used to derive the credit risk valuation adjustments with respect to these instruments. As we would not expect changes in our or our counterparties' credit spreads to have a significant impact on the valuations of these instruments, we have determined that these valuations fall under Level 2 of the fair value hierarchy. Our credit risk valuation adjustments with respect to our cross-currency and interest rate swaps and certain of our debt are quantified and further explained in notes 5 and 8.

Fair value measurements are also used in connection with nonrecurring valuations performed in connection with impairment assessments and acquisition accounting. These nonrecurring valuations include the valuation of customer relationship intangible assets, property and equipment and the implied value of goodwill. The valuation of customer relationships is primarily based on an excess earnings methodology, which is a form of a discounted cash flow analysis. The excess earnings methodology requires us to estimate the specific cash flows expected from the customer relationship, considering such factors as estimated customer life, the revenue expected to be generated over the life of the customer relationship, contributory asset charges and other factors. Tangible assets are typically valued using a replacement or reproduction cost approach, considering factors such as current prices of the same or similar equipment, the age of the equipment and economic obsolescence. The implied value of goodwill is determined by allocating the fair value of a reporting unit to all of the assets and liabilities of that unit as if the reporting unit had been acquired in a business combination, with the residual amount allocated to goodwill. All of our nonrecurring valuations use significant unobservable inputs and therefore fall under Level 3 of the fair value hierarchy. We did not perform any significant nonrecurring fair value measurements during 2016, 2015 and 2014.

A summary of our assets and liabilities that are measured at fair value on a recurring basis is as follows:

Description		**December 31, 2016 (a)**
		in millions
Assets — derivative instruments:		
Cross-currency and interest rate derivative contracts	£	1,038.1
Foreign currency forward option contracts		2.0
Foreign currency forward contracts — related-party		22.5
Total assets	£	1,062.6
Liabilities:		
Derivative instruments:		
Cross-currency and interest rate derivative contracts	£	238.3
Debt		28.9
Total liabilities	£	267.2

(a) As of December 31, 2016, all fair value measurements used significant other observable inputs (Level 2).

		Fair value measurements at December 31, 2015 using:	
Description	December 31, 2015	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
		in millions	
Assets — derivative instruments:			
Cross-currency and interest rate derivative contracts	£ 310.0	£ 310.0	£ —
Equity-related derivative instruments	23.5	—	23.5
Foreign currency forward contracts — related-party	0.6	0.6	—
Total assets	£ 334.1	£ 310.6	£ 23.5
Liabilities — derivative instruments:			
Cross-currency and interest rate derivative contracts	£ 55.9	£ 55.9	£ —
Equity-related derivative instruments	72.1	—	72.1
Total liabilities	£ 128.0	£ 55.9	£ 72.1

(7) Long-lived Assets

Property and Equipment, Net

The details of our property and equipment and the related accumulated depreciation are set forth below:

	Estimated useful life at December 31, 2016	December 31, 2016	December 31, 2015
		in millions	
Distribution systems	3 to 30 years	£ 7,050.1	£ 6,344.3
Customer premises equipment	5 years	1,816.4	1,543.7
Support equipment, buildings and land	3 to 50 years	1,208.2	1,023.4
		10,074.7	8,911.4
Accumulated depreciation		(4,110.2)	(3,050.2)
Total property and equipment, net		£ 5,964.5	£ 5,861.2

Depreciation expense related to our property and equipment was £1,264.1 million, £1,193.6 million and £1,243.3 million during 2016, 2015 and 2014, respectively.

At December 31, 2016 and 2015, the amount of property and equipment, net, recorded under capital leases was £112.7 million and £186.4 million, respectively. Most of these amounts relate to assets included in our customer premises equipment category. Depreciation of assets under capital leases is included in depreciation and amortization in our consolidated statements of operations.

During 2016, 2015 and 2014, we recorded non-cash increases to our property and equipment related to vendor financing arrangements of £636.9 million, £380.4 million and £220.3 million, respectively, which exclude related VAT of £111.1 million, £53.5 million and £27.4 million, respectively, that was also financed by our vendors under these arrangements. In addition, during 2016, 2015 and 2014, we recorded non-cash increases to our property and equipment related to assets acquired under capital leases of £14.3 million, £16.8 million and £28.8 million, respectively.

Most of our property and equipment is pledged as security under our various debt instruments. For additional information, see note 8.

Goodwill

Changes in the carrying amount of our goodwill during 2016 are set forth below (in millions):

January 1, 2016	£	5,966.6
Acquisitions and related adjustments		10.2
Foreign currency translation adjustments		27.5
December 31, 2016	£	6,004.3

Changes in the carrying amount of our goodwill during 2015 are set forth below (in millions):

January 1, 2015	£	5,933.7
Acquisitions and related adjustments		39.9
Foreign currency translation adjustments		(7.0)
December 31, 2015	£	5,966.6

If, among other factors, (i) our enterprise value or Liberty Global's equity values were to decline significantly or (ii) the adverse impacts of economic, competitive, regulatory or other factors were to cause our results of operations or cash flows to be worse than anticipated, we could conclude in future periods that impairment charges are required in order to reduce the carrying values of our goodwill and, to a lesser extent, other long-lived assets. Any such impairment charges could be significant.

Intangible Assets Subject to Amortization, Net

The details of our intangible assets subject to amortization are set forth below:

	Estimated useful life at December 31, 2016	December 31, 2016			December 31, 2015		
		Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
				in millions			
Customer relationships	5 to 8 years	£ 2,527.3	£ (1,319.0)	£ 1,208.3	£ 2,522.3	£ (933.0)	£ 1,589.3
Other	5 to 20 years	17.3	(1.0)	16.3	14.9	(0.1)	14.8
		£ 2,544.6	£ (1,320.0)	£ 1,224.6	£ 2,537.2	£ (933.1)	£ 1,604.1

Amortization expense related to intangible assets with finite useful lives was £386.7 million, £364.2 million and £364.8 million during 2016, 2015 and 2014, respectively. Based on our amortizable intangible asset balances at December 31, 2016, we expect that amortization expense will be as follows for the next five years and thereafter. The pound sterling equivalents of such amortization expense amounts as of December 31, 2016 are presented below (in millions):

2017	£	374.7
2018		374.7
2019		355.1
2020		79.2
2021		27.9
Thereafter		13.0
Total	£	1,224.6

(8) Debt and Capital Lease Obligations

The pound sterling equivalents of the components of our consolidated third-party debt are as follows:

	December 31, 2016		Estimated fair value (b)		Principal amount	
	Weighted average interest rate (a)	Unused borrowing capacity	December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015
			in millions			
Third-party debt:						
Parent:						
VM Convertible Notes (c)	—	£ —	£ —	£ 110.5	£ —	£ 37.2
Subsidiaries:						
VM Notes	5.60%	—	7,542.3	7,190.5	7,323.5	7,161.4
VM Credit Facilities	3.69%	(d)	3,670.7	2,317.0	3,649.6	2,355.9
Vendor financing (e)	4.18%	—	976.0	513.4	976.0	513.4
Other (f)	1.73%	—	122.9	—	122.9	—
Total third-party debt before unamortized premiums, discounts and deferred financing costs	4.86%	£ —	£ 12,311.9	£ 10,131.4	£ 12,072.0	£ 10,067.9

The following table provides a reconciliation of total third-party debt before unamortized premiums, discounts and deferred financing costs to total debt and capital lease obligations:

	December 31, 2016	December 31, 2015
	in millions	
Total third-party debt before unamortized premiums, discounts and deferred financing costs	£ 12,072.0	£ 10,067.9
Unamortized premium, net of discount	11.3	11.4
Unamortized deferred financing costs	(86.1)	(84.2)
Total carrying amount of third-party debt	11,997.2	9,995.1
Capital lease obligations	73.9	108.2
Total third-party debt and capital lease obligations	12,071.1	10,103.3
Related-party debt (note 12)	45.7	72.0
Total debt and capital lease obligations	12,116.8	10,175.3
Current maturities of debt and capital lease obligations	(1,095.1)	(745.9)
Long-term debt and capital lease obligations	£ 11,021.7	£ 9,429.4

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(a) Represents the weighted average interest rate in effect at December 31, 2016 for all borrowings outstanding pursuant to each debt instrument, including any applicable margin. The interest rates presented represent stated rates and do not include the impact of derivative instruments, deferred financing costs, original issue premiums or discounts and commitment fees, all of which affect our overall cost of borrowing. Including the effects of derivative instruments, original issue premiums or discounts and commitment fees, but excluding the impact of financing costs, our weighted average interest rate on our aggregate third-party variable- and fixed-rate indebtedness was 5.2% at December 31, 2016. For information regarding our derivative instruments, see note 5.

(b) The estimated fair values of our debt instruments are determined using the average of applicable bid and ask prices (mostly Level 1 of the fair value hierarchy) or, when quoted market prices are unavailable or not considered indicative of fair value, discounted cash flow models (mostly Level 2 of the fair value hierarchy). The discount rates used in the cash flow models are based on the market interest rates and estimated credit spreads of the applicable entity, to the extent available, and other relevant factors. For additional information regarding fair value hierarchies, see note 6.

(c) The amount reported in the estimated fair value column for the VM Convertible Notes represents the estimated fair value of the remaining VM Convertible Notes outstanding as of December 31, 2015, including both the debt and equity components. The VM Convertible Notes matured in November 2016.

(d) Unused borrowing capacity represents the maximum availability under the VM Credit Facilities (as defined and described below) at December 31, 2016 without regard to covenant compliance calculations or other conditions precedent to borrowing. The VM Revolving Facility (as defined and described under *VM Credit Facilities* below) is a multi-currency revolving facility with maximum borrowing capacity equivalent to £675.0 million. At December 31, 2016, based on the applicable leverage and other financial covenants, the full £675.0 million of unused borrowing capacity was available to be borrowed. When the relevant December 31, 2016 compliance reporting requirements have been completed, and assuming no changes from December 31, 2016 borrowing levels, we anticipate that the full amount of unused borrowing capacity will continue to be available. In addition to these limitations, the debt instruments of our subsidiaries contain restricted payment tests that limit the amount that can be loaned or distributed to other Virgin Media subsidiaries and ultimately to Virgin Media. At December 31, 2016, £539.3 million of unused borrowing capacity was available to be loaned or distributed by the borrowers of the VM Credit Facilities. When the relevant December 31, 2016 compliance reporting requirements have been completed and assuming no changes from December 31, 2016 borrowing levels, we anticipate that the full amount of unused borrowing capacity will be available to be loaned or distributed by the borrowers of the VM Credit Facilities.

(e) Represents amounts owed pursuant to interest-bearing vendor financing arrangements that are used to finance certain of our property and equipment additions and certain of our operating expenses. These obligations are due within one year and include VAT that was paid on our behalf by the vendor. Repayments of vendor financing obligations are included in repayments and repurchases of third-party debt and capital lease obligations in our consolidated statements of cash flows.

(f) The December 31, 2016 balance includes (i) £94.0 million of debt held by Virgin Media Receivables Financing PLC and (ii) £28.9 million associated with certain derivative-related borrowing instruments accounted for at fair value. The debt held by Virgin Media Receivables Financing PLC is collateralized by certain trade receivables of our company, thereby creating a variable interest in which we are the primary beneficiary and, accordingly, we are required to consolidate Virgin Media Receivables Financing PLC. As of December 31, 2016, the fair value of certain of our debt has been reduced by credit risk valuation adjustments resulting in a net gain of £3.5 million for the year ended December 31, 2016. This amount is included in realized and unrealized losses due to changes in fair values of certain debt, net, in our consolidated statements of operations. For further information regarding our fair value measurements, see note 6.

General Information

Credit Facilities. We have entered into senior and senior secured credit facilities agreements with certain financial institutions (the "**credit facilities**"). Our credit facilities contains certain covenants and restrictions, the more notable of which are as follows:

- Our credit facilities contain certain consolidated net leverage ratios, as specified in the credit facilities, which are required to be complied with on an incurrence and, in certain circumstances, a maintenance basis;

- Our credit facilities contain certain restrictions which, among other things, restrict our ability to (i) incur or guarantee certain financial indebtedness, (ii) make certain disposals and acquisitions, (iii) create certain security interests over our assets, in each case, subject to certain customary and agreed exceptions and (iv) make certain restricted payments to our direct and/or indirect parent companies through dividends, loans or other distributions, subject to compliance with applicable covenants;

- Our credit facilities require that certain subsidiaries of Virgin Media (i) guarantee the payment of all sums payable under the credit facility and (ii) with the exception of our senior credit facility, grant first-ranking security over substantially all of our assets to secure the payment of all sums payable thereunder;

- In addition to certain mandatory prepayment events, the instructing group of lenders under our senior secured credit facilities may cancel the commitments thereunder and declare the loans thereunder due and payable after the applicable notice period following the occurrence of a change of control (as specified in the senior secured credit facility);

- Our credit facilities contain certain customary events of default, the occurrence of which, subject to certain exceptions and materiality qualifications, would allow the instructing group of lenders to (i) cancel the total commitments, (ii) accelerate all outstanding loans and terminate their commitments thereunder and/or (iii) declare that all or part of the loans be payable on demand;

- Our credit facilities require that we observe certain affirmative and negative undertakings and covenants, which are subject to certain materiality qualifications and other customary and agreed exceptions; and

- In addition to customary default provisions, our credit facilities include cross-default provisions with respect to our other indebtedness, subject to agreed minimum thresholds and other customary and agreed exceptions.

Senior and Senior Secured Notes. Virgin Media Finance PLC (**Virgin Media Finance**) and Virgin Media Secured Finance PLC (**Virgin Media Secured Finance**), each a wholly-owned subsidiary of Virgin Media, have issued certain senior and senior secured notes, respectively. In general, our senior and senior secured notes (i) are senior obligations of each respective issuer that rank equally with all of the existing and future senior debt of such issuer and are senior to all existing and future subordinated debt of each respective issuer, (ii) contain, in most instances, certain guarantees from Virgin Media and certain other subsidiaries of Virgin Media (as specified in the applicable indenture) and (iii) with respect to our senior secured notes, are secured by certain pledges or liens over the assets and/or shares of our subsidiaries. In addition, the indentures governing our senior and senior secured notes contain certain covenants, the more notable of which are as follows:

- Our notes contain certain customary incurrence-based covenants. In addition, our notes provide that any failure to pay principal prior to expiration of any applicable grace period, or any acceleration with respect to other indebtedness of the issuer or certain subsidiaries, over agreed minimum thresholds (as specified under the applicable indenture), is an event of default under the respective notes;

- Our notes contain certain restrictions that, among other things, restrict our ability to (i) incur or guarantee certain financial indebtedness, (ii) make certain disposals and acquisitions, (iii) create certain security interests over their assets, in each case, subject to certain customary and agreed exceptions and (iv) make certain restricted payments to our direct and/or indirect parent companies through dividends, loans or other distributions, subject to compliance with applicable covenants;

- If the relevant issuer or certain of its subsidiaries (as specified in the applicable indenture) sell certain assets, such issuer must offer to repurchase the applicable notes at par, or if a change of control (as specified in the applicable indenture) occurs, such issuer must offer to repurchase all of the relevant notes at a redemption price of 101%; and

- Our senior secured notes contain certain early redemption provisions including the ability to, during each 12-month period commencing on the issue date for such notes until the applicable call date (**Call Date**), redeem up to 10% of the principal amount of the notes to be redeemed at a redemption price equal to 103% of the principal amount of the notes to be redeemed plus accrued and unpaid interest.

VM Notes

The details of the outstanding notes of Virgin Media as of December 31, 2016 are summarized in the following table:

VM Notes	Maturity	Interest rate	Original issue amount	Outstanding principal amount: Borrowing currency	Outstanding principal amount: Pound sterling equivalent	Estimated fair value	Carrying value (a)
					in millions		
VM Senior Notes:							
2022 VM Senior Notes:							
2022 VM 4.875% Dollar Senior Notes	February 15, 2022	4.875%	$ 118.7	$ 118.7	£ 96.1	£ 85.7	£ 96.7
2022 VM 5.25% Dollar Senior Notes	February 15, 2022	5.250%	$ 95.0	$ 95.0	76.9	68.9	77.4
2022 VM Sterling Senior Notes	February 15, 2022	5.125%	£ 44.1	£ 44.1	44.1	44.8	44.4
2023 VM Senior Notes:							
2023 VM Dollar Senior Notes	April 15, 2023	6.375%	$ 530.0	$ 530.0	429.4	447.0	423.7
2023 VM Sterling Senior Notes	April 15, 2023	7.000%	£ 250.0	£ 250.0	250.0	271.3	246.8
2024 VM Senior Notes:							
2024 VM Dollar Senior Notes	October 15, 2024	6.000%	$ 500.0	$ 500.0	405.0	415.7	401.3
2024 VM Sterling Senior Notes	October 15, 2024	6.375%	£ 300.0	£ 300.0	300.0	318.4	297.9
2025 VM Senior Notes:							
2025 VM Euro Senior Notes	January 15, 2025	4.500%	€ 460.0	€ 460.0	393.0	407.2	388.7
2025 VM Dollar Senior Notes	January 15, 2025	5.750%	$ 400.0	$ 400.0	324.0	323.4	321.1
VM Senior Secured Notes:							
January 2021 VM Senior Secured Notes:							
January 2021 VM Sterling Senior Secured Notes	January 15, 2021	5.500%	£ 628.4	£ 628.4	628.4	697.1	634.0
January 2021 VM Dollar Senior Secured Notes	January 15, 2021	5.250%	$ 447.9	$ 447.9	362.8	385.0	369.4
April 2021 VM Sterling Senior Secured Notes	April 15, 2021	6.000%	£ 1,100.0	£ 640.0	640.0	668.0	634.0
2025 VM Senior Secured Notes:							
2025 VM 5.5% Sterling Senior Secured Notes	January 15, 2025	5.500%	£ 430.0	£ 387.0	387.0	401.5	385.4
2025 VM 5.125% Sterling Senior Secured Notes	January 15, 2025	5.125%	£ 300.0	£ 300.0	300.0	308.4	297.3
2025 VM Dollar Senior Secured Notes	January 15, 2025	5.500%	$ 425.0	$ 425.0	344.3	350.3	342.9
2026 VM Senior Secured Notes:							
2026 VM 5.25% Dollar Senior Secured Notes	January 15, 2026	5.250%	$ 1,000.0	$ 1,000.0	810.0	803.0	811.7
2026 VM 5.5% Dollar Senior Secured Notes	August 15, 2026	5.500%	$ 750.0	$ 750.0	607.5	608.6	601.6
2027 VM Senior Secured Notes	January 15, 2027	4.875%	£ 525.0	£ 525.0	525.0	516.5	523.0
2029 VM Senior Secured Notes	March 28, 2029	6.250%	£ 400.0	£ 400.0	400.0	421.5	400.8
Total					£ 7,323.5	£ 7,542.3	£ 7,298.1

(a) Amounts include the impact of premiums, including amounts recorded in connection with the acquisition accounting for the LG/VM Transaction, and deferred financing costs, where applicable.

Subject to the circumstances described below, the VM Notes are non-callable prior to the Call Date as presented in the below table. At any time prior to the respective Call Date, Virgin Media Secured Finance or Virgin Media Finance may redeem some or all of the applicable notes by paying a "make-whole" premium, which is the present value of all remaining scheduled interest payments to the applicable Call Date using the discount rate (as specified in the applicable indenture) as of the redemption date plus 50 basis points (25 basis points in the case of the January 2021 VM Senior Secured Notes).

VM Notes	Call Date
2022 VM Senior Notes	(a)
2023 VM Senior Notes	April 15, 2018
2024 VM Senior Notes	October 15, 2019
2025 VM Senior Notes	January 15, 2020
January 2021 VM Senior Secured Notes	(a)
April 2021 VM Sterling Senior Secured Notes	April 15, 2017
2025 VM 5.5% Sterling Senior Secured Notes	January 15, 2019
2025 VM Dollar Senior Secured Notes	January 15, 2019
2025 VM 5.125% Sterling Senior Secured Notes	January 15, 2020
2026 VM 5.25% Dollar Senior Secured Notes	January 15, 2020
2026 VM 5.5% Dollar Senior Secured Notes	August 15, 2021
2027 VM Senior Secured Notes	January 15, 2021
2029 VM Senior Secured Notes	January 15, 2021

(a) The 2022 VM Senior Notes and the January 2021 VM Senior Secured Notes are non-callable. At any time prior to maturity, some or all of these notes may be redeemed by paying a "make-whole" premium, which is the present value of all remaining scheduled interest payments to the respective maturity date.

Virgin Media Finance or Virgin Media Secured Finance (as applicable) may redeem some or all of the VM Senior Notes and the VM Senior Secured Notes (with the exception of the 2022 VM Senior Notes and the January 2021 VM Senior Secured Notes) at the following redemption prices (expressed as a percentage of the principal amount) plus accrued and unpaid interest and additional amounts (as specified in the applicable indenture), if any, to the applicable redemption date, as set forth below:

	Redemption price						
	2023 VM Dollar Senior Notes	2023 VM Sterling Senior Notes	2024 VM Dollar Senior Notes	2024 VM Sterling Senior Notes	2025 VM Dollar Senior Notes	2025 VM Euro Senior Notes	April 2021 VM Dollar Senior Secured Notes
12-month period commencing	April 15	April 15	October 15	October 15	January 15	January 15	April 15
2017	N.A.	N.A.	N.A.	N.A.	N.A	N.A	102.688%
2018	103.188%	103.500%	N.A.	N.A.	N.A	N.A	101.344%
2019	102.125%	102.333%	103.000%	103.188%	N.A	N.A	100.000%
2020	101.063%	101.667%	102.000%	102.125%	102.875%	102.250%	100.000%
2021	100.000%	100.000%	101.000%	101.063%	101.917%	101.500%	N.A.
2022	100.000%	100.000%	100.000%	100.000%	100.958%	100.750%	N.A.
2023	N.A.	N.A.	100.000%	100.000%	100.000%	100.000%	N.A.
2024 and thereafter	N.A.	N.A.	N.A.	N.A.	100.000%	100.000%	N.A.

	Redemption Price							
	April 2021 VM Sterling Senior Secured Notes	2025 VM 5.5% Sterling Senior Secured Notes	2025 VM Dollar Senior Secured Notes	2025 VM 5.125% Sterling Senior Secured Notes	2026 VM 5.25% Dollar Senior Secured Notes	2026 VM 5.5% Dollar Senior Secured Notes	2027 VM Senior Secured Notes	2029 VM Senior Secured Notes
12-month period commencing	April 15	January 15	January 15	January 15	January 15	August 15	January 15	January 15
2017	103.000%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2018	101.500%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2019	100.000%	102.750%	102.750%	N.A.	N.A.	N.A.	N.A.	N.A.
2020	100.000%	101.833%	101.833%	102.563%	102.625%	N.A.	N.A.	N.A.
2021	N.A.	100.000%	100.000%	101.708%	101.313%	102.750%	102.438%	103.125%
2022	N.A.	100.000%	100.000%	100.854%	100.656%	101.375%	101.219%	102.083%
2023	N.A.	100.000%	100.000%	100.000%	100.000%	100.688%	100.609%	101.042%
2024 and thereafter	N.A.	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%

2016 Refinancing Transactions. In April 2016, Virgin Media Secured Finance issued the 2026 VM 5.5% Dollar Senior Secured Notes. The net proceeds from the 2026 VM 5.5% Dollar Senior Secured Notes were used to repay in full the then outstanding amount under the VM Revolving Facility and for general corporate purposes.

For information regarding refinancing transactions completed subsequent to December 31, 2016 that impact the VM Notes, see note 20.

2015 and 2014 Refinancing Transactions. During 2015 and 2014, we completed a number of refinancing transactions that generally resulted in lower interest rates and extended maturities. In connection with these transactions, we recognized gains (losses) on debt modification and extinguishment, net, of (£29.4 million) and £20.1 million during 2015 and 2014, respectively, which includes (i) the write-off of £19.5 million and £9.4 million of deferred financing costs, respectively, (ii) the payment of redemption premiums of £6.6 million and £74.4 million, respectively, (iii) the write-off of unamortized (discounts) premiums of (£2.8 million) and £103.9 million, respectively, and (iv) the payment of third-party costs of £0.5 million and nil, respectively.

VM Credit Facilities

The VM Credit Facilities are the senior and senior secured credit facilities of certain subsidiaries of Virgin Media. The details of our borrowings under the VM Credit Facilities as of December 31, 2016 are summarized in the following table:

VM Credit Facilities	Maturity	Interest rate	Facility amount (in borrowing currency)	Outstanding principal amount	Unused borrowing capacity	Carrying value (a)
				in millions		
Senior Secured Facilities:						
E	June 30, 2023	LIBOR + 3.50% (b)	£ 849.4	£ 849.4	£ —	£ 841.6
I	January 31, 2025	LIBOR + 2.75%	$ 3,400.0	2,754.1	—	2,713.4
VM Revolving Facility (c)	December 31, 2021	LIBOR + 2.75%	(d)	—	675.0	—
Total Senior Secured Facilities				3,603.5	675.0	3,555.0
Senior Facility:						
VM Financing Facility	September 15, 2024	5.26%	—	46.1	—	46.1
Total				£ 3,649.6	£ 675.0	£ 3,601.1

(a) The carrying values of VM Facilities E and I are net of discounts and deferred financing costs.

(b) VM Facility E has a LIBOR floor of 0.75%.

(c) The VM Revolving Facility has a fee on unused commitments of 1.1% per year.

(d) The VM Revolving Facility is a multi-currency revolving facility with a maximum borrowing capacity equivalent to £675.0 million.

2016 Refinancing Transactions. In October 2016, Virgin Media Receivables Financing Notes I Designated Activity Company (**Virgin Media Receivables Financing Company**), a third-party special purpose financing entity that is not consolidated by Virgin Media, issued £350.0 million principal amount of 5.50% receivables financing notes due September 15, 2024 (the **VM Receivables Financing Notes**). The net proceeds from the VM Receivables Financing Notes are used to purchase certain vendor financed receivables of Virgin Media from various third parties. To the extent that the proceeds from the VM Receivables Financing Notes exceed the amount of vendor financed receivables available to be purchased, the excess proceeds are used to fund an excess cash facility (the **VM Financing Facility**) under a new credit facility of VMIH. Virgin Media Receivables Financing Company can request the VM Financing Facility be repaid by VMIH as additional vendor financed receivables become available for purchase.

In December 2016, Virgin Media Bristol LLC entered into VM Facility I. VM Facility I was issued at 99.75% of par and is subject to a LIBOR floor of 0.0%. The net proceeds from VM Facility I were used to prepay (i) in full the $1,855.0 million (£1,502.6 million) outstanding principal amount under VM Facility F, (ii) in full the $900.0 million (£729.0 million) outstanding principal under the April 2021 VM Dollar Senior Secured Notes, (iii) £350.0 million of the £990.0 million outstanding principal amount under the April 2021 VM Sterling Senior Secured Notes and (iv) in full the £100.0 million outstanding principal amount under VM Facility D. In connection with these transactions, we recognized a loss on debt modification and extinguishment, net, of £62.9 million. This loss includes (a) the payment of £42.2 million of redemption premium, (b) the write-off of £19.1 million of deferred financing costs and (c) the write-off of unamortized discount of £1.6 million.

For information regarding a refinancing transaction completed subsequent to December 31, 2016 that impacts the VM Credit Facilities, see note 20.

Maturities of Debt and Capital Lease Obligations

The pound sterling equivalents of the maturities of our debt and capital lease obligations as of December 31, 2016 are presented below:

	Third-party debt	Related-party debt	Capital lease obligations	Total
	in millions			
Year ending December 31:				
2017	£ 1,022.6	£ 45.7	£ 30.9	£ 1,099.2
2018	0.4	—	12.2	12.6
2019	0.4	—	5.8	6.2
2020	94.4	—	3.4	97.8
2021	1,631.6	—	2.9	1,634.5
Thereafter	9,318.3	—	136.9	9,455.2
Total debt maturities	12,067.7	45.7	192.1	12,305.5
Unamortized premium, net of discount	11.3	—	—	11.3
Amounts representing interest	—	—	(118.2)	(118.2)
Unamortized deferred financing costs	(86.1)		—	(86.1)
Total	£ 11,992.9	£ 45.7	£ 73.9	£ 12,112.5
Current portion	£ 1,022.6	£ 45.7	£ 26.8	£ 1,095.1
Noncurrent portion	£ 10,970.3	£ —	£ 47.1	£ 11,017.4

Non-cash Refinancing Transactions

During 2016, 2015 and 2014, certain of our refinancing transactions included non-cash borrowings and repayments of debt aggregating nil, £1,205.3 million and £500.4 million, respectively.

(9) Income Taxes

Virgin Media files its primary income tax return in the U.S. Our subsidiaries file income tax returns in the U.S., the U.K. and Ireland. The income taxes of Virgin Media and its subsidiaries are presented on a separate return basis for each tax-paying entity or group.

The components of our earnings (loss) before income taxes are as follows:

	Year ended December 31,		
	2016	2015	2014
		in millions	
U.S.	£ (32.8)	£ (14.0)	£ (218.8)
U.K.	(247.3)	89.5	129.7
Ireland	(19.3)	(16.2)	1.9
Total	£ (299.4)	£ 59.3	£ (87.2)

Income tax benefit (expense) consists of:

	Current	Deferred	Total
		in millions	
Year ended December 31, 2016:			
U.S. (a)	£ 0.2	£ 52.4	£ 52.6
U.K.	(1.9)	(37.4)	(39.3)
Ireland	0.2	0.3	0.5
Total	£ (1.5)	£ 15.3	£ 13.8
Year ended December 31, 2015:			
U.S. (a)	£ (2.4)	£ 8.3	£ 5.9
U.K.	(0.5)	(206.4)	(206.9)
Ireland	(0.2)	—	(0.2)
Total	£ (3.1)	£ (198.1)	£ (201.2)
Year ended December 31, 2014:			
U.S. (a)	£ (2.5)	£ 34.2	£ 31.7
U.K.	—	(53.2)	(53.2)
Ireland	—	0.1	0.1
Total	£ (2.5)	£ (18.9)	£ (21.4)

(a) Includes federal and state income taxes. Our U.S. state income taxes were not material during any of the years presented.

Income tax benefit (expense) attributable to our earnings (loss) before income taxes differs from the amounts computed using the U.S. federal income tax rate of 35.0%, as a result of the following factors:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Computed "expected" tax benefit (expense)	£ 104.8	£ (20.8)	£ 30.5
Enacted tax law and rate changes (a)	(102.8)	(188.1)	0.2
Change in valuation allowances	54.0	24.4	13.3
International rate differences (b)	(45.1)	11.8	40.3
Basis and other differences in the treatment of items associated with investments in subsidiaries	(17.8)	(30.7)	(88.4)
Non-deductible or non-taxable interest and other expenses	10.1	—	(7.7)
Non-deductible or non-taxable foreign currency exchange results	(1.3)	—	(15.8)
Other, net	11.9	2.2	6.2
Total income tax benefit (expense)	£ 13.8	£ (201.2)	£ (21.4)

(a) During 2015, the U.K. enacted legislation that will change the corporate income tax rate from the current rate of 20.0% to 19.0% in April 2017 and 18.0% in April 2020. The impact of these rate changes on our deferred tax balances was recorded during the fourth quarter of 2015 when the change in law was enacted. During the third quarter of 2016, the U.K. enacted legislation that will further reduce the corporate income tax rate in April 2020 from 18.0% to 17.0%. Substantially all of the impact of this rate change on our deferred tax balances was recorded during the third quarter of 2016.

(b) Amounts reflect statutory rates in the U.K. and Ireland, which are lower than the U.S. federal income tax rate.

The components of our deferred tax assets are as follows:

	December 31,	
	2016	2015
	in millions	
Deferred tax assets	£ 1,437.3	£ 1,430.7
Deferred tax liabilities (a)	—	(35.7)
Net deferred tax asset	£ 1,437.3	£ 1,395.0

(a) Our deferred tax liabilities are included in other long-term liabilities in our consolidated balance sheet.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are presented below:

	December 31, 2016	December 31, 2015
	in millions	
Deferred tax assets:		
Capital and net operating loss carryforwards	£ 2,536.2	£ 2,632.3
Property and equipment, net	1,554.8	1,610.5
Debt	95.2	155.3
Other future deductible amounts	43.9	66.0
Deferred tax assets	4,230.1	4,464.1
Valuation allowance	(2,519.6)	(2,607.4)
Deferred tax assets, net of valuation allowance	1,710.5	1,856.7
Deferred tax liabilities:		
Intangible assets	(230.9)	(367.5)
Property and equipment, net	(13.4)	(49.9)
Other future taxable amounts	(28.9)	(44.3)
Deferred tax liabilities	(273.2)	(461.7)
Net deferred tax asset	£ 1,437.3	£ 1,395.0

Our deferred income tax valuation allowance decreased £87.8 million in 2016. This decrease reflects the net effect of (i) enacted tax law, (ii) foreign currency translation adjustments and (iii) the net tax benefit to related to our continuing operations of £54.0 million**.**

At December 31, 2016 and 2015, we had property and equipment on which future U.K. tax deductions can be claimed of £14.5 billion and £14.2 billion, respectively. The maximum amount of these “capital allowances” that can be claimed in any one year is 18% of the remaining balance, after additions, disposals and prior claims. The tax effects of the excess of these capital allowances over the related financial reporting bases are included in the 2016 and 2015 deferred tax assets related to property and equipment, net, in the above table.

At December 31, 2016, our unrecognized excess tax benefits aggregated £73.1 million. These excess tax benefits, which represent tax deductions in excess of the financial reporting expense for share-based compensation, have not been recognized for financial reporting purposes as these tax benefits have not been realized as a reduction of income taxes payable. The tax effects of these unrecognized excess tax benefits are not included in the above table. For additional information regarding the adoption of ASU 2016-09, which will impact the accounting for unrecognized excess tax benefits beginning January 1, 2018, see note 2.

The significant components of our capital and net operating loss carryforwards and related tax assets at December 31, 2016 are as follows:

Country	Capital and net operating loss carryforwards	Related tax asset	Expiration date
	in millions		
U.K.			
Amount attributable to capital losses	£ 12,102.8	£ 2,057.5	Indefinite
Amount attributable to net operating losses (a)	963.4	163.8	Indefinite
U.S.	726.0	254.0	2019-2033
Ireland	487.2	60.9	Indefinite
Total	£ 14,279.4	£ 2,536.2	

(a) This amount includes only the tax loss carryforwards generated by our U.K. subsidiaries. Our U.K. subsidiaries are within the same U.K. tax group as our ultimate parent company, Liberty Global, and its U.K. subsidiaries. U.K. tax law permits the surrendering, without cash payment, of tax losses between entities within the same tax group. During the year ended December 31, 2016, tax losses with an aggregate tax effect of £24.8 million were surrendered by Liberty Global and its U.K. subsidiaries outside of Virgin Media to our U.K. subsidiaries. These surrendered tax assets, which are not reflected in the amount shown in this table as they were utilized by our U.K. subsidiaries during 2016, are reflected as an increase to additional paid-in capital in our consolidated statement of owners' equity.

The use of our tax loss carryforwards within each tax jurisdiction (both capital and ordinary losses) is limited. Certain tax jurisdictions limit the ability to offset taxable income of a separate company or different tax group with the tax losses associated with another separate company or group. Most of the tax loss carryforwards shown in the above table are not expected to be realized.

We have taxable outside basis differences on certain investments in non-U.S. subsidiaries. We intend to indefinitely reinvest earnings from these non-U.S. operations. At December 31, 2016, income and withholding taxes for which a net deferred tax liability might otherwise be required have not been provided on an estimated £5.1 billion of cumulative temporary differences (including, for this purpose, any difference between the aggregate tax basis in stock of a consolidated subsidiary and the corresponding amount of the subsidiary's net equity, including cumulative translation adjustments, determined for financial reporting purposes) on non-U.S. entities. The determination of the additional withholding tax that would arise upon a reversal of temporary differences is impractical to estimate as it is subject to offset by available foreign tax credits and subject to certain limitations.

In general, a U.K. or U.S. corporation may claim a foreign tax credit against its income tax expense for foreign income taxes paid or accrued. A U.S. corporation may also claim a credit for foreign income taxes paid or accrued on the earnings of a foreign corporation paid to the U.S. corporation as a dividend.

Our ability to claim a foreign tax credit for dividends received from our foreign subsidiaries or foreign taxes paid or accrued is subject to various significant limitations under U.S. tax laws, including a limited carry back and carry forward period. Limitations on the ability to claim a foreign tax credit and the inability to offset losses in one jurisdiction against income earned in another jurisdiction could result in a high effective tax rate on our earnings. Since all of our revenue is generated outside the U.S., these risks are greater for us than for companies that generate most of their revenue in the U.S.

Through our subsidiaries, we maintain a significant presence in the U.K. The U.K. maintains a highly complex tax regime that differs significantly from the system of income taxation used in the U.S. We have accounted for the effect of foreign taxes based on what we believe is reasonably expected to apply to us and our subsidiaries based on tax laws currently in effect and reasonable interpretations of these laws.

We comply with taxation legislation and are subject to audit by tax authorities in all jurisdictions in which we operate. Although we expect that the tax amounts presented are reasonable, there is no assurance that the final determination of tax audits or tax disputes will not be different from what is reflected in our recorded income tax provisions.

We and our subsidiaries file consolidated and standalone income tax returns in the U.S., the U.K. and Ireland. In the normal course of business, our income tax filings are subject to review by various taxing authorities. In connection with such reviews, disputes could arise with the taxing authorities over the interpretation or application of certain income tax rules related to our business in that tax jurisdiction. Such disputes may result in future tax and interest and penalty assessments by these taxing authorities. The ultimate resolution of tax contingencies will take place upon the earlier of (i) the settlement date with the applicable taxing authorities in either cash or agreement of income tax positions or (ii) the date when the tax authorities are statutorily prohibited from adjusting the company's tax computations.

Tax returns filed by our company or our subsidiaries for years prior to 2013 are no longer subject to examination by tax authorities.

The changes in our unrecognized tax benefits are summarized below:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Balance at beginning of period	£ 13.8	£ 8.2	£ 7.7
Reductions for tax positions of prior years	(1.7)	—	—
Additions based on tax positions related to the current year	3.3	5.1	—
Foreign currency translation	2.2	0.5	0.5
Lapse of statute of limitations	(0.3)	—	—
Balance at end of period	£ 17.3	£ 13.8	£ 8.2

No assurance can be given that any of these tax benefits will be recognized or realized.

As of December 31, 2016, our unrecognized tax benefits included £3.9 million of tax benefits that would have a favorable impact on our effective income tax rate if ultimately recognized, after considering amounts that we would expect to be offset by valuation allowances.

We do not expect any material changes to our unrecognized tax benefits during 2017. No assurance can be given as to the nature or impact of any changes in our unrecognized tax positions during 2017.

(10) Owners' Equity

Virgin Media has 111 shares of common stock outstanding.

(11) Share-based Compensation

Our share-based compensation expense represents amounts allocated to our company by Liberty Global and related employer taxes. The amounts allocated by Liberty Global to our company represent share-based compensation associated with the Liberty Global share-based incentive awards held by certain employees of our subsidiaries. Share-based compensation expense allocated to our company by Liberty Global is reflected as an increase to parent's equity and is offset by any amounts recharged to us by Liberty Global, as further described in note 12. Incentive awards are denominated in U.S. dollars.

The following table summarizes our share-based compensation expense, which is included in SG&A expense in our consolidated statements of operations:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Performance-based incentive awards (a)	£ 16.1	£ 10.1	£ 7.0
Other share-based incentive awards	14.9	25.4	26.8
Total (b)	£ 31.0	£ 35.5	£ 33.8

(a) Includes share-based compensation expense related to (i) Liberty Global PSUs and (ii) a challenge performance award plan for certain executive officers and key employees of Liberty Global, including certain employees of our subsidiaries (the **Challenge Performance Awards**). The Challenge Performance Awards include PSARs and PSUs.

(b) In connection with the LiLAC Transaction, Liberty Global's compensation committee approved modifications to its outstanding share-based incentive awards (the **2015 Award Modifications**) in accordance with the underlying share-based incentive plans. The objective of the compensation committee was to ensure a relatively unchanged intrinsic value of outstanding equity awards before and after the bonus issuance of the LiLAC Shares. The mechanism to modify outstanding share-based incentive awards, as approved by the compensation committee, utilized the volume-weighted average price of the respective shares for the five days prior to and the five days following the bonus issuance (**Modification VWAPs**). In order to determine if any incremental share-based compensation expense should be recorded as a result of the 2015 Award Modifications, we were required to measure the changes in the fair values of the then outstanding share-based incentive awards using market prices immediately before and immediately after the 2015 Award Modifications. Due to declines in the share prices of Class A and Class C Liberty Global Shares following the bonus issuance, the exercise prices of options, SARs and PSARs determined using the Modification VWAPs were lower than the exercise prices that would have resulted if the market prices immediately before and after the 2015 Award Modifications had been used. Accordingly, the Black-Scholes fair values of Liberty Global options, SARs and PSARs held by employees of our subsidiaries increased as a result of the 2015 Award Modifications, resulting in incremental share-based compensation of £9.6 million including £2.0 million and £5.6 million recognized during 2016 and 2015, respectively, and £2.0 million that will be recognized in future periods through 2019 as the related awards vest.

As of December 31, 2016, £64.0 million of total unrecognized compensation cost related to our Liberty Global share-based compensation awards is expected to be recognized as an expense by our company in the future over a weighted-average period of approximately 2.6 years.

The following table summarizes certain information related to the incentive awards granted or remeasured and exercised by employees of our subsidiaries with respect to Liberty Global ordinary shares:

	Year ended December 31,		
	2016	**2015**	**2014**
Assumptions used to estimate fair value of options, SARs and PSARs granted:			
Risk-free interest rate	0.88 - 1.24%	0.96 - 1.40%	0.81 - 1.31%
Expected life	3.2 - 4.2 years	3.0 - 4.3 years	3.1 - 3.9 years
Expected volatility	27.4 - 34.7%	23.1 - 26.0%	25.5 - 26.5%
Expected dividend yield	none	none	none
Weighted average grant-date fair value per share of awards granted:			
Options	$ 10.45	$ 14.81	$ —
SARs	$ 8.09	$ 9.57	$ 8.04
PSARs	$ —	$ —	$ 8.15
RSUs	$ 36.42	$ 51.91	$ 39.84
PSUs	$ 34.02	$ 51.44	$ 40.13
Total intrinsic value of awards exercised (in millions):			
Options	£ 9.9	£ 58.7	£ 63.3
SARs	£ 0.5	£ 1.7	£ 0.4
PSARs	£ 0.1	£ —	£ 0.1
Cash received by Liberty Global from exercise of options (in millions)	£ 12.9	£ 26.5	£ 26.4
Income tax benefit related to share-based compensation (in millions)	£ 5.6	£ 6.4	£ 6.7

Share Incentive Plans — Liberty Global Ordinary Shares

Incentive Plans

As of December 31, 2016, Liberty Global was authorized to grant incentive awards under the Liberty Global 2014 Incentive Plan. Generally, the compensation committee of Liberty Global's board of directors may grant non-qualified share options, SARs, restricted shares, RSUs, cash awards, performance awards or any combination of the foregoing (collectively, awards). Ordinary shares issuable pursuant to awards made under these incentive plans will be made available from either authorized but unissued shares or shares that have been issued but reacquired by Liberty Global. Awards may be granted at or above fair value in any class of ordinary shares. The maximum number of Liberty Global ordinary shares with respect to which awards may be issued under the Liberty Global 2014 Incentive Plan is 105 million (of which no more than 50.25 million shares may consist of Class B ordinary shares), subject to anti-dilution and other adjustment provisions in the respective plan. As of December 31, 2016, the Liberty Global 2014 Incentive Plan had 64,795,919 ordinary shares available for grant.

Awards (other than performance-based awards) issued under the (i) Liberty Global 2014 Incentive Plan, (ii) Liberty Global 2005 Incentive Plan and (iii) VM Incentive Plan after June 7, 2013 generally (a) vest 12.5% on the six month anniversary of the grant date and then vest at a rate of 6.25% each quarter thereafter and (b) expire seven years after the grant date. RSUs vest on the date of the first annual general meeting of Liberty Global shareholders following the grant date. These awards may be granted at or above fair value in any class of ordinary shares. No further awards will be granted under the Liberty Global 2005 Incentive Plan or the VM Incentive Plan.

Performance Awards

The following is a summary of the material terms and conditions with respect to Liberty Global's performance-based awards for certain executive officers and key employees.

Liberty Global PSUs

Equity awards are granted to executive officers and key employees based on a target annual equity value for each executive and key employee, of which approximately two-thirds would be delivered in the form of PSUs and approximately one-third in the form of an annual award of SARs. Each currently-outstanding PSU represents the right to receive one Liberty Global or LiLAC Class A or Class C ordinary share, as applicable, subject to performance and vesting. Although PSUs are generally granted on an annual basis, no PSUs will be granted in 2017 to recipients of the 2016 PSUs, as defined and described below.

In March 2015, Liberty Global's compensation committee approved the grant of PSUs to executive officers and key employees (the **2015 PSU**s). The performance plan for the 2015 PSUs covered a two-year period ending December 31, 2016 and included a performance target based on the achievement of a specified compound annual growth rate (**CAGR**) in a consolidated operating cash flow metric (as defined in the applicable underlying agreement). The performance target was adjusted for events such as acquisitions, dispositions and changes in foreign currency exchange rates that affect comparability (**OCF CAGR**), and the participant’s annual performance ratings during the two-year performance period. A performance range of 75% to 125% of the target OCF CAGR will result in award recipients earning 50% to 150% of their respective PSUs, subject to reduction or forfeiture based on individual performance. Subsequent to December 31, 2016, the compensation committee finalized and approved the percentage of the 2015 PSUs that was earned by participants at 99.5%. The 2015 PSUs will vest 50% on each of April 1 and October 1 of 2017.

In February 2016, Liberty Global's compensation committee approved the grant of PSUs to executive officers and key employees (the **2016 PSU**s) pursuant to a performance plan that is based on the achievement of a specified OCF CAGR during the three-year period ended December 31, 2018. The 2016 PSUs require delivery of a compound annual growth rate of our consolidated OCF CAGR of 6.0% during the three-year performance period, with over- and under-performance payout opportunities should the OCF CAGR exceed or fail to meet the target, as applicable. The performance payout may be adjusted at the compensation committee’s discretion for events that may affect comparability, such as changes in foreign currency exchange rates and accounting principles or policies. A performance range of 75% to 167.5% of the target OCF CAGR will generally result in award recipients earning 75% to 300% of their target 2016 PSUs, subject to reduction or forfeiture based on individual performance. The earned 2016 PSUs will vest 50% on each of April 1 and October 1, 2019.

Liberty Global Challenge Performance Awards.

Effective June 24, 2013, Liberty Global’s compensation committee approved the Challenge Performance Awards, which consisted solely of PSARs for Liberty Global’s senior executive officers and a combination of PSARs and PSUs for other executive officers and key employees. Each PSU represented the right to receive one Liberty Global or LiLAC Class A or Class C ordinary share, as applicable. The performance criteria for the Challenge Performance Awards was based on the participant’s performance and achievement of individual goals in each of the years 2013, 2014 and 2015. As a result of satisfying performance conditions, 100% of the then outstanding Challenge Performance Awards vested and became fully exercisable on June 24, 2016. The PSARs have a term of seven years and base prices equal to the respective market closing prices of the applicable class on the grant date.

Virgin Media Incentive Awards

Equity awards were granted to certain of our employees prior to the LG/VM Transaction under certain incentive plans maintained and administered by our company and no new grants will be made under these incentive plans. The equity awards granted include stock options, restricted shares, RSUs and performance awards. Awards under the VM Incentive Plan issued prior to the LG/VM Transaction have a 10-year term and become fully exercisable within five years of continued employment.

LiLAC Distribution

On July 1, 2016, Liberty Global distributed (as a bonus issue) LiLAC Shares to holders of Liberty Global Shares on a pro-rata basis (the **LiLAC Distribution**). The LiLAC Distribution was accounted for prospectively effective July 1, 2016. In connection with the LiLAC Distribution, Liberty Global's compensation committee approved modifications to its outstanding share-based incentive awards (the **2016 Award Modification**) in accordance with the underlying share-based incentive plans. The objective of the compensation committee was to ensure a relatively unchanged intrinsic value of outstanding equity awards before and after the LiLAC Distribution. The mechanism to modify outstanding share-based incentive awards, as approved by the compensation committee, utilized an analysis of the prices of the respective shares before and after the share issuance. Based upon this approach, we determined the incremental value associated with the 2016 Award Modification was immaterial. As a result, we did not recognize any incremental share-based compensation expense associated with the 2016 Award Modification. The impact of the LiLAC Distribution is separately presented in the below tables.

Share-based Award Activity — Awards Issued by Liberty Global

The following tables summarize the share-based award activity during 2016 with respect to Liberty Global Shares held by employees of our subsidiaries:

Options — Class A ordinary shares	Number of shares	Weighted average exercise price	Weighted average remaining contractual term	Aggregate intrinsic value
			in years	in millions
Outstanding at January 1, 2016	403,521	$ 20.27		
Forfeited	(4,554)	$ 22.08		
Exercised	(179,856)	$ 22.59		
Transfers	(6,974)	$ 19.81		
Outstanding at June 30, 2016	212,137	$ 18.28		
Impact of the LiLAC Distribution	31,599	$ (2.41)		
Outstanding at July 1, 2016	243,736	$ 15.87		
Forfeited	(3,116)	$ 16.62		
Exercised	(59,132)	$ 17.75		
Transfers	(2,484)	$ 17.35		
Outstanding at December 31, 2016 (a)	179,004	$ 15.22	4.7	$ 2.8
Exercisable at December 31, 2016	126,952	$ 13.90	4.3	$ 2.1

Options — Class C ordinary shares	Number of shares	Weighted average exercise price	Weighted average remaining contractual term	Aggregate intrinsic value
			in years	in millions
Outstanding at January 1, 2016	1,474,044	$ 25.59		
Forfeited	(42,295)	$ 33.06		
Exercised	(449,985)	$ 21.28		
Transfers	(16,900)	$ 11.99		
Outstanding at June 30, 2016	964,864	$ 27.51		
Impact of the LiLAC Distribution	146,709	$ (3.97)		
Outstanding at July 1, 2016	1,111,573	$ 23.54		
Granted	499,552	$ 25.05		
Forfeited	(59,041)	$ 27.20		
Exercised	(141,738)	$ 16.95		
Transfers	(6,602)	$ 16.28		
Outstanding at December 31, 2016 (a)	1,403,744	$ 24.63	3.5	$ 7.1
Exercisable at December 31, 2016	272,294	$ 12.88	4.4	$ 4.6

(a) The pound sterling equivalent amounts for the aggregate intrinsic value for outstanding options related to Class A and Class C Liberty Global Shares are £2.3 million and £5.8 million, respectively.

SARs — Class A ordinary shares	Number of shares	Weighted average base price	Weighted average remaining contractual term	Aggregate intrinsic value
			in years	in millions
Outstanding at January 1, 2016	882,910	$ 42.03		
Granted	546,226	$ 37.73		
Forfeited	(31,283)	$ 44.73		
Exercised	(5,851)	$ 12.62		
Transfers	(27,467)	$ 43.42		
Outstanding at June 30, 2016	1,364,535	$ 40.35		
Impact of the LiLAC Distribution	132,826	$ (5.16)		
Outstanding at July 1, 2016	1,497,361	$ 35.19		
Granted	31,830	$ 32.10		
Forfeited	(25,524)	$ 35.92		
Exercised	(3,387)	$ 27.07		
Transfers	(62,548)	$ 35.02		
Outstanding at December 31, 2016 (a)	1,437,732	$ 35.14	5.4	$ 0.5
Exercisable at December 31, 2016	500,485	$ 34.49	4.6	$ 0.5

SARs — Class C ordinary shares	Number of shares	Weighted average base price	Weighted average remaining contractual term	Aggregate intrinsic value
			in years	in millions
Outstanding at January 1, 2016	1,868,528	$ 39.86		
Granted	1,092,452	$ 36.60		
Forfeited	(63,363)	$ 43.21		
Exercised	(16,453)	$ 10.86		
Transfers	(55,199)	$ 41.95		
Outstanding at June 30, 2016	2,825,965	$ 38.67		
Impact of the LiLAC Distribution	280,779	$ (5.10)		
Outstanding at July 1, 2016	3,106,744	$ 33.57		
Granted	63,660	$ 31.15		
Forfeited	(52,005)	$ 34.81		
Exercised	(12,436)	$ 26.54		
Transfers	(131,717)	$ 33.35		
Outstanding at December 31, 2016 (a)	2,974,246	$ 33.54	5.3	$ 1.6
Exercisable at December 31, 2016	1,078,688	$ 32.44	4.5	$ 1.6

(a) The pound sterling equivalent amounts for the aggregate intrinsic value for outstanding SARs related to Class A and Class C Liberty Global Shares are £0.4 million and £1.3 million, respectively.

PSARs — Class A ordinary shares	Number of shares	Weighted average base price	Weighted average remaining contractual term	Aggregate intrinsic value
			in years	in millions
Outstanding at January 1, 2016	229,454	$ 32.48		
Transfers	(8,248)	$ 31.87		
Outstanding at June 30, 2016	221,206	$ 32.50		
Impact of the LiLAC Distribution	6,741	$ (4.25)		
Outstanding at July 1, 2016	227,947	$ 28.25		
Exercised	(4,215)	$ 27.71		
Transfers	(12,649)	$ 27.71		
Outstanding at December 31, 2016 (a)	211,083	$ 28.29	3.5	$ 0.5
Exercisable at December 31, 2016	211,083	$ 28.29	3.5	$ 0.5

PSARs — Class C ordinary shares	Number of shares	Weighted average base price	Weighted average remaining contractual term	Aggregate intrinsic value
			in years	in millions
Outstanding at January 1, 2016	685,703	$ 31.12		
Transfers	(24,692)	$ 30.46		
Outstanding at June 30, 2016	661,011	$ 31.14		
Impact of the LiLAC Distribution	21,036	$ (4.23)		
Outstanding at July 1, 2016	682,047	$ 26.91		
Exercised	(27,189)	$ 26.06		
Transfers	(38,075)	$ 26.30		
Outstanding at December 31, 2016 (a)	616,783	$ 26.99	3.5	$ 1.8
Exercisable at December 31, 2016	616,783	$ 26.99	3.5	$ 1.8

(a) The pound sterling equivalent amounts for the aggregate intrinsic value for outstanding PSARs related to Class A and Class C Liberty Global Shares are £0.4 million and £1.5 million, respectively.

RSUs — Class A ordinary shares	Number of shares	Weighted average grant-date fair value per share	Weighted average remaining contractual term
			in years
Outstanding at January 1, 2016	189,016	$ 42.31	
Granted	104,128	$ 37.73	
Forfeited	(6,626)	$ 46.45	
Released from restrictions	(24,266)	$ 42.44	
Transfers	(21,116)	$ 38.90	
Outstanding at June 30, 2016	241,136	$ 40.50	
Impact of the LiLAC Distribution	34,339	$ (5.53)	
Outstanding at July 1, 2016	275,475	$ 34.97	
Granted	6,932	$ 32.17	
Forfeited	(8,668)	$ 32.46	
Released from restrictions	(36,119)	$ 34.07	
Transfers	(8,562)	$ 37.58	
Outstanding at December 31, 2016	229,058	$ 35.02	3.5

RSUs — Class C ordinary shares	Number of shares	Weighted average grant-date fair value per share	Weighted average remaining contractual term
			in years
Outstanding at January 1, 2016	374,743	$ 40.29	
Granted	208,256	$ 36.60	
Forfeited	(13,344)	$ 44.72	
Released from restrictions	(55,290)	$ 39.62	
Transfers	(29,877)	$ 37.56	
Outstanding at June 30, 2016	484,488	$ 38.83	
Impact of the LiLAC Distribution	72,398	$ (5.23)	
Outstanding at July 1, 2016	556,886	$ 33.60	
Granted	13,864	$ 31.35	
Forfeited	(17,434)	$ 33.37	
Released from restrictions	(75,767)	$ 34.01	
Transfers	(17,267)	$ 35.73	
Outstanding at December 31, 2016	460,282	$ 33.39	3.5

PSUs — Class A ordinary shares	Number of shares	Weighted average grant-date fair value per share	Weighted average remaining contractual term
			in years
Outstanding at January 1, 2016	117,260	$ 43.32	
Granted	320,732	$ 35.02	
Performance adjustment (a)	1,551	$ 39.16	
Forfeited	(1,849)	$ 36.61	
Released from restrictions	(45,451)	$ 36.83	
Transfers	(866)	$ 33.91	
Outstanding at June 30, 2016	391,377	$ 37.31	
Impact of the LiLAC Distribution	27,238	$ (4.88)	
Outstanding at July 1, 2016	418,615	$ 32.43	
Granted	22,922	$ 32.04	
Forfeited	(255)	$ 33.14	
Released from restrictions	(29,167)	$ 33.61	
Transfers	(15,653)	$ 30.54	
Outstanding at December 31, 2016	396,462	$ 32.39	2.5

PSUs — Class C ordinary shares	Number of shares	Weighted average grant-date fair value per share	Weighted average remaining contractual term
			in years
Outstanding at January 1, 2016	258,532	$ 40.59	
Granted	641,464	$ 33.95	
Performance adjustment (a)	3,101	$ 37.70	
Forfeited	(3,699)	$ 35.25	
Released from restrictions	(114,054)	$ 34.44	
Transfers	(2,598)	$ 31.64	
Outstanding at June 30, 2016	782,746	$ 36.09	
Impact of the LiLAC Distribution	56,806	$ (4.56)	
Outstanding at July 1, 2016	839,552	$ 31.53	
Granted	45,844	$ 31.00	
Released from restrictions	(58,867)	$ 35.49	
Transfers	(31,415)	$ 29.47	
Outstanding at December 31, 2016	795,114	$ 31.29	2.5

(a) Represents the increase in PSUs associated with the first quarter 2016 determination that 103.6% of the PSUs that were granted in 2014 (the **2014 PSUs**) had been earned. As of December 31, 2016, all of the earned 2014 PSUs have been released from restrictions.

(12) Related-party Transactions

Our related-party transactions consist of the following:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Credits (charges) included in:			
Programming and other direct costs of services	£ (3.4)	£ (1.4)	£ (0.7)
Other operating	8.9	5.6	2.1
SG&A	(3.3)	(8.0)	(4.7)
Allocated share-based compensation expense	(29.1)	(24.7)	(28.8)
Fees and allocations, net:			
Operating and SG&A (exclusive of depreciation and share-based compensation)	(29.5)	(24.4)	(16.9)
Depreciation	(18.1)	(11.8)	(8.8)
Share-based compensation	(20.1)	(22.2)	(2.8)
Management fee	(43.2)	(29.2)	(8.1)
Total fees and allocations, net	(110.9)	(87.6)	(36.6)
Included in operating income	(137.8)	(116.1)	(68.7)
Interest income	289.6	246.5	229.7
Realized and unrealized gain (loss) on derivative instruments, net	15.8	(6.7)	(1.9)
Interest expense	(4.2)	(5.7)	(52.0)
Included in net loss	£ 163.4	£ 118.0	£ 107.1
Property and equipment additions, net	£ 100.3	£ 45.6	£ 32.7

General. Virgin Media charges fees and allocates costs and expenses to certain other Liberty Global subsidiaries and certain Liberty Global subsidiaries outside of Virgin Media charge fees and allocate costs and expenses to Virgin Media. Depending on the nature of these related-party transactions, the amount of the charges or allocations may be based on (i) our estimated share of the underlying costs, (ii) our estimated share of the underlying costs plus a mark-up or (iii) commercially-negotiated rates. The methodology Liberty Global uses to allocate its central and administrative costs to its borrowing groups impacts the calculation of the "EBITDA" metric specified by our debt agreements (**Covenant EBITDA**). In this regard, the components of related-party fees and allocations that are deducted to arrive at our Covenant EBITDA are based on (a) the amount and nature of costs incurred by the allocating Liberty Global subsidiaries during the period, (b) the allocation methodologies in effect during the period and (c) the size of the overall pool of entities that are charged fees and allocated costs, such that changes in any of these factors would likely result in changes to the amount of related-party fees and allocations that will be deducted to arrive at our Covenant EBITDA in future periods. For example, to the extent that a Liberty Global subsidiary borrowing group was to acquire (sell) an operating entity, and assuming no change in the total costs incurred by the allocating entities, the fees charged and the costs allocated to our company would decrease (increase). Although we believe that the related-party charges and allocations described below are reasonable, no assurance can be given that the related-party costs and expenses reflected in our consolidated statements of operations are reflective of the costs that we would incur on a standalone basis. Our related-party transactions are generally cash settled unless otherwise noted below.

Programming and other direct costs of services. Amounts consist of certain backbone and other services provided to our company by other Liberty Global subsidiaries.

Other operating expenses. Amounts consist of the net effect of (i) recharges of £11.3 million, £7.7 million and £6.7 million during 2016, 2015 and 2014, respectively, for network design and other services provided by our company to other Liberty Global subsidiaries and (ii) charges of £2.4 million, £2.1 million and £4.6 million during 2016, 2015 and 2014, respectively, for network-related and other services provided to our company by other Liberty Global subsidiaries.

SG&A expenses. Amounts primarily consist of the net effect of (i) charges of £3.7 million, £5.3 million and £3.9 million during 2016, 2015 and 2014, respectively, for insurance-related services provided to our company by another Liberty Global subsidiary, (ii) recharges of £1.7 million, £2.1 million and £3.4 million during 2016, 2015 and 2014, respectively, for network design and other services provided by our company to other Liberty Global subsidiaries, and (iii) charges of £1.2 million, £4.2 million and £3.9 million during 2016, 2015 and 2014, respectively, for information technology-related services provided to our company by another Liberty Global subsidiary.

Allocated share-based compensation expense. As further described in note 11, Liberty Global allocates share-based compensation expense to our company.

Fees and allocations, net. These amounts, which are based on our company's estimated share of the applicable costs (including personnel-related and other costs associated with the services provided) incurred by other Liberty Global subsidiaries, represent the aggregate net effect of charges between subsidiaries of Virgin Media and various Liberty Global subsidiaries that are outside of Virgin Media. These charges generally relate to management, finance, legal, technology and other services that support our company's operations. The categories of our fees and allocations, net, are as follows:

- *Operating and SG&A (exclusive of depreciation and share-based compensation).* The amounts included in this category, which are generally loan settled, represent our estimated share of certain centralized technology, management, marketing, finance and other operating and SG&A expenses of Liberty Global's European operations, whose activities benefit multiple operations, including operations within and outside of our company. The amounts allocated represent our estimated share of the actual costs incurred by Liberty Global's European operations, without a mark-up. Amounts in this category are generally deducted to arrive at our Covenant EBITDA.

- *Depreciation.* The amounts included in this category, which are generally loan settled, represent our estimated share of depreciation of assets not owned by our company. The amounts allocated represent our estimated share of the actual costs incurred by Liberty Global's European operations, without a mark-up.

- *Share-based compensation.* The amounts included in this category, which are generally loan settled, represent our estimated share of share-based compensation associated with Liberty Global employees who are not employees of our company. The amounts allocated represent our estimated share of the actual costs incurred by Liberty Global's European operations, without a mark-up.

- *Management fee.* The amounts included in this category, which are generally loan settled, represent our estimated allocable share of (i) operating and SG&A expenses related to stewardship services provided by certain Liberty Global subsidiaries and (ii) the mark-up, if any, applicable to each category of the related-party fees and allocations charged to our company.

During the first three quarters of 2014, a subsidiary of Liberty Global allocated technology-based costs to our company and other Liberty Global subsidiaries based on each subsidiary's estimated proportionate share of these costs. During the fourth quarter of 2014, the approach used to charge technology-based fees was changed to a royalty-based method. For 2016, 2015 and 2014, our £25.9 million, £20.0 million and £17.0 million, respectively, proportional share of the technology-based costs was £3.8 million, £6.3 million and £13.6 million, respectively, more than the royalty-based technology fee charged under the new approach. Accordingly, these excess amounts have been reflected as a deemed contribution of technology-related services in our consolidated statements of owners' equity. The fees charged under the new royalty-based method are expected to escalate in future periods. Any excess of these charges over our estimated proportionate share of the underlying technology-based costs will be classified as a management fee and added back to arrive at Covenant EBITDA.

Interest income. Amounts represent interest income on related-party notes, as further described below.

Realized and unrealized gain (loss) on derivative instruments, net. As further described in note 5, these amounts relate to related-party foreign currency forward contracts with LGE Financing.

Interest expense. Amount during 2016 relates to interest expense associated with the note payable to LG Europe 2. Amount during 2015 relates to interest expense associated with the note payable to LG Europe 2 and the VM Ireland Note. Amount during 2014 relates to interest expense associated with the VM Ireland Note.

Property and equipment additions, net. These amounts, which are generally cash settled, represent the net carrying values of (i) customer premises equipment acquired from other Liberty Global subsidiaries, which centrally procure equipment on behalf of our company and various other Liberty Global subsidiaries, and (ii) equipment transferred to or acquired from other Liberty Global subsidiaries outside of Virgin Media.

The following table provides details of our related-party balances:

	December 31,	
	2016	2015
	in millions	
Current receivables (a)	£ 60.1	£ 45.4
Current derivative instruments (b)	12.9	0.6
Prepaid expenses (c)	0.9	0.9
Long-term notes receivable (d)	4,687.2	3,385.1
Long-term derivative instruments (b)	9.6	—
Total related-party assets	£ 4,770.7	£ 3,432.0
Accounts payable (e)	£ 8.5	£ 8.6
Accrued capital expenditures (f)	19.8	8.5
Related-party debt (g)	45.7	72.0
Other current liabilities (h)	93.0	17.6
Total related-party liabilities	£ 167.0	£ 106.7

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(a) Amounts represent (i) accrued interest on long-term notes receivable from LG Europe 2, including £39.3 million (equivalent) and £38.7 million (equivalent), respectively, owed to Virgin Media Finco Limited (**VMFL**) and (ii) certain receivables from other Liberty Global subsidiaries arising in the normal course of business. The accrued interest on the long-term notes receivable from LG Europe 2 is payable semi-annually on April 15 and October 15 and may be cash settled or, if mutually agreed, loan settled. Other receivables are settled periodically.

(b) Amounts represent the fair value of related-party derivative instruments with LGE Financing, as further described in note 5.

(c) Represents prepayments for services to be rendered by another Liberty Global subsidiary.

(d) Amounts represent:

(i) notes receivable from LG Europe 2 that are owed to VMFL (the **2023 8.5% LG Europe 2 Notes Receivable**). These notes mature on April 15, 2023 and bear interest at a rate of 8.5%. At December 31, 2016 and 2015, the principal amount outstanding under these notes was £2,174.6 million. As further described in note 4, the decrease during 2015 relates to the €165.6 million (£122.7 million at the transaction date) cash payment from LG Europe 2;

(ii) a note receivable from LG Europe 2 that is owed to VMFL. During the fourth quarter of 2015, the amount outstanding on a current note receivable was transferred to this long-term note receivable. At December 31, 2016 and 2015 the principal amount outstanding under this note was £2,496.6 million and £1,197.4 million, respectively. The increase during 2016 relates to (i) £4,635.8 million of cash advances, (ii) £3,219.1 million of cash repayments, (iii) £196.6 million of non-cash repayments and (iv) £79.1 million of non-cash advances. Pursuant to the agreement, the maturity date is July 16, 2023, however VMFL may agree to advance additional amounts to LG Europe 2 at any time and LG Europe 2 may, with agreement from VMFL, repay all or part of the outstanding principal at any time prior to the maturity date. The note receivable is subject to further advances and repayments. The interest rate on this note, which is subject to adjustment, was 5.561% as of December 31, 2016; and

(iii) a note receivable from Liberty Global that is owed to us. At December 31, 2016 and 2015, this note, which matures on June 4, 2018, had a principal balance of $19.6 million (£16.0 million) and $19.3 million (£15.6 million), respectively. This note bears interest at a rate of 1.80%. The increase during 2016 relates to an increase of (i) £2.6 million due to the cumulative translation adjustment and (ii) £0.3 million (equivalent at the transaction date) in capitalized accrued interest. The increase during 2015 relates to an increase of (a) £0.7 million due to the cumulative translation adjustment and (b) £0.2 million (equivalent at the transaction date) in capitalized accrued interest. The increase during 2014 relates to an increase of (1) £0.7 million due to the cumulative translation adjustment and (2) £0.2 million (equivalent at the transaction date) in capitalized accrued interest. The accrued interest on this note receivable is payable semi-annually on January 15 and July 15 and may be cash settled or, if mutually agreed, loan settled, and is included in other long-term assets, net in our consolidated balance sheets.

(e) Amounts represent certain payables to other Liberty Global subsidiaries arising in the normal course of business.

(f) Amounts represent accrued capital expenditures for property and equipment transferred to our company from other Liberty Global subsidiaries.

(g) Represents a note payable to LG Europe 2 that originated in December 2015. This note matures on December 18, 2017 and bears interest at a rate of 5.26%. The net decrease during 2016 relates to (i) £99.0 million of cash repayments and (ii) £72.7 million of cash borrowings. Accrued interest may be, as agreed to by our company and LG Europe 2, (a) transferred to the loan balance annually on January 1 or (b) repaid on the last day of each month and on the date of principal repayments.

(h) Amounts represent (i) certain payables to other Liberty Global subsidiaries arising in the normal course of business, including amounts associated with fees and allocations as described above and (ii) £8.5 million (equivalent) and £6.9 million (equivalent), respectively, of unpaid capital charges from Liberty Global, as described below. The payables related to the capital charges are settled periodically. None of these payables are currently interest bearing.

During the fourth quarter of 2015, the principal balance of a note receivable from LG Europe 2 that was owed to us was converted to equity. Prior to the conversion to equity, this note bore interest at a rate of 7.875%. The net decrease during 2015 relates to (i) a £465.8 million decrease resulting from the aforementioned conversion of the then remaining principal balance to equity, (ii) £448.1 million of cash advances, (iii) £5.2 million (equivalent at the transaction date) in capitalized interest, (iv) £2.3 million of cash repayments and (v) an increase of £2.0 million due to the cumulative transaction adjustment. The net decrease during 2014 relates to (a) cash advances of £97.0 million (equivalent at the transaction date), (b) cash repayments of £165.0 million, (c) £8.3 million (equivalent at the transaction date) in capitalized accrued interest and (d) an increase of £7.7 million due to the cumulative translation adjustment.

During 2016, 2015 and 2014, we recorded capital charges of $27.0 million (£19.8 million at the applicable rate), $37.2 million (£24.6 million at the applicable rate) and $47.8 million (£28.8 million at the applicable rate), respectively, in our consolidated statements of owners' equity in connection with the exercise of Liberty Global SARs and options and the vesting of Liberty Global RSUs and PSUs held by employees of our subsidiaries. We and Liberty Global have agreed that these capital charges will be based on the fair value of the underlying Liberty Global Shares associated with share-based incentive awards that vest or are exercised during the period, subject to any reduction that is necessary to ensure that the cumulative capital charge does not exceed the cumulative amount of share-based compensation expense recorded by our company with respect to Liberty Global share-based incentive awards.

During 2016, 2015 and 2014, tax losses with an aggregate tax effect of £24.8 million, £105.5 million and £147.4 million, respectively, were surrendered by Liberty Global and its U.K. subsidiaries outside of Virgin Media to our U.K. subsidiaries. For additional information, see note 9.

Our parent company, Virgin Media, and certain Liberty Global subsidiaries are co-guarantors of the indebtedness of certain other Liberty Global subsidiaries. We do not believe these guarantees will result in material payments in the future.

(13) Restructuring Liabilities

A summary of changes in our restructuring liabilities during 2016 is set forth in the table below:

	Employee severance and termination	Office closures	Total
		in millions	
Restructuring liability as of January 1, 2016	£ 2.9	£ 5.1	£ 8.0
Restructuring charges (a)	19.3	1.7	21.0
Cash paid	(15.8)	(1.2)	(17.0)
Other	—	(0.2)	(0.2)
Restructuring liability as of December 31, 2016	£ 6.4	£ 5.4	£ 11.8
Current portion	£ 5.2	£ 1.4	£ 6.6
Noncurrent portion	1.2	4.0	5.2
Total	£ 6.4	£ 5.4	£ 11.8

(a) Our restructuring charges include employee severance and termination costs related to certain reorganization and integration activities.

A summary of changes in our restructuring liabilities during 2015 is set forth in the table below:

	Employee severance and termination	Office closures	Total
		in millions	
Restructuring liability as of January 1, 2015	£ 1.2	£ 8.0	£ 9.2
Restructuring charges (credits) (a)	13.9	(0.9)	13.0
Cash paid	(12.3)	(3.0)	(15.3)
Other	0.1	1.0	1.1
Restructuring liability as of December 31, 2015	£ 2.9	£ 5.1	£ 8.0
Current portion	£ 2.9	£ 1.2	£ 4.1
Noncurrent portion	—	3.9	3.9
Total	£ 2.9	£ 5.1	£ 8.0

(a) Our restructuring charges include employee severance and termination costs related to certain reorganization and integration activities.

A summary of changes in our restructuring liabilities during 2014 is set forth in the table below:

	Employee severance and termination	Office closures	Contract termination and other	Total
	in millions			
Restructuring liability as of January 1, 2014	£ 5.4	£ 8.9	£ 0.2	£ 14.5
Restructuring charges (a)	10.5	5.7	—	16.2
Cash paid	(14.3)	(6.5)	—	(20.8)
Other	(0.4)	(0.1)	(0.2)	(0.7)
Restructuring liability as of December 31, 2014	£ 1.2	£ 8.0	£ —	£ 9.2

(a) Our restructuring charges relate to certain organizational and staffing changes that we implemented following the LG/VM Transaction.

(14) Defined Benefit Plans

We operate two defined benefit plans in the U.K. and one defined benefit plan in Ireland, all of which are funded. These defined benefit plans are closed to new participants and existing participants do not accrue any additional benefits.

The table below provides summary information on our defined benefit plans:

	Year ended December 31,		
	2016	2015	2014
	in millions		
Projected benefit obligation	£ 628.6	£ 499.7	£ 541.9
Fair value of plan assets (a)	£ 650.9	£ 501.2	£ 500.8
Net asset (liability)	£ 22.3	£ 1.5	£ (41.1)
Net periodic pension benefit	£ 6.5	£ 5.4	£ 5.2

(a) The fair value of plan assets at December 31, 2016 includes £478.3 million, £23.7 million and £148.9 million, of assets that are valued based on Level 1, Level 2 and Level 3 inputs, respectively, of the fair value hierarchy (as further described in note 6). Our plan assets comprise investments in debt securities, equity securities, hedge funds, insurance contracts and certain other assets.

Based on December 31, 2016 exchange rates and information available as of that date, contributions to our defined benefit plans in 2017 are expected to aggregate £25.7 million.

(15) Accumulated Other Comprehensive Earnings

Accumulated other comprehensive earnings included in our consolidated balance sheets and statements of owners' equity reflect the aggregate impact of foreign currency translation adjustments, unrealized losses on cash flow hedges and pension-related adjustments. The changes in the components of accumulated other comprehensive earnings, net of taxes, are summarized as follows:

	Parent					
	Foreign currency translation adjustments	Unrealized losses on cash flow hedges	Pension-related adjustments	Accumulated other comprehensive earnings	Non-controlling interest	Total accumulated other comprehensive earnings
	in millions					
Balance at January 1, 2014	£ 150.0	£ —	£ (5.0)	£ 145.0	£ (0.4)	£ 144.6
Other comprehensive loss	(66.6)	—	(29.4)	(96.0)	0.8	(95.2)
Balance at December 31, 2014	83.4	—	(34.4)	49.0	0.4	49.4
Other comprehensive earnings	34.9	—	7.0	41.9	4.5	46.4
Balance at December 31, 2015	118.3	—	(27.4)	90.9	4.9	95.8
Other comprehensive loss	4.6	0.9	(5.8)	(0.3)	(8.9)	(9.2)
Balance at December 31, 2016	£ 122.9	£ 0.9	£ (33.2)	£ 90.6	£ (4.0)	£ 86.6

The components of other comprehensive earnings (loss), net of taxes, are reflected in our consolidated statements of comprehensive loss. The following table summarizes the tax effects related to each component of other comprehensive earnings (loss), net of amounts reclassified to our consolidated statements of operations:

	Pre-tax amount	Tax benefit (expense)	Net-of-tax amount
		in millions	
Year ended December 31, 2016:			
Foreign currency translation adjustments	£ (2.9)	£ —	£ (2.9)
Pension-related adjustments and other	(6.9)	0.6	(6.3)
Other comprehensive loss	(9.8)	0.6	(9.2)
Other comprehensive loss attributable to noncontrolling interest	8.9	—	8.9
Other comprehensive loss attributable to parent	£ (0.9)	£ 0.6	£ (0.3)
Year ended December 31, 2015:			
Foreign currency translation adjustments	£ 37.3	£ —	£ 37.3
Pension-related adjustments	9.8	(0.7)	9.1
Other comprehensive earnings	47.1	(0.7)	46.4
Other comprehensive earnings attributable to noncontrolling interest	(4.5)	—	(4.5)
Other comprehensive earnings attributable to parent	£ 42.6	£ (0.7)	£ 41.9
Year ended December 31, 2014:			
Foreign currency translation adjustments	£ (62.9)	£ —	£ (62.9)
Pension-related adjustments	(39.3)	7.0	(32.3)
Other comprehensive loss	(102.2)	7.0	(95.2)
Other comprehensive earnings attributable to noncontrolling interest	(0.8)	—	(0.8)
Other comprehensive loss attributable to parent	£ (103.0)	£ 7.0	£ (96.0)

(16) Commitments and Contingencies

Commitments

In the normal course of business, we have entered into agreements that commit our company to make cash payments in future periods with respect to programming contracts, network and connectivity commitments, purchases of customer premises and other equipment and services, non-cancellable operating leases and other items. The following table sets forth the pound sterling equivalents of such commitments as of December 31, 2016:

	Payments due during:						
	2017	2018	2019	2020	2021	Thereafter	Total
				in millions			
Programming commitments	£ 578.0	£ 511.1	£ 237.0	£ 60.3	£ 15.6	£ 55.4	£ 1,457.4
Network and connectivity commitments	260.3	138.0	146.6	144.7	139.0	16.0	844.6
Purchase commitments	462.4	64.7	42.2	18.0	1.6	2.0	590.9
Operating leases	38.5	32.7	27.5	20.5	16.2	61.9	197.3
Other commitments	11.7	2.9	1.8	—	—	—	16.4
Total (a)	£ 1,350.9	£ 749.4	£ 455.1	£ 243.5	£ 172.4	£ 135.3	£ 3,106.6

(a) The commitments included in this table do not reflect any liabilities that are included in our December 31, 2016 consolidated balance sheet.

Programming commitments consist of obligations associated with certain of our programming contracts that are enforceable and legally binding on us as we have agreed to pay minimum fees without regard to (i) the actual number of subscribers to the programming services or (ii) whether we terminate service to a portion of our subscribers or dispose of a portion of our distribution systems. In addition, programming commitments do not include increases in future periods associated with contractual inflation or other price adjustments that are not fixed. Accordingly, the amounts reflected in the above table with respect to these contracts are significantly less than the amounts we expect to pay in these periods under these contracts. Historically, payments to programming vendors have represented a significant portion of our operating costs, and we expect that this will continue to be the case in future periods. In this regard, during 2016, 2015 and 2014, our programming and copyright costs aggregated £799.4 million, £700.0 million and £624.1 million, respectively.

Network and connectivity commitments include, among other items, the fixed minimum commitments associated with our mobile virtual network operator (**MVNO**) agreements and service commitments associated with our network extension projects. As such, the commitments shown in the above table may be significantly less than the actual amounts we ultimately pay in these periods.

Purchase commitments include unconditional and legally binding obligations related to (i) the purchase of customer premises and other equipment and (ii) certain service-related commitments, including call center, information technology and maintenance services.

Commitments arising from acquisition agreements are not reflected in the above table.

In addition to the commitments set forth in the table above, we have significant commitments under (i) derivative instruments and (ii) defined benefit plans and similar agreements, pursuant to which we expect to make payments in future periods. For information regarding our derivative instruments, including the net cash paid or received in connection with these instruments during 2016, 2015 and 2014, see note 5. For information regarding our defined benefit plans, see note 14.

Rental expense under non-cancellable operating lease arrangements amounted to £49.6 million, £48.0 million and £48.6 million during 2016, 2015 and 2014, respectively. It is expected that in the normal course of business, operating leases that expire generally will be renewed or replaced by similar leases.

We have established defined contribution benefit plans for our subsidiaries' employees. The aggregate expense for matching contributions under the defined contribution employee benefit plans was £19.8 million, £19.4 million and £18.8 million during 2016, 2015 and 2014, respectively.

Guarantees and Other Credit Enhancements

In the ordinary course of business, we may provide (i) indemnifications to our lenders, our vendors and certain other parties, (ii) performance and/or financial guarantees to local municipalities, our customers and vendors and (iii) guarantees as a co-guarantor with certain other Liberty Global subsidiaries related to various financing arrangements. Historically, these arrangements have not resulted in our company making any material payments and we do not believe that they will result in material payments in the future.

Legal and Regulatory Proceedings and Other Contingencies

VAT Matters. Our application of VAT with respect to certain revenue generating activities has been challenged by the U.K. tax authorities. We have estimated our maximum exposure in the event of an unfavorable outcome to be £46.6 million as of December 31, 2016. No portion of this exposure has been accrued by our company as the likelihood of loss is not considered to be probable. A court hearing was held at the end of September 2014 in relation to the U.K. tax authorities' challenge and the timing of the court's decision is uncertain.

On March 19, 2014, the U.K. government announced a change in legislation with respect to the charging of VAT in connection with prompt payment discounts such as those that we offer to our fixed-line telephony customers. This change, which took effect on May 1, 2014, impacted our company and some of our competitors. The U.K. tax authority issued a decision in the fourth quarter of 2015 challenging our application of the prompt payment discount rules prior to the May 1, 2014 change in legislation. We have appealed this decision. As part of the appeal process, we were required to make aggregate payments of £67.0 million, which included the challenged amount of £63.7 million and related interest of £3.3 million. The aggregate amount paid does not include penalties, which could be significant in the unlikely event that penalties were to be assessed. This matter will likely be subject to court proceedings that could delay the ultimate resolution for an extended period of time. No portion of this potential exposure has been accrued by our company as the likelihood of loss is not considered to be probable.

Other Regulatory Issues. Video distribution, broadband internet, fixed-line telephony, mobile and content businesses are subject to significant regulation and supervision by various regulatory bodies in the jurisdictions in which we operate, and other U.K. and European Union (**E.U.**) authorities. Adverse regulatory developments could subject our businesses to a number of risks. Regulation, including conditions imposed on us by competition or other authorities as a requirement to close acquisitions or dispositions, could limit growth, revenue and the number and types of services offered and could lead to increased operating costs and property and equipment additions. In addition, regulation may restrict our operations and subject them to further competitive pressure, including pricing restrictions, interconnect and other access obligations, and restrictions or controls on content, including content provided by third parties. Failure to comply with current or future regulation could expose our businesses to various penalties.

We have agreed to an increase in the rateable value of our existing network and other assets in the U.K. that is scheduled to become effective on April 1, 2017. This increase will affect the amount we pay for network infrastructure charges as the annual amount payable to the U.K. government is calculated by applying a percentage multiplier to the rateable value of assets. This proposed change, together with a similar proposed change in Ireland, would result in significant increases in our network infrastructure charges. We estimate that the aggregate amount of these increases will be approximately £30 million during 2017 and will build to a maximum aggregate increase of up to £100 million in 2021. We continue to believe that the proposed increases are excessive, and we retain the right of appeal should more favorable agreements be reached with other operators.

In addition to the foregoing items, we have contingent liabilities related to matters arising in the ordinary course of business, including (i) legal proceedings, (ii) issues involving VAT and wage, property, withholding and other tax issues and (iii) disputes over interconnection, programming, copyright and channel carriage fees. While we generally expect that the amounts required to satisfy these contingencies will not materially differ from any estimated amounts we have accrued, no assurance can be given that the resolution of one or more of these contingencies will not result in a material impact on our results of operations, cash flows or financial position in any given period. Due, in general, to the complexity of the issues involved and, in certain cases, the lack of a clear basis for predicting outcomes, we cannot provide a meaningful range of potential losses or cash outflows that might result from any unfavorable outcomes.

(17) Segment Reporting

We have one reportable segment that provides video, broadband internet, fixed-line telephony and mobile services in the U.K. and Ireland.

Our revenue by major category is set forth below:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Subscription revenue (a):			
Video	£ 1,052.1	£ 1,062.2	£ 1,079.5
Broadband internet	1,369.6	1,228.5	1,111.8
Fixed-line telephony	956.4	952.1	991.6
Cable subscription revenue	3,378.1	3,242.8	3,182.9
Mobile (b)	421.0	465.0	480.0
Total subscription revenue	3,799.1	3,707.8	3,662.9
B2B revenue (c)	672.8	657.4	617.5
Other revenue (b) (d)	334.2	253.2	216.5
Total	£ 4,806.1	£ 4,618.4	£ 4,496.9

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(a) Subscription revenue includes amounts received from subscribers for ongoing services, excluding installation fees and late fees. Subscription revenue from subscribers who purchase bundled services at a discounted rate is generally allocated proportionally to each service based on the standalone price for each individual service. As a result, changes in the standalone pricing of our cable and mobile products or the composition of bundles can contribute to changes in our product revenue categories from period to period.

(b) Mobile subscription revenue excludes mobile interconnect revenue of £58.9 million, £68.1 million and £80.2 million during 2016, 2015 and 2014, respectively. Mobile interconnect revenue and revenue from mobile handset sales are included in other revenue.

(c) B2B revenue includes revenue from business broadband internet, video, voice, mobile and data services offered to medium to large enterprises and, on a wholesale basis, to other operators. We also provide services to certain small or home office (**SOHO**) subscribers. SOHO subscribers pay a premium price to receive expanded service levels along with video, broadband internet, fixed-line telephony or mobile services that are the same or similar to the mass marketed products offered to our residential subscribers. Revenue from SOHO subscribers, which is included in subscription revenue, aggregated £30.7 million, £21.8 million and £17.2 million during 2016, 2015 and 2014, respectively.

(d) Other revenue includes, among other items, mobile handset sales, interconnect fees, broadcasting revenue and late fees.

Geographic Segments

The revenue of our geographic segments is set forth below:

	Year ended December 31,		
	2016	2015	2014
	in millions		
U.K.	£ 4,481.5	£ 4,359.6	£ 4,213.9
Ireland	324.6	258.8	283.0
Total	£ 4,806.1	£ 4,618.4	£ 4,496.9

The long-lived assets of our geographic segments are set forth below:

	December 31,	
	2016	2015
	in millions	
U.K.	£ 12,668.0	£ 12,982.4
Ireland	525.4	449.5
Total	£ 13,193.4	£ 13,431.9

18) Condensed Consolidating Financial Information — Senior Notes

We present the following condensed consolidating financial information as of and for the year ended December 31, 2016 as required by the applicable underlying indentures. For the condensed consolidating financial information as of and for the years ended December 31, 2015 and 2014, see our 2015 annual report.

As of December 31, 2016, Virgin Media Finance is the issuer of the following senior notes:

- $118.7 million (£96.1 million) aggregate principal amount of 2022 VM 4.875% Dollar Senior Notes;
- $95.0 million (£76.9 million) aggregate principal amount of 2022 VM 5.25% Dollar Senior Notes;
- £44.1 million aggregate principal amount of 2022 VM Sterling Senior Notes;
- $530.0 million (£429.4 million) aggregate principal amount of 2023 VM Dollar Senior Notes;
- £250.0 million aggregate principal amount of 2023 VM Sterling Senior Notes;
- $500.0 million (£405.0 million) aggregate principal amount of 2024 VM Dollar Senior Notes;
- £300.0 million aggregate principal amount of 2024 VM Sterling Senior Notes;
- €460.0 million (£393.0 million) aggregate principal amount of 2025 VM Euro Senior Notes; and
- $400.0 million (£324.0 million) aggregate principal amount of 2025 VM Dollar Senior Notes.

Our senior notes are issued by Virgin Media Finance and are guaranteed on a senior basis by Virgin Media and certain of its subsidiaries, namely Virgin Media Group LLC (**Virgin Media Group**), Virgin Media (UK) Group LLC (**Virgin Media (UK) Group**) and Virgin Media Communications. Each of VMIH and Virgin Media Investments Limited (**VMIL**) are conditional guarantors and have guaranteed the senior notes on a senior subordinated basis.

Balance sheets	December 31, 2016 Virgin Media	Virgin Media Finance	Other guarantors	VMIH	VMIL	All other subsidiaries	Eliminations	Total
	in millions							
ASSETS								
Current assets:								
Cash and cash equivalents	£ 0.2	£ —	£ —	£ 0.2	£ —	£ 21.7	£ —	£ 22.1
Related-party receivables	9.8	—	—	—	—	50.3	—	60.1
Other current assets:								
Third-party	—	—	—	82.9	—	638.2	—	721.1
Intercompany and related-party	—	6.8	—	12.4	—	20.7	(26.1)	13.8
Total current assets	10.0	6.8	—	95.5	—	730.9	(26.1)	817.1
Property and equipment, net	—	—	—	—	—	5,964.5	—	5,964.5
Goodwill	—	—	—	—	—	6,004.3	—	6,004.3
Intangible assets subject to amortization, net	—	—	—	—	—	1,224.6	—	1,224.6
Investments in, and loans to, parent and subsidiary companies	7,360.0	9,684.0	8,136.7	13,801.6	13,741.6	(5,776.5)	(46,947.4)	—
Deferred income taxes	—	—	—	—	—	1,437.3	—	1,437.3
Related-party notes receivable	16.0	—	—	—	—	4,671.2	—	4,687.2
Other assets, net:								
Third-party	4.8	—	—	968.0	—	215.8	—	1,188.6
Intercompany and related-party	—	73.1	—	9.9	—	208.8	(282.2)	9.6
Total assets	£ 7,390.8	£9,763.9	£ 8,136.7	£14,875.0	£13,741.6	£ 14,680.9	£ (47,255.7)	£ 21,333.2
LIABILITIES AND OWNERS' EQUITY								
Current liabilities:								
Intercompany and related-party payables	£ 36.7	£ 88.1	£ —	£ 123.4	£ —	£ 147.4	£ (387.1)	£ 8.5
Other current liabilities:								
Third-party	2.4	39.1	—	1,064.9	—	1,529.5	—	2,635.9
Intercompany and related-party	88.5	—	—	26.1	—	70.0	(26.1)	158.5
Total current liabilities	127.6	127.2	—	1,214.4	—	1,746.9	(413.2)	2,802.9
Long-term debt and capital lease obligations	—	2,297.9	—	28.3	—	8,695.5	—	11,021.7
Other long-term liabilities:								
Third-party	—	—	—	193.8	—	111.1	—	304.9
Intercompany	—	—	—	281.8	—	0.4	(282.2)	—
Total liabilities	127.6	2,425.1	—	1,718.3	—	10,553.9	(695.4)	14,129.5
Total parent's equity	7,263.2	7,338.8	8,136.7	13,156.7	13,741.6	4,186.5	(46,560.3)	7,263.2
Noncontrolling interest	—	—	—	—	—	(59.5)	—	(59.5)
Total owners' equity	7,263.2	7,338.8	8,136.7	13,156.7	13,741.6	4,127.0	(46,560.3)	7,203.7
Total liabilities and owners' equity	£ 7,390.8	£9,763.9	£ 8,136.7	£14,875.0	£13,741.6	£ 14,680.9	£ (47,255.7)	£ 21,333.2

Statements of operations	Virgin Media	Virgin Media Finance	Other guarantors	VMIH	VMIL	All other subsidiaries	Eliminations	Total
	Year ended December 31, 2016							
	in millions							
Revenue	£ —	£ —	£ —	£ —	£ —	£ 4,806.1	£ —	£ 4,806.1
Operating costs and expenses (exclusive of depreciation and amortization, shown separately below):								
Programming and other direct costs of services	—	—	—	—	—	1,436.1	—	1,436.1
Other operating	—	—	—	—	—	617.1	—	617.1
SG&A	1.3	—	—	—	—	615.5	—	616.8
Related-party fees and allocations, net	9.2	—	—	—	—	101.7	—	110.9
Depreciation and amortization	—	—	—	—	—	1,650.8	—	1,650.8
Impairment, restructuring and other operating items, net	—	—	—	—	—	26.4	—	26.4
	10.5	—	—	—	—	4,447.6	—	4,458.1
Operating income (loss)	(10.5)	—	—	—	—	358.5	—	348.0
Non-operating income (expense):								
Interest expense:								
Third-party	(1.1)	(130.7)	—	(34.9)	—	(416.9)	—	(583.6)
Related-party and intercompany	(33.6)	(274.7)	(0.2)	(463.4)	—	(1,199.7)	1,967.4	(4.2)
Interest income – related-party and intercompany	0.3	59.9	34.6	222.9	—	1,939.3	(1,967.4)	289.6
Realized and unrealized gains (losses) on derivative instruments, net:								
Third-party	9.2	—	—	640.8	—	—	—	650.0
Related-party	—	62.0	—	(211.4)	—	165.2	—	15.8
Foreign currency transaction gains (losses), net	0.1	(804.9)	(30.5)	(463.4)	—	348.5	—	(950.2)
Loss on debt modification and extinguishment, net	—	—	—	—	—	(62.9)	—	(62.9)
Realized and unrealized losses due to changes in fair values of certain debt, net	—	—	—	(4.5)	—	—	—	(4.5)
Other income (expense), net	—	(0.1)	—	(0.2)	—	2.9	—	2.6
	(25.1)	(1,088.5)	3.9	(314.1)	—	776.4	—	(647.4)
Earnings (loss) before income taxes	(35.6)	(1,088.5)	3.9	(314.1)	—	1,134.9	—	(299.4)
Income tax benefit (expense)	(0.2)	—	—	—	—	14.0	—	13.8
Earnings (loss) after income taxes	(35.8)	(1,088.5)	3.9	(314.1)	—	1,148.9	—	(285.6)
Equity in net earnings (loss) of subsidiaries	(246.1)	828.1	(252.7)	1,142.3	797.9	—	(2,269.5)	—
Net earnings (loss)	(281.9)	(260.4)	(248.8)	828.2	797.9	1,148.9	(2,269.5)	(285.6)
Net loss attributable to noncontrolling interest	—	—	—	—	—	3.7	—	3.7
Net earnings (loss) attributable to parent	£ (281.9)	£ (260.4)	£ (248.8)	£ 828.2	£ 797.9	£ 1,152.6	£ (2,269.5)	£ (281.9)
Total comprehensive earnings (loss)	£ (282.2)	£ (277.4)	£ (145.3)	£ 811.2	£ 780.9	£ 1,123.0	£ (2,305.0)	£ (294.8)
Comprehensive loss attributable to noncontrolling interest	—	—	—	—	—	12.6	—	12.6
Comprehensive earnings (loss) attributable to parent	£ (282.2)	£ (277.4)	£ (145.3)	£ 811.2	£ 780.9	£ 1,135.6	£ (2,305.0)	£ (282.2)

	Year ended December 31, 2016						
Statements of cash flows	Virgin Media	Virgin Media Finance	Other guarantors	VMIH	VMIL	All other subsidiaries	Total
				in millions			
Cash flows from operating activities:							
Net cash provided (used) by operating activities	£ (11.3)	£ (302.8)	£ —	£ (253.8)	£ —	£ 2,373.2	£ 1,805.3
Cash flows from investing activities:							
Advances to related parties, net	—	—	—	—	—	(1,416.7)	(1,416.7)
Capital expenditures	—	—	—	—	—	(559.7)	(559.7)
Cash paid in connection with other acquisitions, net of cash acquired	—	—	—	—	—	(34.1)	(34.1)
Other investing activities, net	—	—	—	—	—	0.7	0.7
Net cash used by investing activities	—	—	—	—	—	(2,009.8)	(2,009.8)
Cash flows from financing activities:							
Borrowings of third-party debt	—	—	—	2,303.9	—	3,382.3	5,686.2
Repayments and repurchases of third-party debt and capital lease obligations	(40.2)	—	—	(2,623.8)	—	(2,764.0)	(5,428.0)
Net repayments of related-party notes	—	—	—	—	—	(26.3)	(26.3)
Contributions (distributions)	32.7	302.9	(0.1)	576.3	—	(911.8)	—
Payment of financing costs and debt premiums	—	(0.3)	—	(3.9)	—	(48.8)	(53.0)
Net cash received related to derivative instruments	29.0	—	—	1.4	—	—	30.4
Other financing activities, net	(13.1)	—	—	—	—	7.1	(6.0)
Net cash provided (used) by financing activities	8.4	302.6	(0.1)	253.9	—	(361.5)	203.3
Effect of exchange rates on cash and cash equivalents	3.1	—	—	—	—	—	3.1
Net increase (decrease) in cash and cash equivalents	0.2	(0.2)	(0.1)	0.1	—	1.9	1.9
Cash and cash equivalents:							
Beginning of period	—	0.2	0.1	0.1	—	19.8	20.2
End of period	£ 0.2	£ —	£ —	£ 0.2	£ —	£ 21.7	£ 22.1

(19) Condensed Consolidating Financial Information — Senior Secured Notes

We present the following condensed consolidating financial information as of and for the year ended December 31, 2016 as required by the applicable underlying indentures. For the condensed consolidating financial information as of and for the years ended December 31, 2015 and 2014, see our 2015 annual report.

As of December 31, 2016, Virgin Media Secured Finance is the issuer of the following senior secured notes:

- £628.4 million aggregate principal amount of January 2021 VM Sterling Senior Secured Notes;
- $447.9 million (£362.8 million) aggregate principal amount of January 2021 VM Dollar Senior Secured Notes;
- £640.0 million aggregate principal amount of April 2021 VM Sterling Senior Secured Notes;
- £387.0 million aggregate principal amount of 2025 VM 5.5% Sterling Senior Secured Notes;
- £300.0 million aggregate principal amount of 2025 VM 5.125% Sterling Senior Secured Notes;
- $425.0 million (£344.3 million) aggregate principal amount of 2025 VM Dollar Senior Secured Notes;
- $1.0 billion (£810.0 million) aggregate principal amount of 2026 VM 5.25% Dollar Senior Secured Notes;
- $750.0 million (£607.5 million) aggregate principal amount of 2026 VM 5.5% Dollar Senior Secured Notes;
- £525.0 million aggregate principal amount of 2027 VM Senior Secured Notes; and
- £400.0 million aggregate principal amount of 2029 VM Senior Secured Notes.

Our senior secured notes are issued by Virgin Media Secured Finance and are guaranteed on a senior basis by Virgin Media, Virgin Media Group, Virgin Media (UK) Group and Virgin Media Communications and on a senior subordinated basis by VMIH and VMIL. They also rank pari passu with and, subject to certain exceptions, share in the same guarantees and security which has been granted in favor of our VM Credit Facilities.

	December 31, 2016					
Balance sheets	Virgin Media	Virgin Media Secured Finance	Guarantors	Non-Guarantors	Eliminations	Total
	in millions					
ASSETS						
Current assets:						
Cash and cash equivalents	£ 0.2	£ 10.1	£ 8.9	£ 2.9	£ —	£ 22.1
Related-party receivables	9.8	—	11.0	39.3	—	60.1
Other current assets:						
Third-party	—	—	563.1	158.0	—	721.1
Intercompany and related-party	—	16.8	22.6	0.5	(26.1)	13.8
Total current assets	10.0	26.9	605.6	200.7	(26.1)	817.1
Property and equipment, net	—	—	4,740.2	1,224.3	—	5,964.5
Goodwill	—	—	5,793.7	210.6	—	6,004.3
Intangible assets subject to amortization, net	—	—	1,091.3	133.3	—	1,224.6
Investments in, and loans to, parent and subsidiary companies	7,360.0	4,914.0	(2,566.3)	4,302.9	(14,010.6)	—
Deferred income taxes	—	—	1,435.2	2.1	—	1,437.3
Related-party notes receivable	16.0	—	—	4,671.2	—	4,687.2
Other assets, net:						
Third-party	4.8	—	1,135.6	48.2	—	1,188.6
Intercompany and related-party	—	208.8	83.0	—	(282.2)	9.6
Total assets	£ 7,390.8	£ 5,149.7	£ 12,318.3	£ 10,793.3	£ (14,318.9)	£ 21,333.2
LIABILITIES AND OWNERS' EQUITY						
Current liabilities:						
Intercompany and related-party payables	£ 36.7	£ —	£ 236.9	£ 125.2	£ (390.3)	£ 8.5
Other current liabilities:						
Third-party	2.4	123.6	2,405.5	104.4	—	2,635.9
Intercompany and related-party	88.5	0.1	46.2	49.8	(26.1)	158.5
Total current liabilities	127.6	123.7	2,688.6	279.4	(416.4)	2,802.9
Long-term debt and capital lease obligations	—	5,000.2	5,928.3	93.2	—	11,021.7
Other long-term liabilities:						
Third-party	—	—	278.5	26.4	—	304.9
Intercompany	—	—	281.8	0.4	(282.2)	—
Total liabilities	127.6	5,123.9	9,177.2	399.4	(698.6)	14,129.5
Total parent's equity	7,263.2	25.8	3,141.1	10,453.4	(13,620.3)	7,263.2
Noncontrolling interest	—	—	—	(59.5)	—	(59.5)
Total owners' equity	7,263.2	25.8	3,141.1	10,393.9	(13,620.3)	7,203.7
Total liabilities and owners' equity	£ 7,390.8	£ 5,149.7	£ 12,318.3	£ 10,793.3	£ (14,318.9)	£ 21,333.2

Statements of operations	Virgin Media	Virgin Media Secured Finance	Guarantors	Non-Guarantors	Eliminations	Total
	Year ended December 31, 2016					
	in millions					
Revenue	£ —	£ —	£ 4,058.2	£ 747.9	£ —	£ 4,806.1
Operating costs and expenses (exclusive of depreciation and amortization, shown separately below):						
Programming and other direct costs of services	—	—	1,239.3	196.8	—	1,436.1
Other operating	—	—	507.4	109.7	—	617.1
SG&A	1.3	—	521.5	94.0	—	616.8
Related-party fees and allocations, net	9.2	—	59.2	42.5	—	110.9
Depreciation and amortization	—	—	1,392.8	258.0	—	1,650.8
Impairment, restructuring and other operating items, net	—	—	19.3	7.1	—	26.4
	10.5	—	3,739.5	708.1	—	4,458.1
Operating income (loss)	(10.5)	—	318.7	39.8	—	348.0
Non-operating income (expense):						
Interest expense:						
Third-party	(1.1)	(314.4)	(267.3)	(0.8)	—	(583.6)
Related-party and intercompany	(33.6)	—	(1,050.1)	(927.9)	2,007.4	(4.2)
Interest income – related-party and intercompany	0.3	323.4	951.2	1,022.1	(2,007.4)	289.6
Realized and unrealized gains (losses) on derivative instruments, net:						
Third-party	9.2	—	640.8	—	—	650.0
Related-party	—	165.3	(149.5)	—	—	15.8
Foreign currency transaction gains (losses), net	0.1	(191.0)	(976.9)	217.6	—	(950.2)
Loss on debt modification and extinguishment, net	—	(54.7)	(8.2)	—	—	(62.9)
Realized and unrealized losses due to changes in fair values of certain debt, net	—	—	(4.5)	—	—	(4.5)
Other income (expense), net	—	(0.1)	0.1	2.6	—	2.6
	(25.1)	(71.5)	(864.4)	313.6	—	(647.4)
Earnings (loss) before income taxes	(35.6)	(71.5)	(545.7)	353.4	—	(299.4)
Income tax benefit (expense)	(0.2)	—	13.5	0.5	—	13.8
Earnings (loss) after income taxes	(35.8)	(71.5)	(532.2)	353.9	—	(285.6)
Equity in net earnings (loss) of subsidiaries	(246.1)	—	271.8	(602.9)	577.2	—
Net loss	(281.9)	(71.5)	(260.4)	(249.0)	577.2	(285.6)
Net loss attributable to noncontrolling interest	—	—	—	3.7	—	3.7
Net loss attributable to parent	£ (281.9)	£ (71.5)	£ (260.4)	£ (245.3)	£ 577.2	£ (281.9)
Total comprehensive loss	£ (282.2)	£ (71.5)	£ (277.4)	£ (145.4)	£ 481.7	£ (294.8)
Comprehensive loss attributable to noncontrolling interest	—	—	—	12.6	—	12.6
Comprehensive loss attributable to parent	£ (282.2)	£ (71.5)	£ (277.4)	£ (132.8)	£ 481.7	£ (282.2)

Statements of cash flows	Year ended December 31, 2016				
	Virgin Media	Virgin Media Secured Finance	Guarantors	Non-Guarantors	Total
			in millions		
Cash flows from operating activities:					
Net cash provided (used) by operating activities	£ (11.3)	£ (19.9)	£ 1,498.8	£ 337.7	£ 1,805.3
Cash flows from investing activities:					
Advances to related parties, net	—	—	—	(1,416.7)	(1,416.7)
Capital expenditures	—	—	(475.4)	(84.3)	(559.7)
Cash paid in connection with other acquisitions, net of cash acquired	—	—	(34.1)	—	(34.1)
Other investing activities, net	—	—	0.5	0.2	0.7
Net cash used by investing activities	—	—	(509.0)	(1,500.8)	(2,009.8)
Cash flows from financing activities:					
Borrowings of third-party debt	—	514.3	5,077.9	94.0	5,686.2
Repayments and repurchases of third-party debt and capital lease obligations	(40.2)	(1,086.1)	(4,287.9)	(13.8)	(5,428.0)
Net repayments of related-party notes	—	—	—	(26.3)	(26.3)
Contributions (distributions)	32.7	649.8	(1,798.1)	1,115.6	—
Payment of financing costs and debt premiums	—	(48.1)	(4.4)	(0.5)	(53.0)
Net cash received (paid) related to derivative instruments	29.0	—	9.8	(8.4)	30.4
Other financing activities, net	(13.1)	—	5.9	1.2	(6.0)
Net cash provided (used) by financing activities	8.4	29.9	(996.8)	1,161.8	203.3
Effect of exchange rates on cash and cash equivalents	3.1	—	—	—	3.1
Net increase (decrease) in cash and cash equivalents	0.2	10.0	(7.0)	(1.3)	1.9
Cash and cash equivalents:					
Beginning of period	—	0.1	15.9	4.2	20.2
End of period	£ 0.2	£ 10.1	£ 8.9	£ 2.9	£ 22.1

(20) Subsequent Events

In January 2017, Virgin Media Secured Finance issued £675.0 million principal amount of 5.0% senior secured notes due April 15, 2027 (the **April 2027 VM Senior Secured Notes**). The net proceeds from the April 2027 VM Senior Secured Notes were used to repay in full the outstanding principal amount under the April 2021 VM Sterling Senior Secured Notes.

Subject to the circumstances described below, the April 2027 VM Senior Secured Notes are non-callable until April 15, 2022. At any time prior to April 15, 2022, Virgin Media Secured Finance may redeem some or all of the April 2027 VM Senior Secured Notes by paying a “make-whole” premium, which is the present value of all remaining scheduled interest payments to April 15, 2022 using the discount rate (as specified in the indenture) as of the redemption date plus 50 basis points.

Virgin Media Secured Finance may redeem some or all of the April 2027 VM Senior Secured Notes at the following redemption prices (expressed as a percentage of the principal amount) plus accrued and unpaid interest and additional amounts (as specified in the indenture), if any, to the applicable redemption date, as set forth below:

	Redemption price
12-month period commencing April 15:	
2022	102.500%
2023	101.250%
2024	100.625%
2025 and thereafter	100.000%

In February 2017, Virgin Media SFA Finance Limited entered into a new £865.0 million term loan facility (**VM Facility J**). VM Facility J matures on January 31, 2026, bears interest at a rate of LIBOR + 3.50% and is subject to a LIBOR floor of 0.0%. The net proceeds from VM Facility J were used to repay in full the outstanding principal amount under VM Facility E.

In February 2017, Virgin Media Secured Finance launched an offer (the **Exchange Offer**) to exchange the January 2021 VM Sterling Senior Secured Notes for new senior secured notes due January 15, 2025 (the **2025 VM 6.0% Sterling Senior Secured Notes**). The Exchange Offer was consummated on March 21, 2017 and £521.3 million aggregate principal amount of the January 2021 VM Sterling Senior Secured Notes were exchanged for £521.3 million aggregate principal amount of the 2025 VM 6.0% Sterling Senior Secured Notes. Interest on the 2025 VM 6.0% Sterling Senior Secured Notes will initially accrue at a rate of 6.0% up to January 15, 2021, and at a rate of 11.0% thereafter. The January 2021 VM Sterling Senior Secured Notes were exchanged for the 2025 VM 6.0% Sterling Senior Secured Notes in a non-cash transaction, other than the payment of accrued and unpaid interest on the exchanged January 2021 VM Sterling Senior Secured Notes.

Subject to the circumstances described below, the 2025 VM 6.0% Sterling Senior Secured Notes are non-callable until January 15, 2021. At any time prior to January 15, 2021, Virgin Media Secured Finance may redeem some or all of the 2025 VM 6.0% Sterling Senior Secured Notes by paying a "make-whole" premium, which is the present value of all remaining scheduled interest payments to January 15, 2021 using the discount rate (as specified in the indenture) as of the redemption date plus 50 basis points.

Virgin Media Secured Finance may redeem some or all of the 2025 VM 6.0% Sterling Senior Secured Notes at the following redemption prices (expressed as a percentage of the principal amount) plus accrued and unpaid interest and additional amounts (as specified in the indenture), if any, to the applicable redemption date, as set forth below:

	Redemption price
12-month period commencing January 15:	
2021	105.000%
2022	102.500%
2023 and thereafter	100.000%

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

The following discussion and analysis, which should be read in conjunction with our consolidated financial statements, is intended to assist in providing an understanding of our results of operations and financial condition and is organized as follows:

- *Overview.* This section provides a general description of our business and recent events.
- *Results of Operations.* This section provides an analysis of our results of operations for the years ended December 31, 2016, 2015 and 2014.
- *Liquidity and Capital Resources.* This section provides an analysis of our corporate and subsidiary liquidity, consolidated statements of cash flows and contractual commitments.
- *Critical Accounting Policies, Judgments and Estimates.* This section discusses those material accounting policies that involve uncertainties and require significant judgment in their application.
- *Quantitative and Qualitative Disclosures about Market Risk*. This section provides discussion and analysis of the foreign currency, interest rate and other market risk that our company faces.

The capitalized terms used below have been defined in the notes to our consolidated financial statements. In the following text, the terms “we,” “our,” “our company” and “us” may refer, as the context requires, to Virgin Media or collectively to Virgin Media and its subsidiaries.

Unless otherwise indicated, convenience translations into pound sterling are calculated, and operational data (including subscriber statistics) is presented, as of December 31, 2016.

Overview

General

We are a subsidiary of Liberty Global that provides video, broadband internet, fixed-line telephony and mobile services in the U.K. and Ireland. We are one of the U.K.’s and Ireland’s largest providers of residential video, broadband internet and fixed-line telephony services in terms of the number of customers. We believe our advanced, deep-fiber cable access network enables us to offer faster and higher quality broadband services than our digital subscriber line (**DSL**) competitors. As a result, we provide our customers with a leading next-generation broadband service and one of the most advanced interactive television services available in the U.K. and Irish markets.

Operations

At December 31, 2016, our network passed 14,311,500 homes and served 14,056,600 revenue generating units (**RGU**s), consisting of 5,280,200 broadband internet subscribers, 4,742,500 fixed-line telephony subscribers and 4,033,900 video subscribers. In addition, at December 31, 2016, we served 3,040,200 mobile subscribers.

As a result of our decision to discontinue our multi-channel multipoint distribution system (**MMDS**) service in Ireland, we have excluded subscribers to our MMDS service from our externally reported operating statistics effective January 1, 2016, which resulted in a reduction to homes passed, RGUs and customer relationships in Ireland of 22,200.

The following table provides details of our organic RGU and mobile subscriber changes for the years indicated:

	Year ended December 31,		
	2016	2015	2014
Organic RGU additions (losses):			
Video:			
Basic	(2,400)	(8,000)	(11,000)
Enhanced	(34,000)	(55,300)	1,900
Total video	(36,400)	(63,300)	(9,100)
Broadband internet	214,100	166,100	166,900
Fixed-line telephony	73,900	107,700	103,000
Total organic RGU additions	251,600	210,500	260,800
Organic mobile additions (losses):			
Prepaid	(103,700)	(187,800)	(167,500)
Postpaid	119,900	158,800	230,300
Total organic mobile additions (losses)	16,200	(29,000)	62,800

Digital Video services. Our digital cable service offerings include basic and premium programming and incremental product and service offerings, such as enhanced pay-per-view programming (including digital cable-on-demand), digital cable recorders, high definition and 3D programming and access to over-the-top content.

*Broadband internet services.*Our residential broadband subscribers generally access the internet at various download speeds ranging up to 200 Mbps in the U.K. and up to 360 Mbps in Ireland, depending on the tier of service selected. We determine pricing for each different tier of broadband internet service through analysis of speed, market conditions and other factors. We continue to invest in new technologies that allow us to increase the internet speeds we offer to our customers.

Fixed-line telephony services. We offer fixed-line telephony services via either voice-over-internet-protocol or "**VoIP**" technology or circuit-switched telephony.

Mobile services. We offer voice and data mobile services using third-party networks through MVNO networks.

B2B services. We provide B2B services, including voice, broadband internet, data, video, wireless and cloud services.

In addition, we provide broadband internet, fixed-line and mobile telephony and other connectivity services to businesses, public sector organizations and service providers in the U.K. and Ireland.

For additional information regarding the details of our products and services, see *Business* included in this annual report.

Competition and other external factors

We are experiencing significant competition from incumbent telecommunications operators, direct-to-home satellite (**DTH**) operators and/or other providers. For additional information regarding the competition we face, see *Business - Competition* and *Regulatory Matters* included in this annual report. This significant competition, together with macroeconomic factors, has adversely impacted our revenue, RGUs and/or average monthly subscription revenue per average cable RGU or mobile subscriber, as applicable (**ARPU**). For additional information regarding the revenue impact of changes in the RGUs and ARPU, see *Discussion and Analysis* below.

In addition to competition, our operations are subject to macroeconomic, political and other risks that are outside of our control. For example, high levels of sovereign debt in the U.S. and several European countries, combined with weak growth and high unemployment, could potentially lead to fiscal reforms (including austerity measures), tax increases, sovereign debt restructurings, currency instability, increased counterparty credit risk, high levels of volatility and disruptions in the credit and equity markets, as well as other outcomes that might adversely impact our company.

On June 23, 2016, the U.K. held a referendum in which U.K. citizens voted in favor of, on an advisory basis, an exit from the E.U., commonly referred to as "**Brexit**." The terms of any withdrawal are subject to a negotiation period that could last at least two years after the British government formally initiates a withdrawal process pursuant to Article 50 of the Treaty on Europe. The British government has indicated that it plans to commence negotiations to determine the terms of the U.K.'s withdrawal from the E.U. by the end of March 2017. A withdrawal could, among other outcomes, disrupt the free movement of goods, services, people and capital between the U.K. and the E.U., undermine bilateral cooperation in key geographic areas and significantly disrupt trade between the U.K. and the E.U. or other nations as the U.K. pursues independent trade relations. The initial impact of the announcement of Brexit caused significant volatility in global capital markets. The effects of Brexit could adversely affect our business, results of operations, financial condition and liquidity.

Strategy and management focus

We strive to achieve organic revenue and customer growth in our operations by developing and marketing bundled entertainment and information and communications services, and extending and upgrading the quality of our networks where appropriate. As we use the term, organic growth excludes foreign currency translation effects (**FX**) and the estimated impact of acquisitions. While we seek to increase our customer base, we also seek to maximize the average revenue we receive from each household by increasing the penetration of our digital video, broadband internet, fixed-line telephony and mobile services with existing customers through product bundling and upselling.

During 2015, we initiated a network extension program in the U.K., which was subsequently expanded to include Ireland, (the **Network Extension**). During 2015 and 2016, we connected 567,000 homes and commercial premises to our two-way network (including technical upgrades in the U.K.). Pursuant to the Network Extension, we expect in 2017 to connect an estimated 700,000 to 800,000 additional homes and commercial premises (excluding upgrades) to our two-way network. Depending on a variety of factors, including the financial and operational results of the program, the Network Extension may be continued, modified or cancelled at our discretion.

The capital costs associated with the Network Extension, which include the costs to build-out the network and the purchase and installation of related customer premises equipment, are expected to be significant. For information regarding our expectations with regard to the percentage of revenue represented by our property and equipment additions during 2017, see *Liquidity and Capital Resources — Consolidated Statements of Cash Flows* below.

Results of Operations

We completed two small acquisitions and one small disposition during 2016, one small acquisition during 2015, two small acquisitions during 2014 and the U.K. Non-Cable Disposal, as defined and described below, in 2015. These transactions impact the comparability of our 2016, 2015 and 2014 results of operations. In the following discussion, we quantify the estimated impact of acquisitions (the **Acquisition Impact**) and disposals on our operating results. The Acquisition Impact represents our estimate of the difference between the operating results of the periods under comparison that is attributable to an acquisition. In general, we base our estimate of the Acquisition Impact on an acquired entity's operating results during the first three to six months following the acquisition date, as adjusted to remove integration costs and any other material unusual or nonoperational items, such that changes from those operating results in subsequent periods are considered to be organic changes. Accordingly, in the following discussion, (i) variances attributed to an acquired entity during the first 12 months following the acquisition date represent differences between the Acquisition Impact and the actual results and (ii) the calculation of our organic growth percentages includes the organic growth of an acquired entity relative to the Acquisition Impact of such entity. During 2016, we changed how we calculate our organic growth percentages to include the Acquisition Impact in the denominator of the calculation, as this methodology takes into account the size of the acquired entity's operations relative to our existing operations. This change has been reflected retroactively for all periods presented herein.

Discussion and Analysis

General

Most of our revenue is subject to VAT or similar revenue-based taxes. Any increases in these taxes could have an adverse impact on our ability to maintain or increase our revenue to the extent that we are unable to pass such tax increases on to our customers. In the case of revenue-based taxes for which we are the ultimate taxpayer, we will also experience increases in our operating costs and expenses and corresponding declines in our Segment OCF and Segment OCF margin (Segment OCF divided by revenue) to the extent of any such tax increases. As we use the term, **Segment OCF** is defined as operating income before depreciation and amortization, share-based compensation, related-party fees and allocations, provisions and provision releases related to significant litigation and impairment, restructuring and other operating items. Other operating items include (i) gains and losses on the disposition of long-lived assets, (ii) third-party costs directly associated with successful and unsuccessful acquisitions and dispositions, including legal, advisory and due diligence fees, as applicable, and (iii) other acquisition-related items, such as gains and losses on the settlement of contingent consideration.

We pay interconnection fees to other telephony providers when calls or text messages from our subscribers terminate on another network, and we receive similar fees from such providers when calls or text messages from their customers terminate on our networks or networks that we access through MVNO or other arrangements. The amounts we charge and incur with respect to fixed-line telephony and mobile interconnection fees are subject to regulatory oversight. To the extent that regulatory authorities introduce fixed-line or mobile termination rate changes, we would experience prospective changes in our interconnect revenue and costs. The ultimate impact of any such changes in termination rates on our Segment OCF would be dependent on the call or text messaging patterns that are subject to the changed termination rates.

Revenue

Revenue includes amounts earned from (i) subscribers to our broadband communication and other fixed-line services (collectively referred to herein as "**cable subscription revenue**") and our mobile services and (ii) B2B services, interconnect fees, mobile handset sales, installation fees, late fees and advertising revenue. Consistent with the presentation of our revenue categories in note 17 to our consolidated financial statements, we use the term “subscription revenue” in the following discussion to refer to amounts received from subscribers for ongoing services, excluding installation fees and late fees. In the below tables, mobile subscription revenue excludes the related interconnect revenue.

Variances in the subscription revenue that we receive from our customers are a function of (i) changes in the number of RGUs or mobile subscribers outstanding during the period and (ii) changes in ARPU. Changes in ARPU can be attributable to (a) changes in prices, (b) changes in bundling or promotional discounts, (c) changes in the tier of services selected, (d) variances in subscriber usage patterns and (e) the overall mix of cable and mobile products during the period. In the following discussion, we discuss ARPU changes in terms of the net impact of the above factors on the ARPU that is derived from our video, broadband internet, fixed-line telephony and mobile products.

2016 compared to 2015

Revenue

Our revenue by major category is set forth below:

	Year ended December 31,		Increase (decrease)		Organic increase (decrease)
	2016	2015	£	%	%
		in millions			
Subscription revenue (a):					
Video	£ 1,052.1	£ 1,062.2	£ (10.1)	(1.0)	(1.3)
Broadband internet	1,369.6	1,228.5	141.1	11.5	10.5
Fixed-line telephony	956.4	952.1	4.3	0.5	(0.1)
Cable subscription revenue	3,378.1	3,242.8	135.3	4.2	3.5
Mobile (b)	421.0	465.0	(44.0)	(9.5)	(9.5)
Total subscription revenue	3,799.1	3,707.8	91.3	2.5	1.9
B2B revenue (c)	672.8	657.4	15.4	2.3	1.6
Other revenue (b) (d)	334.2	253.2	81.0	32.0	16.8
Total	£ 4,806.1	£ 4,618.4	£ 187.7	4.1	2.8

(a) Subscription revenue includes amounts received from subscribers for ongoing services, excluding installation fees and late fees. Subscription revenue from subscribers who purchase bundled services at a discounted rate is generally allocated proportionally to each service based on the standalone price for each individual service. As a result, changes in the standalone pricing of our cable and mobile products or the composition of bundles can contribute to changes in our product revenue categories from period to period.

(b) Mobile subscription revenue excludes mobile interconnect revenue of £58.9 million and £68.1 million during 2016 and 2015, respectively. Mobile interconnect revenue and revenue from mobile handset sales are included in other revenue.

(c) B2B revenue includes revenue from business broadband internet, voice, mobile and data services offered to medium to large enterprises and, on a wholesale basis, to other operators. We also provide services to certain SOHO subscribers. SOHO subscribers pay a premium price to receive expanded service levels along with video, broadband internet, fixed-line telephony or mobile services that are the same or similar to the mass marketed products offered to our residential subscribers. Revenue from SOHO subscribers, which is included in subscription revenue, aggregated £30.7 million and £21.8 million during 2016 and 2015, respectively.

(d) Other revenue includes, among other items, mobile handset sales, interconnect fees, broadcasting revenue and late fees.

The increase in our revenue during 2016, as compared to 2015, includes (i) an organic increase of £127.9 million or 2.8%, (ii) the impact of acquisitions, (iii) the impact of disposals and (iv) the impact of FX, as set forth below:

	Subscription revenue	Non-subscription revenue	Total
		in millions	
Increase in cable subscription revenue due to change in:			
Average number of RGUs (a)	£ 68.7	£ —	£ 68.7
ARPU (b)	45.8	—	45.8
Total increase in cable subscription revenue	114.5	—	114.5
Decrease in mobile subscription revenue (c)	(44.3)	—	(44.3)
Total increase in subscription revenue	70.2	—	70.2
Increase in B2B revenue	—	10.7	10.7
Increase in other revenue (d)	—	47.0	47.0
Total organic increase	70.2	57.7	127.9
Impact of acquisitions	—	33.1	33.1
Impact of disposals (e)	(7.7)	(3.8)	(11.5)
Impact of FX	28.8	9.4	38.2
Total	£ 91.3	£ 96.4	£ 187.7

(a) The increase in cable subscription revenue related to a change in the average number of RGUs is attributable to the net effect of (i) an increase in the average number of broadband internet RGUs in the U.K., (ii) an increase in the average number of fixed-line telephony RGUs and (iii) declines in the average number of enhanced video RGUs and, to a much lesser extent, the average number of basic video RGUs in Ireland.

(b) The increase in cable subscription revenue related to a change in ARPU is primarily attributable to the net effect of (i) a net increase primarily due to (a) higher ARPU from broadband internet services, (b) lower ARPU from fixed-line telephony services in the U.K., (c) lower ARPU resulting from the impact of a change in the regulations governing payment handling fees that we charge our customers in the U.K., which reduced revenue by £19.2 million, and (d) higher ARPU from video services, as an increase in the U.K. was only partially offset by a decrease in Ireland, and (ii) an adverse change in RGU mix.

(c) The decrease in mobile subscription revenue relates to the net effect of (i) lower ARPU in the U.K., including a decline of £68.9 million in postpaid mobile services revenue associated with the U.K. Split-contract Program, (ii) an increase in the average number of mobile subscribers, as an increase in the average number of postpaid mobile subscribers more than offset the decrease in the average number of prepaid mobile subscribers in the U.K., and (iii) a decrease in revenue due to the impact of a £2.8 million favorable adjustment to VAT recorded during the fourth quarter of 2015. For additional information regarding the U.K. Split-contract Program, see note 3 to our consolidated financial statements.

(d) The increase in other revenue is primarily due to the net effect of (i) an increase in mobile handset sales, primarily attributable to an increase of £41.5 million associated with the U.K. Split-contract Program, (ii) a decrease in interconnect revenue in the U.K. of £11.1 million, primarily due to (a) a decline in mobile short message service (**SMS**) termination volumes and (b) lower fixed-line telephony termination volumes, (iii) an increase in broadcasting revenue in Ireland and (iv) an increase in installation revenue in the U.K. The increase in revenue from the U.K. Split-contract Program is due to the net effect of (1) increased volume and (2) lower average revenue per handset sold.

(e) Represents the estimated impact of (i) the MMDS subscribers in Ireland that have disconnected since we announced the switch-off of this service effective April 2016 and (ii) the non-cable subscribers in the U.K. that we sold in the fourth quarter of 2014 (the **U.K. Non-Cable Disposal**). The non-cable subscribers were migrated to a third party during the first nine months of 2015.

The details of the changes in our B2B revenue categories are as follows:

	Year ended December 31,		Increase (decrease)		Organic increase (decrease)
	2016	2015	£	%	%
	in millions				
Data (a)	£ 506.8	£ 474.0	£ 32.8	6.9	6.3
Voice (b)	108.9	130.8	(21.9)	(16.7)	(17.1)
Other (c)	57.1	52.6	4.5	8.6	8.5
Total B2B revenue	£ 672.8	£ 657.4	£ 15.4	2.3	1.6

(a) The increase in data revenue is primarily attributable to (i) higher volumes and (ii) an increase of £8.6 million in the U.K.'s amortization of deferred upfront fees on B2B contracts.

(b) The decrease in voice revenue is primarily attributable to lower voice revenue in the U.K. primarily due to (i) a decrease in revenue due to the impact of an £11.5 million favorable adjustment recorded during the fourth quarter of 2015 related to the settlement of disputes with mobile operators over amounts charged for voice traffic, including £10.3 million related to years prior to 2015, (ii) a decline in usage and (iii) lower wholesale revenue.

(c) The increase in other revenue is primarily attributable to an increase in low-margin equipment sales in the U.K.

For information concerning certain regulatory developments that could have an adverse impact on our revenue in the U.K., see note 16 to our consolidated financial statements.

Programming and other direct costs of services

Programming and other direct costs of services include programming and copyright costs, mobile access and interconnect costs, mobile handset and other equipment cost of goods sold and other direct costs related to our operations. Programming and copyright costs, which represent a significant portion of our operating costs, are expected to rise in future periods as a result of (i) higher costs associated with the expansion of our digital video content, including rights associated with ancillary product offerings and rights that provide for the broadcast of live sporting events and (ii) rate increases. In addition, we are subject to inflationary pressures with respect to certain costs. Any cost increases that we are not able to pass on to our subscribers through rate increases would result in increased pressure on our operating margins.

Our programming and other direct costs of services increased £81.6 million or 6.0% during 2016, as compared to 2015. This increase includes (i) an increase of £21.3 million attributable to the impact of acquisitions and (ii) a decrease of £5.3 million attributable to the U.K. Non-Cable Disposal and another less significant disposition. Excluding the effects of acquisitions, dispositions and FX, programming and other direct costs of services increased £56.3 million or 4.1%. This increase includes the following factors:

- An increase in programming and copyright costs of £74.9 million or 10.4%, primarily due to the net effect of (i) higher costs for certain premium and basic content, including an increase of (a) £36.0 million associated with a sports programming contract entered into in August 2015 in the U.K. and (b) £6.4 million associated with a new company-wide programming contract that was entered into in June 2016 with retroactive impact to January 1, 2016 and (ii) a decrease of £2.3 million associated with the reassessment of an accrual during the fourth quarter of 2016;

- A decrease in mobile access and interconnect costs of £34.7 million or 8.1%, primarily due to the net effect of (i) a decline resulting from lower rates, (ii) lower fixed-line telephony call volumes, (iii) an increase in costs attributable to higher mobile usage and (iv) a decrease of £2.8 million related to the settlement of a commercial dispute during the fourth quarter of 2015; and

- An increase in mobile handset costs of £3.0 million or 2.1%, primarily due to the net effect of (i) higher mobile handset sales volumes and (ii) a lower average cost per handset sold.

Other operating expenses

Other operating expenses include network operations, customer operations, customer care and other costs related to our operations. We are subject to inflationary pressures with respect to our labor and certain other costs. Any cost increases that we are not able to pass on to our subscribers through rate increases would result in increased pressure on our operating margins.

Our other operating expenses decreased £12.2 million or 1.9% during 2016, as compared to 2015. This decrease includes (i) an increase of £7.2 million attributable to the impact of acquisitions and (ii) a decrease of £0.6 million attributable to the U.K. Non-Cable Disposal and another less significant disposition. Excluding the effects of acquisitions, dispositions and FX, other operating expenses decreased £25.6 million or 4.0%. This decrease includes the following factors:

- A decrease in personnel costs of £24.9 million or 11.2%, primarily due to the net effect of (i) decreased costs of £13.0 million resulting from higher proportions of capitalized labor costs, primarily due to higher installation activity associated with the Network Extension, (ii) lower incentive compensation costs, (iii) annual wage increases, (iv) decreased staffing levels and (v) lower costs related to certain employee benefits;

- An increase in network-related expenses of £8.8 million or 5.2%, primarily due to the net effect of (i) an £11.8 million increase resulting from retroactive adjustments recorded during the first and second quarters of 2015 to reflect lower local authority charges for certain elements of network infrastructure in the U.K., (ii) higher network maintenance costs, (iii) a £4.1 million decrease associated with the settlement of an operational contingency during the first quarter of 2016 and (iv) lower outsourced labor costs associated with customer-facing activities. For information regarding increased local authority charges for network infrastructure in the U.K. that are expected to become effective April 1, 2017, see note 16 to our consolidated financial statements;

- An increase in outsourced labor and professional fees of £5.1 million or 6.1%, primarily due to the net effect of (i) an increase in call center costs and (ii) lower consulting costs;

- A decrease in bad debt and collection expense of £3.5 million or 8.8%;

- A decrease in facilities expenses of £2.9 million or 15.5%, due to lower facility-related expenses; and

- A net decrease resulting from individually insignificant changes in other operating expense categories.

SG&A expenses

SG&A expenses include human resources, information technology, general services, management, finance, legal, external sales and marketing costs, share-based compensation and other general expenses. We do not include share-based compensation in the following discussion and analysis of our SG&A expenses as share-based compensation expense is discussed separately below. As noted above, we are subject to inflationary pressures with respect to our labor and certain other costs.

Our SG&A expenses (exclusive of share-based compensation) increased £20.5 million or 3.6% during 2016, as compared to 2015. This increase includes an increase of £9.0 million attributable to the impact of acquisitions. Excluding the effects of acquisitions and FX, SG&A expenses increased £6.5 million or 1.1%. This increase includes the following factors:

- An increase in personnel costs of £15.0 million or 6.8%, primarily due to the net effect of (i) increased staffing levels, (ii) annual wage increases and (iii) lower incentive compensation costs;

- A decrease in external sales and marketing costs of £7.3 million or 3.4%, primarily due to the net effect of (i) lower costs associated with advertising campaigns and (ii) higher third-party sales commissions;

- A decrease in outsourced labor and professional fees of £3.4 million or 10.9%, due largely to a decrease of £1.7 million associated with consulting fees incurred during the fourth quarter of 2015 in connection with the settlement of a commercial dispute; and

- A net increase resulting from individually insignificant changes in other SG&A expense categories.

Share-based compensation expense (included in SG&A expense)

Our share-based compensation expense represents amounts allocated to our company by Liberty Global and related employer taxes. The amounts allocated by Liberty Global to our company represent share-based compensation associated with the Liberty Global share-based incentive awards held by certain employees of our subsidiaries. A summary of the share-based compensation expense that is included in our SG&A expenses is set forth below:

	Year ended December 31,	
	2016	**2015**
	in millions	
Performance-based incentive awards (a)	£ 16.1	£ 10.1
Other share-based incentive awards	14.9	25.4
Total (b)	£ 31.0	£ 35.5

(a) Includes share-based compensation expense related to (i) Liberty Global PSUs and (ii) the Challenge Performance Awards.

(b) In connection with the LiLAC Transaction, the compensation committee of Liberty Global's board of directors approved the 2015 Award Modifications in accordance with the underlying share-based incentive plans. As a result of the 2015 Award Modifications, we recognized £2.0 million and £5.6 million of incremental expense during 2016 and 2015, respectively.

For additional information regarding our share-based compensation, see note 11 to our consolidated financial statements.

Related-party fees and allocations, net

We recorded related-party fees and allocations, net, related to corporate services performed by Liberty Global and our company of £110.9 million and £87.6 million during 2016 and 2015, respectively. These charges generally relate to management, finance, legal, technology and other corporate and administrative services provided to our subsidiaries. For additional information, see note 12 to our consolidated financial statements.

Depreciation and amortization expense

Our depreciation and amortization expense increased £93.0 million or 6.0% during 2016, as compared to 2015. Excluding the effects of FX, depreciation and amortization expense increased £86.2 million or 5.5%, primarily due to the net effect of (i) an increase associated with property and equipment additions related to the installation of customer premises equipment, the expansion and upgrade of our networks and other capital initiatives and (ii) a decrease associated with certain assets becoming fully depreciated.

Impairment, restructuring and other operating items, net

We recognized impairment, restructuring and other operating items, net, of £26.4 million and £10.9 million during 2016 and 2015, respectively. The 2016 amount includes (i) restructuring charges of £21.0 million, primarily related to employee severance and termination costs related to certain reorganization activities and (ii) an impairment charge of £4.1 million. The 2015 amount includes the net effect of (a) restructuring charges of £13.0 million, primarily related to employee severance and termination costs related to certain reorganization activities, (b) a gain from the disposition of assets of £8.3 million and (c) an impairment charge of £6.2 million.

If, among other factors, (i) our enterprise value or Liberty Global's equity values were to decline significantly or (ii) the adverse impacts of economic, competitive, regulatory or other factors were to cause our results of operations or cash flows to be worse than anticipated, we could conclude in future periods that impairment charges are required in order to reduce the carrying values of our goodwill and, to a lesser extent, other long-lived assets. Any such impairment charges could be significant.

Interest expense – third-party

Our third-party interest expense increased £73.1 million or 14.3% during 2016, as compared to 2015, primarily due to the net effect of (i) higher average outstanding third-party debt balances and (ii) lower weighted average interest rates related to the completion of certain refinancing transactions that resulted in extended maturities and net decreases to certain of our interest rates. For additional information regarding our outstanding third-party indebtedness, see note 8 to our consolidated financial statements.

It is possible that the interest rates on (i) any new borrowings could be higher than the current interest rates on our existing indebtedness and (ii) our variable-rate indebtedness could increase in future periods. As further discussed in note 5 to our consolidated financial statements and under *Qualitative and Quantitative Disclosures about Market Risk* below, we use derivative instruments to manage our interest rate risks.

Interest expense – related-party

Our related-party interest expense decreased £1.5 million or 26.3% during 2016, as compared to 2015. Related-party interest expense relates to interest expense incurred on (i) the note payable to LG Europe 2 that originated in December 2015 and (ii) the VM Ireland Note during the first quarter of 2015. As further described in note 4 to our consolidated financial statements, the VM Ireland Note eliminates in consolidation following the February 2015 VM Ireland Acquisition. For additional information regarding our related-party indebtedness, see note 12 to our consolidated financial statements.

Interest income – related-party

Our related-party interest income increased £43.1 million or 17.5% during 2016, as compared to 2015, primarily due to interest income earned on related-party notes receivable from LG Europe 2. For additional information, see note 12 to our consolidated financial statements.

Realized and unrealized gains on derivative instruments, net

Our realized and unrealized gains or losses on derivative instruments include (i) unrealized changes in the fair values of our derivative instruments that are non-cash in nature until such time as the derivative contracts are fully or partially settled and (ii) realized gains or losses upon the full or partial settlement of the derivative contracts. The details of our realized and unrealized gains on derivative instruments, net, are as follows:

	Year ended December 31,	
	2016	**2015**
	in millions	
Cross-currency and interest rate derivative contracts (a)	£ 640.8	£ 249.6
Foreign currency forward and option contracts	15.8	(6.7)
Equity-related derivative instruments (b)	9.2	10.2
Total	£ 665.8	£ 253.1

(a) The gain during 2016 is primarily attributable to the net effect of (i) gains associated with an increase in the value of the U.S. dollar relative to the pound sterling and (ii) losses associated with decreases in market interest rates in the pound sterling market. In addition, the gain during 2016 includes a net loss of £28.5 million resulting from changes in our credit risk valuation adjustments. The gain during 2015 is primarily attributable to the net effect of (a) gains associated with an increase in the value of the U.S. dollar relative to the pound sterling, (b) gains associated with increases in market interest rates in the pound sterling market and (c) losses associated with increases in market interest rates in the U.S. dollar market. In addition, the gain during 2015 includes a net loss of £11.3 million resulting from changes in our credit risk valuation adjustments.

(b) Amounts represent activity related to the Virgin Media Capped Calls and the derivative embedded in the VM Convertible Notes. The fair values of our equity-related derivative instruments are primarily impacted by the trading prices of the underlying security. During 2016, the VM Convertible Notes matured and the remaining outstanding notional amount of the Virgin Media Capped Calls was settled.

For additional information regarding our derivative instruments, see notes 5 and 6 to our consolidated financial statements and *Quantitative and Qualitative Disclosures about Market Risk* below.

Foreign currency transaction losses, net

Our foreign currency transaction gains or losses primarily result from the remeasurement of monetary assets and liabilities that are denominated in currencies other than the underlying functional currency of the applicable entity. Unrealized foreign currency transaction gains or losses are computed based on period-end exchange rates and are non-cash in nature until such time as the amounts are settled. The details of our foreign currency transaction losses, net, are as follows:

	Year ended December 31,	
	2016	2015
	in millions	
U.S. dollar denominated debt issued by our company	£ (704.8)	£ (140.4)
Intercompany payables and receivables denominated in a currency other than the entity's functional currency (a)	(181.2)	(122.7)
Euro denominated debt issued by our company	(53.8)	4.9
Other	(10.4)	(13.6)
Total	£ (950.2)	£ (271.8)

(a) Amounts primarily relate to loans between certain of our non-operating subsidiaries.

For information regarding how we manage our exposure to foreign currency risk, see *Quantitative and Qualitative Disclosures about Market Risk — Foreign Currency Risk* below.

Realized and unrealized losses due to changes in fair values of certain debt, net

Our realized and unrealized gains or losses due to changes in fair values of certain debt include unrealized gains or losses associated with changes in fair values that are non-cash in nature until such time as these gains or losses are realized through cash transactions. We recognized realized and unrealized losses due to changes in fair values of certain debt, net, of £4.5 million during 2016 as compared to nil during 2015. For additional information regarding our fair value measurements, see note 6 to our consolidated financial statements.

Gains (losses) on debt modification and extinguishment, net

We recognized losses on debt modification and extinguishment, net, of £62.9 million and £29.4 million during 2016 and 2015, respectively. The loss during 2016 is attributable to (i) the payment of £42.2 million of redemption premium, (ii) the write-off of £19.1 million of deferred financing costs and (iii) the write-off of unamortized discount of £1.6 million. The loss during 2015 is attributable to (a) the write-off of £19.5 million of deferred financing costs, (b) the payment of £6.6 million of redemption premiums, (c) the write-off of £2.8 million of unamortized discount and (d) the payment of £0.5 million of third-party costs.

For additional information regarding our losses on debt modification and extinguishment, net, see note 8 to our consolidated financial statements.

Income tax benefit (expense)

We recognized income tax benefit (expense) of £13.8 million and (£201.2 million) during 2016 and 2015, respectively.

The income tax benefit during 2016 differs from the expected income tax benefit of £104.8 million (based on the U.S. federal income tax rate of 35%), primarily due to the negative impacts of (i) a reduction in net deferred tax assets in the U.K. due to enacted changes in tax law, (ii) statutory tax rates in certain jurisdictions in which we operate that are lower than the U.S. federal income tax rate and (iii) certain permanent differences between the financial and tax accounting treatment of items associated with investments in subsidiaries. The negative impacts of these items were partially offset by the positive impact of a net decrease in valuation allowances.

The income tax expense during 2015 differs from the expected income tax expense of £20.8 million (based on the U.S. federal income tax rate of 35%), primarily due to the negative impacts of (i) a reduction in net deferred tax assets in the U.K. due to enacted changes in tax law and (ii) certain permanent differences between the financial and tax accounting treatment of items associated with investments in subsidiaries. The negative impacts of these items were partially offset by the positive impacts of (a) a net decrease in valuation allowances and (b) statutory tax rates in certain jurisdictions in which we operate that are lower than the U.S. federal income tax rate.

For additional information regarding our income taxes, see note 9 to our consolidated financial statements.

Net loss

During 2016 and 2015, we reported net losses of £285.6 million and £141.9 million, respectively, including (i) operating income of £348.0 million and £377.5 million, respectively, (ii) net non-operating expense of £647.4 million and £318.2 million, respectively, and (iii) income tax benefit (expense) of £13.8 million and (£201.2 million), respectively.

Gains or losses associated with (i) changes in the fair values of derivative instruments and (ii) movements in foreign currency exchange rates are subject to a high degree of volatility and, as such, any gains from these sources do not represent a reliable source of income. In the absence of significant gains in the future from these sources or from other non-operating items, our ability to achieve earnings is largely dependent on our ability to increase our Segment OCF to a level that more than offsets the aggregate amount of our (a) share-based compensation expense, (b) related-party fees and allocations, (c) depreciation and amortization, (d) impairment, restructuring and other operating items, (e) interest expense, (f) other non-operating expenses and (g) income tax expenses.

Subject to the limitations included in our various debt instruments, we expect that Liberty Global will continue to cause our company to maintain our debt at current levels relative to our Covenant EBITDA. As a result, we expect that we will continue to report significant levels of interest expense for the foreseeable future. For information regarding our expectations with respect to trends that may affect certain aspects of our operating results in future periods, see the discussion under *Overview* above. For information regarding the reasons for changes in specific line items in our consolidated statements of operations, see the above discussion.

2015 compared to 2014

Revenue

Our revenue by major category is set forth below:

	Year ended December 31,		Increase (decrease)		Organic increase (decrease)
	2015	2014	£	%	%
		in millions			
Subscription revenue (a):					
Video	£ 1,062.2	£ 1,079.5	£ (17.3)	(1.6)	(0.5)
Broadband internet	1,228.5	1,111.8	116.7	10.5	11.3
Fixed-line telephony	952.1	991.6	(39.5)	(4.0)	(3.5)
Cable subscription revenue	3,242.8	3,182.9	59.9	1.9	2.7
Mobile (b)	465.0	480.0	(15.0)	(3.1)	(3.1)
Total subscription revenue	3,707.8	3,662.9	44.9	1.2	1.9
B2B revenue (c)	657.4	617.5	39.9	6.5	6.3
Other revenue (b) (d)	253.2	216.5	36.7	17.0	33.6
Total	£ 4,618.4	£ 4,496.9	£ 121.5	2.7	3.9

(a) Subscription revenue includes amounts received from subscribers for ongoing services, excluding installation fees and late fees. Subscription revenue from subscribers who purchase bundled services at a discounted rate is generally allocated proportionally to each service based on the standalone price for each individual service. As a result, changes in the standalone pricing of our cable and mobile products or the composition of bundles can contribute to changes in our product revenue categories from period to period.

(b) Mobile subscription revenue excludes mobile interconnect revenue of £68.1 million and £80.2 million during 2015 and 2014, respectively. Mobile interconnect revenue and revenue from mobile handset sales are included in other revenue.

(c) B2B revenue includes revenue from business broadband internet, voice, mobile and data services offered to medium to large enterprises and, on a wholesale basis, to other operators. We also provide services to certain SOHO subscribers. SOHO subscribers pay a premium price to receive expanded service levels along with video, broadband internet, fixed-line telephony or mobile services that are the same or similar to the mass marketed products offered to our residential subscribers. Revenue from SOHO subscribers, which is included in subscription revenue, aggregated £21.8 million and £17.2 million during 2015 and 2014, respectively.

(d) Other revenue includes, among other items, mobile handset sales, interconnect fees and late fees.

The increase in our revenue during 2015, as compared to 2014, includes (i) an organic increase of £174.7 million or 3.9%, (ii) the impact of acquisitions, (iii) the impact of a disposal and (iv) the impact of FX, as set forth below:

	Subscription revenue	Non-subscription revenue	Total
		in millions	
Increase in cable subscription revenue due to change in:			
Average number of RGUs (a)	£ 51.1	£ —	£ 51.1
ARPU (b)	35.0	—	35.0
Total increase in cable subscription revenue	86.1	—	86.1
Decrease in mobile subscription revenue (c)	(14.8)	—	(14.8)
Total increase in subscription revenue	71.3	—	71.3
Increase in B2B revenue	—	39.3	39.3
Increase in other revenue (d)	—	64.1	64.1
Total organic increase	71.3	103.4	174.7
Impact of acquisitions	0.2	5.1	5.3
Impact of a disposal (e)	—	(30.3)	(30.3)
Impact of FX	(26.6)	(1.6)	(28.2)
Total	£ 44.9	£ 76.6	£ 121.5

(a) The increase in cable subscription revenue related to a change in the average number of RGUs is attributable to increases in the average numbers of broadband internet and fixed-line telephony RGUs that were only partially offset by declines in (i) the average number of enhanced video RGUs and (ii) the average number of basic and MMDS video RGUs in Ireland.

(b) The increase in cable subscription revenue related to a change in ARPU is primarily attributable to the net effect of (i) a net increase primarily due to (a) higher ARPU from broadband internet services in the U.K., (b) lower ARPU from fixed-line telephony services and (c) higher ARPU from video services and (ii) an adverse change in RGU mix in Ireland. In addition, the growth in ARPU was partially offset by (1) the impact of a January 1, 2015 change in how VAT is applied to certain components of our U.K. operations, which reduced revenue by £30.3 million, and (2) a May 1, 2014 change in legislation in the U.K. with respect to the charging of VAT in connection with prompt payment discounts, as discussed below, which reduced revenue by £14.4 million.

(c) The decrease in mobile subscription revenue relates to the U.K. and is due to (i) lower ARPU, including the net impact of (a) a decline of £25.5 million in postpaid mobile services revenue due to the November 2014 introduction of the Split-contract Program, (b) a decrease of £6.8 million related to the above-described January 1, 2015 change in how VAT is applied and (c) an increase in revenue due to the favorable impact of a £2.8 million adjustment to VAT recorded during the fourth quarter of 2015, and (ii) a decrease in the average number of subscribers, as a decrease in the average number of prepaid subscribers more than offset the increase in the average number of postpaid subscribers.

(d) The increase in other revenue is primarily due to the net effect of (i) an increase in mobile handset sales, primarily attributable to an £88.1 million increase associated with the November 2014 introduction of the Split-contract Program, (ii) a decrease in interconnect revenue of £14.2 million, primarily due to a decline in mobile SMS termination volumes in the U.K., and (iii) a decrease in installation revenue of £7.6 million.

(e) Represents the estimated impact of the U.K. Non-Cable Disposal. These non-cable subscribers were migrated to a third party during the first nine months of 2015.

On March 19, 2014, the U.K. government announced a change in legislation with respect to the charging of VAT in connection with prompt payment discounts such as those that we offer to our fixed-line telephony customers. This change, which took effect on May 1, 2014, impacted our company and some of our competitors. For additional information regarding a challenge from the U.K. government regarding our application of the prompt payment discount rules prior to the May 1, 2014 change in legislation, see note 16 to our consolidated financial statements.

The details of the changes in our B2B revenue categories are as follows:

	Year ended December 31,		Increase		Organic increase
	2015	2014	£	%	%
	in millions				
Data (a)	£ 474.0	£ 446.7	£ 27.3	6.1	5.9
Voice (b)	130.8	127.8	3.0	2.3	2.7
Other (c)	52.6	43.0	9.6	22.3	22.9
Total B2B revenue	£ 657.4	£ 617.5	£ 39.9	6.5	6.3

(a) The increase in data revenue is primarily attributable to (i) higher volumes and (ii) an increase of £13.8 million in the U.K.'s amortization of deferred upfront fees on B2B contracts.

(b) The increase in voice revenue is largely attributable to the net effect of (i) an £11.5 million increase recorded in the U.K. during the fourth quarter of 2015 related to the settlement of disputes with mobile operators over amounts charged for voice traffic, including £10.3 million related to years prior to 2015, and (ii) a decline in usage.

(c) The increase in other revenue is primarily attributable to an increase in low-margin equipment sales in the U.K.

Programming and other direct costs of services

Our programming and other direct costs of services increased £71.6 million or 5.6% during 2015, as compared to 2014. This increase includes (i) a decrease of £23.2 million attributable to the U.K. Non-Cable Disposal and (ii) an increase of £2.0 million attributable to the impact of acquisitions. Excluding the effects of the U.K. Non-Cable Disposal, acquisitions and FX, programming and other direct costs of services increased £101.6 million or 8.1%. This increase includes the following factors:

- An increase in programming and related costs of £77.5 million or 12.5%, primarily due to (i) higher costs for certain premium and basic content, due in part to a new sports programming contract entered into in August 2015, and (ii) a £6.9 million increase due to the impact of a reduction of programming costs that resulted from the favorable resolution of an operational contingency during the second quarter of 2014;

- An increase in mobile handset costs of £19.4 million or 16.2%, primarily due to the net effect of (i) an increase in the proportion of higher-value handsets sold, primarily due to the Split-contract Program implemented in the U.K. in November 2014, and (ii) a decrease in costs as a result of continued growth of subscriber identification module or "SIM"-only contracts; and

- An increase in mobile access and interconnect costs of £2.8 million or 0.6%, primarily due to the net effect of (i) increased costs attributable to higher mobile usage, (ii) a decline resulting from lower rates, (iii) increased costs associated with B2B services, (iv) lower fixed-line telephony call volumes and (v) an increase of £2.8 million related to the settlement of a commercial dispute.

Other operating expenses

Our other operating expenses decreased £42.5 million or 6.3% during 2015, as compared to 2014. This decrease includes (i) a decrease of £2.1 million attributable to the U.K. Non-Cable Disposal and (ii) an increase of £1.5 million attributable to the impact of acquisitions. Excluding the effects of the U.K. Non-Cable Disposal, acquisitions and FX, other operating expenses decreased £39.5 million or 5.9%. This decrease includes the following factors:

- A decrease in personnel costs of £17.9 million or 7.4%, primarily due to the net effect of (i) lower incentive compensation costs, (ii) decreased costs due to higher capitalized labor costs associated with the Network Extension and (iii) annual wage increases;

- A decrease in network-related expenses of £16.0 million or 8.6%, primarily due to (i) lower outsourced labor costs associated with customer-facing activities, (ii) a decrease in network maintenance costs and (iii) lower costs of £5.2

million associated with the reassessment of accruals or operational contingencies in 2015. The decrease in network expense also includes the impact of reductions in local authority charges for certain elements of network infrastructure in the U.K. arising from successful appeals during the last half of 2014 and the first half of 2015. As compared to 2014, these reductions in local authority charges resulted in an increase of £5.2 million;

- An increase in information technology-related expenses of £11.6 million or 37.1%, primarily due to higher software and other information technology-related service and maintenance costs; and

- A decrease in bad debt and collection expense of £6.7 million or 14.3%.

SG&A expenses

Our SG&A expenses (exclusive of share-based compensation) decreased £11.6 million or 2.0% during 2015, as compared to 2014. This decrease includes an increase of £0.9 million attributable to the impact of acquisitions. Excluding the effects of acquisitions and FX, SG&A expenses decreased £8.7 million or 1.5%. This decrease includes the following factors:

- A decrease in external sales and marketing costs of £8.0 million or 3.4%, due primarily to (i) lower costs third-party sales commissions and (ii) lower costs associated with advertising campaigns;

- A decrease in personnel costs of £6.9 million or 3.0%, primarily due to the net effect of (i) lower incentive compensation costs, (ii) annual wage increases, (iii) increased staffing levels and (iv) decreased costs due to higher capitalized labor costs associated with the Network Extension; and

- An increase in outsourced labor and professional fees of £6.7 million or 22.6%, primarily due to the net effect of (i) increased consulting costs associated with strategic initiatives, (ii) the positive impact of a £4.7 million increase associated with the consulting fee that was incurred during the third quarter of 2014 in connection with the reduction in local authority charges for certain elements of network infrastructure in the U.K., as discussed above, (iii) decreased legal costs and (iv) an increase of £1.7 million associated with the consulting fee that was incurred during the fourth quarter of 2015 in connection with the settlement of a commercial dispute.

Share-based compensation expense (included in SG&A expense)

A summary of the share-based compensation expense that is included in our SG&A expenses is set forth below:

	Year ended December 31,	
	2015	2014
	in millions	
Performance-based incentive awards (a)	£ 10.1	£ 7.0
Other share-based incentive awards	25.4	26.8
Total (b)	£ 35.5	£ 33.8

(a) Includes share-based compensation expense related to Liberty Global PSUs and the Challenge Performance Awards.

(b) In connection with the LiLAC Transaction, the compensation committee of Liberty Global's board of directors approved the 2015 Award Modifications in accordance with the underlying share-based incentive plans. As a result of the 2015 Award Modifications, we recognized £5.6 million of incremental expense during 2015.

For additional information regarding our share-based compensation, see note 11 to our consolidated financial statements.

Related-party fees and allocations, net

We recorded related-party fees and allocations, net, related to corporate services performed by Liberty Global and our company of £87.6 million and £36.6 million during 2015 and 2014, respectively. For additional information, see note 12 to our consolidated financial statements.

Depreciation and amortization expense

Our depreciation and amortization expense decreased £50.3 million or 3.1% during 2015, as compared to 2014. Excluding the effects of FX, depreciation and amortization expense decreased £44.8 million or 2.8%, primarily due to the net effect of (i) a decrease associated with certain assets becoming fully depreciated and (ii) an increase associated with property and equipment additions related to the installation of customer premises equipment, the expansion and upgrade of our networks and other capital initiatives.

Impairment, restructuring and other operating items, net

We recognized impairment, restructuring and other operating items, net, of £10.9 million and £12.7 million during 2015 and 2014, respectively. The 2015 amount includes the net effect of (i) restructuring charges of £13.0 million, primarily related to employee severance and termination costs related to certain reorganization activities, (ii) a gain from the disposition of assets of £8.3 million and (iii) an impairment charge of £6.2 million. The 2014 amount includes the net effect of (a) restructuring charges of £16.2 million, primarily related to employee severance and termination costs related to certain reorganization activities that we implemented following the completion of the LG/VM Transaction, and (b) a gain from the disposition of assets of £4.6 million.

Interest expense – third-party

Our third-party interest expense increased £53.4 million or 11.7% during 2015, as compared to 2014, primarily due to the net effect of (i) higher average outstanding third-party debt balances and (ii) lower weighted average interest rates related to the completion of certain refinancing transactions that resulted in extended maturities and net decreases to certain of our interest rates. For additional information regarding our outstanding third-party indebtedness, see note 8 to our consolidated financial statements.

Interest expense – related-party

Our related-party interest expense decreased £46.3 million or 89.0% during 2015, as compared to 2014, primarily due to the interest expense incurred on the VM Ireland Note. As further described in note 4 to our consolidated financial statements, the VM Ireland Note eliminates in consolidation following the February 2015 VM Ireland Acquisition. For additional information regarding our related-party indebtedness, see note 12 to our consolidated financial statements.

Interest income – related-party

Our related-party interest income increased £16.8 million or 7.3% during 2015, as compared to 2014, primarily due to interest income earned on related-party notes receivable from LG Europe 2. For additional information, see note 12 to our consolidated financial statements.

Realized and unrealized gains on derivative instruments, net

The details of our realized and unrealized gains on derivative instruments, net, are as follows:

	Year ended December 31,	
	2015	2014
	in millions	
Cross-currency and interest rate derivative contracts (a)	£ 249.6	£ 53.9
Equity-related derivative instruments (b)	10.2	(6.0)
Foreign currency forward and option contracts	(6.7)	0.7
Total	£ 253.1	£ 48.6

(a) The gain during 2015 is primarily attributable to the net effect of (i) gains associated with an increase in the value of the U.S. dollar relative to the pound sterling, (ii) gains associated with increases in market interest rates in the pound sterling market and (iii) losses associated with increases in market interest rates in the U.S. dollar market. In addition, the gain during 2015 includes a net loss of £11.3 million resulting from changes in our credit risk valuation adjustments. The gain during 2014 is primarily attributable to the net effect of (a) gains associated with an increase in the value of the U.S. dollar relative to the pound sterling and (b) losses associated with decreases in market interest rates in the pound sterling market. In addition, the gain during 2014 includes a net loss of £25.3 million resulting from changes in our credit risk valuation adjustments.

(b) Amounts represent activity related to the Virgin Media Capped Calls and the derivative embedded in the VM Convertible Notes. The fair values of our equity-related derivative instruments are primarily impacted by the trading prices of the underlying security.

For additional information regarding our derivative instruments, see notes 5 and 6 to our consolidated financial statements and *Quantitative and Qualitative Disclosures about Market Risk* below.

Foreign currency transaction losses, net

The details of our foreign currency transaction losses, net, are as follows:

	Year ended December 31,	
	2015	**2014**
	in millions	
U.S. dollar denominated debt issued by our company	£ (140.4)	£ (109.7)
Intercompany payables and receivables denominated in a currency other than the entity's functional currency (a)	(122.7)	—
Related-party payables and receivables denominated in a currency other than the entity's functional currency (b)	(12.4)	(36.4)
Other	3.7	(5.9)
Total	£ (271.8)	£ (152.0)

(a) Amounts primarily relate to loans between certain of our non-operating subsidiaries.

(b) The 2014 amount primarily relates to our euro-denominated notes receivable from LGE Holdco V BV that were entered into during 2014. Accordingly, this amount is a function of movements of the euro against the pound sterling. During the fourth quarter of 2014, the euro-denominated notes receivable from LGE Holdco V BV were converted to equity.

For information regarding how we manage our exposure to foreign currency risk, see *Quantitative and Qualitative Disclosures about Market Risk — Foreign Currency Risk* below.

Gains (losses) on debt modification and extinguishment, net

We recognized gains (losses) on debt modification and extinguishment, net, of (£29.4 million) and £20.1 million during 2015 and 2014, respectively. The loss during 2015 is attributable to (i) the write-off of £19.5 million of deferred financing costs, (ii) the payment of £6.6 million of redemption premiums, (iii) the write-off of £2.8 million of unamortized discount and (iv) the payment of £0.5 million of third-party costs. The gain during 2014 is attributable to (a) the write-off of £103.9 million of unamortized premium, (b) the payment of £74.4 million of redemption premium and (c) the write-off of £9.4 million of deferred financing costs.

For additional information regarding our gains (losses) on debt modification and extinguishment, net, see note 8 to our consolidated financial statements.

Income tax benefit (expense)

We recognized income tax expense of £201.2 million and £21.4 million during 2015 and 2014, respectively.

The income tax expense during 2015 differs from the expected income tax expense of £20.8 million (based on the U.S. federal income tax rate of 35.0%), primarily due to the negative impacts of (i) a reduction in net deferred tax assets in the U.K. due to enacted changes in tax law and (ii) certain permanent differences between the financial and tax accounting treatment of items associated with investments in subsidiaries. The negative impacts of these items were partially offset by the positive impacts of (a) a net decrease in valuation allowances and (b) statutory tax rates in certain jurisdictions in which we operate that are lower than the U.S. federal income tax rate.

The income tax expense during 2014 differs from the expected income tax benefit of £30.5 million (based on the U.S. federal income tax rate of 35.0%), primarily due to the negative impacts of (i) certain permanent differences between the financial and tax accounting treatment of items associated with investments in subsidiaries and (ii) non-deductible or non-taxable foreign currency exchange results. The negative impacts of these items were partially offset by the positive impacts of (a) statutory tax rates in certain jurisdictions in which we operate that are lower than the U.S. federal income tax rate and (b) a net decrease in valuation allowances.

For additional information regarding our income taxes, see note 9 to our consolidated financial statements.

Net loss

During 2015 and 2014, we reported net losses of £141.9 million and £108.6 million, respectively, including (i) operating income of £377.5 million and £274.1 million, respectively, (ii) net non-operating expense of £318.2 million and £361.3 million, respectively, and (iii) income tax expense of £201.2 million and £21.4 million, respectively.

Liquidity and Capital Resources

Sources and Uses of Cash

Cash and cash equivalents

At December 31, 2016, we had cash and cash equivalents of £22.1 million, substantially all of which was held by our subsidiaries. The terms of the instruments governing the indebtedness of certain of these subsidiaries may restrict our ability to access the liquidity of these subsidiaries. In addition, our ability to access the liquidity of our subsidiaries may be limited by tax and legal considerations and other factors.

Liquidity of Virgin Media

Our sources of liquidity at the parent level include (i) our cash and cash equivalents, (ii) funding from LG Europe 2 (and ultimately from Liberty Global or other Liberty Global subsidiaries) in the form of loans or contributions, as applicable, and (iii) subject to the restrictions noted above, proceeds in the form of distributions or loans from our subsidiaries. For information regarding limitations imposed by our subsidiaries' debt instruments, see note 8 to our consolidated financial statements.

The ongoing cash needs of Virgin Media include corporate general and administrative expenses. From time to time, Virgin Media may also require cash in connection with (i) the repayment of outstanding debt and related-party obligations, (ii) the satisfaction of contingent liabilities or (iii) acquisitions and other investment opportunities. No assurance can be given that funding from LG Europe 2 (and ultimately from Liberty Global or other Liberty Global subsidiaries), our subsidiaries or external sources would be available on favorable terms, or at all.

Our parent company, Virgin Media, and certain Liberty Global subsidiaries are co-guarantors of the indebtedness of certain other Liberty Global subsidiaries. We do not believe these guarantees will result in material payments in the future.

Liquidity of our subsidiaries

In addition to cash and cash equivalents, the primary sources of liquidity of our operating subsidiaries are cash provided by operations and, in the case of VMIH, any borrowing availability under the VM Credit Facilities. For details of the borrowing availability of the VM Credit Facilities, see note 8 to our consolidated financial statements.

The liquidity of our operating subsidiaries generally is used to fund property and equipment additions, debt service requirements and other liquidity requirements that may arise from time to time. For additional information regarding our consolidated cash flows, see the discussion under *Consolidated Statements of Cash Flows* below. Our subsidiaries may also require funding in connection with (i) the repayment of outstanding debt, (ii) acquisitions and other investment opportunities or (iii) distributions or loans to Virgin Media, Liberty Global or other Liberty Global subsidiaries. No assurance can be given that any external funding would be available to our subsidiaries on favorable terms, or at all.

Capitalization

At December 31, 2016, the outstanding principal amount of our consolidated third-party debt, together with our capital lease obligations, aggregated £12,145.9 million, including £1,049.4 million that is classified as current in our consolidated balance sheet and £10,988.6 million that is not due until 2021 or thereafter. For additional information regarding our current debt maturities, see note 8 to our consolidated financial statements.

As further discussed under *Quantitative and Qualitative Disclosures about Market Risk* below and in note 5 to our consolidated financial statements, we use derivative instruments to mitigate foreign currency and interest rate risk associated with our debt instruments.

Our ability to service or refinance our debt and to maintain compliance with the leverage covenants in our credit agreements and indentures is dependent primarily on our ability to maintain or increase our Covenant EBITDA and to achieve adequate returns on our property and equipment additions and acquisitions. In addition, our ability to obtain additional debt financing is limited by the leverage covenants contained in the various debt instruments of our subsidiaries. In this regard, if our Covenant EBITDA were to decline, we could be required to repay or limit our borrowings under the VM Credit Facilities in order to maintain compliance with applicable covenants. No assurance can be given that we would have sufficient sources of liquidity, or that any external funding would be available on favorable terms, or at all, to fund any such required repayment. We do not anticipate any instances of non-compliance with respect to any of our subsidiaries' debt covenants that would have a material adverse impact on our liquidity during the next 12 months.

Notwithstanding our negative working capital position at December 31, 2016, we believe that we have sufficient resources to repay or refinance the current portion of our debt and capital lease obligations and to fund our foreseeable liquidity requirements during the next 12 months. However, as our maturing debt grows in later years, we anticipate that we will seek to refinance or otherwise extend our debt maturities. No assurance can be given that we will be able to complete these refinancing transactions or otherwise extend our debt maturities. In this regard, it is not possible to predict how political and economic conditions, sovereign debt concerns or any adverse regulatory developments could impact the credit markets we access and, accordingly, our future liquidity and financial position. However, (i) the financial failure of any of our counterparties could (a) reduce amounts available under committed credit facilities and (b) adversely impact our ability to access cash deposited with any failed financial institution and (ii) tightening of the credit markets could adversely impact our ability to access debt financing on favorable terms, or at all. In addition, sustained or increased competition, particularly in combination with adverse economic or regulatory developments, could have an unfavorable impact on our cash flows and liquidity.

All of our consolidated debt and capital lease obligations at December 31, 2016 have been borrowed or incurred by our subsidiaries. For additional information regarding our debt and capital lease obligations, see note 8 to our consolidated financial statements.

Consolidated Statements of Cash Flows — 2016 compared to 2015

Summary. Our consolidated statements of cash flows for 2016 and 2015 are summarized as follows:

	Year ended December 31,		
	2016	2015	Change
	in millions		
Net cash provided by operating activities	£ 1,805.3	£ 1,626.3	£ 179.0
Net cash used by investing activities	(2,009.8)	(2,508.2)	498.4
Net cash provided by financing activities	203.3	863.1	(659.8)
Effect of exchange rate changes on cash	3.1	2.4	0.7
Net increase (decrease) in cash and cash equivalents	£ 1.9	£ (16.4)	£ 18.3

Operating Activities. The increase in net cash provided by our operating activities is primarily attributable to the net effect of (i) an increase in the cash provided by our Segment OCF and related working capital items, (ii) a decrease in cash provided due to higher net cash payments for interest and (iii) an increase in cash provided due to higher cash receipts related to derivative instruments.

Investing Activities. The decrease in net cash used by our investing activities is primarily attributable to the net effect of (i) a decrease in cash used of £993.8 million associated with cash paid in connection with the VM Ireland Acquisition in 2015, (ii) an increase in cash used of £529.2 million to fund loans to subsidiaries of Liberty Global, (iii) a decrease in cash used of £23.1 million associated with cash paid in connection with other acquisitions and (iv) a decrease in cash used of £20.5 million due to lower capital expenditures.

The capital expenditures that we report in our consolidated statements of cash flows do not include amounts that are financed under capital-related vendor financing or capital lease arrangements. Instead, these amounts are reflected as non-cash additions to our property and equipment when the underlying assets are delivered and as repayments of debt when the principal is repaid. In this discussion, we refer to (i) our capital expenditures as reported in our consolidated statements of cash flows, which exclude amounts financed under capital-related vendor financing or capital lease arrangements, and (ii) our total property and equipment additions, which include our capital expenditures on an accrual basis and amounts financed under capital-related vendor financing or capital lease arrangements. For further details regarding our property and equipment additions and our debt, see notes 7 and 8, respectively, to our consolidated financial statements.

A reconciliation of our consolidated property and equipment additions to our consolidated capital expenditures as reported in our consolidated statements of cash flows is set forth below:

	Year ended December 31,	
	2016	2015
	in millions	
Property and equipment additions	£ 1,317.3	£ 999.0
Assets acquired under capital-related vendor financing arrangements	(636.9)	(380.4)
Assets acquired under capital leases	(14.3)	(16.8)
Changes in current liabilities related to capital expenditures	(106.4)	(21.6)
Capital expenditures	£ 559.7	£ 580.2

The increase in our property and equipment additions is primarily due to the increase in expenditures associated with the Network Extension. During 2016 and 2015, our property and equipment additions represented 27.4% and 21.6% of our revenue, respectively. We expect the percentage of revenue represented by our aggregate 2017 consolidated property and equipment additions to range from 31% to 33%. The increase in this percentage, as compared to the corresponding 2016 percentage, is primarily attributable to anticipated increases in expenditures associated with the Network Extension. For additional information regarding the Network Extension, see *Overview* above. The actual amount of our 2017 consolidated property and equipment additions may vary from expected amounts for a variety of reasons, including (i) changes in (a) the competitive or regulatory environment, (b) business plans or (c) our current or expected future operating results and (ii) the availability of sufficient capital. Accordingly, no assurance can be given that our actual property and equipment additions will not vary materially from our expectations.

Financing Activities. The decrease in net cash provided by our financing activities is primarily attributable to the net effect of (i) a decrease in cash provided of £562.9 million related to lower net borrowings of third-party debt, (ii) a decrease in cash provided of £95.9 million related to higher net repayments of related-party notes, (iii) an increase in cash provided of £48.3 million due to higher net cash received related to derivative instruments and (iv) a decrease in cash provided of £24.3 million due to higher payments of financing costs and debt premiums.

Consolidated Statements of Cash Flows — 2015 compared to 2014

Summary. Our consolidated statements of cash flows for 2015 and 2014 are summarized as follows:

	Year ended December 31,		
	2015	2014	Change
	in millions		
Net cash provided by operating activities	£ 1,626.3	£ 1,682.4	£ (56.1)
Net cash used by investing activities	(2,508.2)	(1,666.5)	(841.7)
Net cash provided (used) by financing activities	863.1	(321.4)	1,184.5
Effect of exchange rate changes on cash	2.4	(1.9)	4.3
Net decrease in cash and cash equivalents	£ (16.4)	£ (307.4)	£ 291.0

Operating Activities. The decrease in net cash provided by our operating activities is primarily attributable to the net effect of (i) a decrease in the cash provided by our Segment OCF and related working capital items, (ii) a decrease in cash provided due to higher net cash payments for interest and (iii) an increase in cash provided due to higher interest received for related-party interest income.

Investing Activities. The increase in net cash used by our investing activities is primarily attributable to the net effect of (i) an increase in cash used of £993.8 million associated with cash paid in connection with the VM Ireland Acquisition, (ii) a decrease in cash used of £118.1 million to fund loans to subsidiaries of Liberty Global and (iii) a decrease in cash used of £70.6 million due to lower capital expenditures.

A reconciliation of our consolidated property and equipment additions to our consolidated capital expenditures as reported in our consolidated statements of cash flows is set forth below:

	Year ended December 31,	
	2015	2014
	in millions	
Property and equipment additions	£ 999.0	£ 915.3
Assets acquired under capital-related vendor financing arrangements	(380.4)	(220.3)
Assets acquired under capital leases	(16.8)	(28.8)
Changes in current liabilities related to capital expenditures	(21.6)	(15.4)
Capital expenditures	£ 580.2	£ 650.8

The increase in our property and equipment additions is primarily due to the net impact of (i) an increase in expenditures for support capital, such as information technology upgrades and general support systems, (ii) an increase in expenditures for new build and upgrade projects to expand service and (iii) a decrease in expenditures for the purchase and installation of customer premises equipment. During 2015 and 2014, our property and equipment additions represented 21.6% and 20.4% of our revenue, respectively.

Financing Activities. The change in net cash provided (used) by our financing activities is primarily attributable to (i) an increase in cash of £960.9 million related to higher net borrowings of third-party debt, (ii) an increase in cash of £134.3 million related to lower net repayments of related-party debt and (iii) an increase in cash of £60.6 million due to lower payments for financing costs and debt premiums.

Contractual Commitments

The pound sterling equivalents of our commitments as of December 31, 2016 are presented below:

	Payments due during:						
	2017	2018	2019	2020	2021	Thereafter	Total
				in millions			
Debt (excluding interest):							
Third-party	£ 1,022.6	£ 0.4	£ 0.4	£ 94.4	£ 1,631.6	£ 9,318.3	£12,067.7
Related-party	45.7	—	—	—	—	—	45.7
Capital leases (excluding interest)	26.8	9.1	3.0	0.7	0.2	34.1	73.9
Programming commitments	578.0	511.1	237.0	60.3	15.6	55.4	1,457.4
Network and connectivity commitments	260.3	138.0	146.6	144.7	139.0	16.0	844.6
Purchase commitments	462.4	64.7	42.2	18.0	1.6	2.0	590.9
Operating leases	38.5	32.7	27.5	20.5	16.2	61.9	197.3
Other commitments	11.7	2.9	1.8	—	—	—	16.4
Total (a)	£ 2,446.0	£ 758.9	£ 458.5	£ 338.6	£ 1,804.2	£ 9,487.7	£15,293.9
Projected cash interest payments on third-party debt and capital lease obligations (b)	£ 597.9	£ 575.7	£ 574.7	£ 574.7	£ 527.8	£ 1,615.5	£ 4,466.3

(a) The commitments included in this table do not reflect any liabilities that are included in our December 31, 2016 consolidated balance sheet other than debt and capital lease obligations.

(b) Amounts are based on interest rates, interest payment dates, commitment fees and contractual maturities in effect as of December 31, 2016. These amounts are presented for illustrative purposes only and will likely differ from the actual cash payments required in future periods. In addition, the amounts presented do not include the impact of our interest rate derivative contracts, deferred financing costs, original issue premiums or discounts.

For information regarding our debt and capital lease obligations, see note 8 to our consolidated financial statements. For information regarding our commitments, see note 16 to our consolidated financial statements.

In addition to the commitments set forth in the table above, we have significant commitments under (i) derivative instruments and (ii) defined benefit plans and similar agreements, pursuant to which we expect to make payments in future periods. For information regarding projected cash flows associated with our derivative instruments, see *Quantitative and Qualitative Disclosures about Market Risk — Projected Cash Flows Associated with Derivative Instruments* below. For information regarding our derivative instruments, including the net cash paid or received in connection with these instruments during 2016, 2015 and 2014, see note 5 to our consolidated financial statements. For information regarding our defined benefit plans, see note 14 to our consolidated financial statements.

Critical Accounting Policies, Judgments and Estimates

In connection with the preparation of our consolidated financial statements, we make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expenses and related disclosure of contingent assets and liabilities. Critical accounting policies are defined as those policies that are reflective of significant judgments, estimates and uncertainties, which would potentially result in materially different results under different assumptions and conditions. We believe the following accounting policies are critical in the preparation of our consolidated financial statements because of the judgment necessary to account for these matters and the significant estimates involved, which are susceptible to change:

- Impairment of property and equipment and intangible assets (including goodwill);
- Costs associated with construction and installation activities;

- Useful lives of long-lived assets;
- Fair value measurements; and
- Income tax accounting.

We have discussed the selection of the aforementioned critical accounting policies with the audit committee of Liberty Global's board of directors. For additional information regarding our significant accounting policies, see note 3 to our consolidated financial statements.

Impairment of Property and Equipment and Intangible Assets

Carrying Value. The aggregate carrying value of our property and equipment and intangible assets (including goodwill) that was held for use comprised 61.8% of our total assets at December 31, 2016.

When circumstances warrant, we review the carrying amounts of our property and equipment and our intangible assets (other than goodwill) to determine whether such carrying amounts continue to be recoverable. Such changes in circumstance may include (i) an expectation of a sale or disposal of a long-lived asset or asset group, (ii) adverse changes in market or competitive conditions, (iii) an adverse change in legal factors or business climate in the markets in which we operate and (iv) operating or cash flow losses. For purposes of impairment testing, long-lived assets are grouped at the lowest level for which cash flows are largely independent of other assets and liabilities, generally at or below the reporting unit level (see below). If the carrying amount of the asset or asset group is greater than the expected undiscounted cash flows to be generated by such asset or asset group, an impairment adjustment is recognized. Such adjustment is measured by the amount that the carrying value of such asset or asset group exceeds its fair value. We generally measure fair value by considering (a) sale prices for similar assets, (b) discounted estimated future cash flows using an appropriate discount rate and/or (c) estimated replacement cost. Assets to be disposed of are recorded at the lower of their carrying amount or fair value less costs to sell.

We evaluate goodwill for impairment at least annually on October 1 and whenever facts and circumstances indicate that the carrying amount of goodwill may not be recoverable. For impairment evaluations with respect to goodwill, we first make a qualitative assessment to determine if goodwill may be impaired. If it is more-likely-than-not that a reporting unit's fair value is less than its carrying value, we then compare the fair value of the reporting unit to its respective carrying amount. A reporting unit is an operating segment or one level below an operating segment (referred to as a "component"). We have identified one reporting unit to which all goodwill is assigned. If the carrying value of a reporting unit were to exceed its fair value, we would then compare the implied fair value of the reporting unit's goodwill to its carrying amount, and any excess of the carrying amount over the fair value would be charged to operations as an impairment loss.

When required, considerable management judgment is necessary to estimate the fair value of reporting units and the underlying long-lived and indefinite-lived assets. We typically determine fair value using an income-based approach (discounted cash flows) based on assumptions in our long-range business plans and, in some cases, a combination of an income-based approach and a market-based approach. With respect to our discounted cash flow analysis used in the income-based approach, the timing and amount of future cash flows under these business plans require estimates of, among other items, subscriber growth and retention rates, rates charged per product, expected gross margin and Segment OCF margin and expected property and equipment additions. The development of these cash flows, and the discount rate applied to the cash flows, is subject to inherent uncertainties, and actual results could vary significantly from such estimates. Our determination of the discount rate is based on a weighted average cost of capital approach, which uses a market participant's cost of equity and after-tax cost of debt and reflects the risks inherent in the cash flows. Based on the results of our 2016 qualitative assessment of our reporting unit carrying value, we determined that it was more-likely-than-not that fair value exceeded carrying value for the reporting unit.

During 2016, 2015 and 2014, we recorded no material impairments of our property and equipment and intangible assets (including goodwill). For additional information, see note 7 to our consolidated financial statements.

If, among other factors, (i) our enterprise value or Liberty Global's equity values were to decline significantly or (ii) the adverse impacts of economic, competitive, regulatory or other factors were to cause our results of operations or cash flows to be worse than anticipated, we could conclude in future periods that impairment charges are required in order to reduce the carrying values of our goodwill and, to a lesser extent, other long-lived assets. Any such impairment charges could be significant.

Costs Associated with Construction and Installation Activities

We capitalize costs associated with the construction of new cable and mobile transmission and distribution facilities and the installation of new cable services. Installation activities that are capitalized include (i) the initial connection (or drop) from our cable system to a customer location, (ii) the replacement of a drop and (iii) the installation of equipment for additional services, such as digital cable, telephone or broadband internet service. The costs of other customer-facing activities, such as reconnecting customer locations where a drop already exists, disconnecting customer locations and repairing or maintaining drops, are expensed as incurred.

The nature and amount of labor and other costs to be capitalized with respect to construction and installation activities involves significant judgment. In addition to direct external and internal labor and materials, we also capitalize other costs directly attributable to our construction and installation activities, including dispatch costs, quality-control costs, vehicle-related costs and certain warehouse-related costs. The capitalization of these costs is based on time sheets, time studies, standard costs, call tracking systems and other verifiable means that directly link the costs incurred with the applicable capitalizable activity. We continuously monitor the appropriateness of our capitalization policies and update the policies when necessary to respond to changes in facts and circumstances, such as the development of new products and services and changes in the manner that installations or construction activities are performed.

Useful Lives of Long-lived Assets

We depreciate our property and equipment on a straight-line basis over the estimated useful lives of the assets. The determination of the useful lives of property and equipment requires significant management judgment, based on factors such as the estimated physical lives of the assets, technological changes, changes in anticipated use, legal and economic factors, rebuild and equipment swap-out plans, and other factors. Our intangible assets with finite lives primarily consist of customer relationships. Customer relationship intangible assets are amortized on a straight-line basis over the estimated weighted average life of the customer relationships. The determination of the estimated useful life of customer relationship intangible assets requires significant management judgment and is primarily based on historical and forecasted subscriber disconnect rates, adjusted when necessary for risk associated with demand, competition, technological changes and other economic factors. We regularly review whether changes to estimated useful lives are required in order to accurately reflect the economic use of our property and equipment and intangible assets with finite lives. Any changes to estimated useful lives are reflected prospectively. Our depreciation and amortization expense during 2016, 2015 and 2014, was £1,650.8 million, £1,557.8 million and £1,608.1 million, respectively. A 10% increase in the aggregate amount of our depreciation and amortization expense during 2016 would have resulted in a £165.1 million or 47.4% decrease in our 2016 operating income.

Fair Value Measurements

U.S. GAAP provides guidance with respect to the recurring and nonrecurring fair value measurements and for a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. Level 1 inputs are quoted market prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date. Level 2 inputs are inputs other than quoted market prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability.

Recurring Valuations. We perform recurring fair value measurements with respect to our derivative instruments and certain instruments that we classify as debt, each of which are carried at fair value. We use (i) cash flow valuation models to determine the fair values of our interest rate and foreign currency derivative instruments and (ii) a binomial option pricing model to determine the fair values of our equity-related derivative instruments. For a detailed discussion of the inputs we use to determine the fair value of our derivative instruments, see note 6 to our consolidated financial statements. See also note 5 to our consolidated financial statements for information regarding our derivative instruments.

Changes in the fair values of our derivative instruments and certain instruments that we classify as debt have had, and we believe will continue to have, a significant and volatile impact on our results of operations. During 2016, 2015 and 2014, we recognized net gains of £661.3 million, £253.1 million and £48.6 million, respectively, attributable to changes in the fair values of these items.

As further described in note 5 to our consolidated financial statements, actual amounts received or paid upon the settlement of our derivative instruments may differ materially from the recorded fair values at December 31, 2016.

For information regarding the sensitivity of the fair value of certain of our more significant derivative instruments to changes in market conditions, see *Quantitative and Qualitative Disclosures About Market Risk — Sensitivity Information* below.

Nonrecurring Valuations. Our nonrecurring valuations are primarily associated with (i) the application of acquisition accounting and (ii) impairment assessments, both of which require that we make fair value determinations as of the applicable valuation date. In making these determinations, we are required to make estimates and assumptions that affect the recorded amounts, including, but not limited to, expected future cash flows, market comparables and discount rates, remaining useful lives of long-lived assets, replacement or reproduction costs of property and equipment and the amounts to be recovered in future periods from acquired net operating losses and other deferred tax assets. To assist us in making these fair value determinations, we may engage third-party valuation specialists. Our estimates in this area impact, among other items, the amount of depreciation and amortization, impairment charges and income tax expense or benefit that we report. Our estimates of fair value are based upon assumptions we believe to be reasonable, but which are inherently uncertain. All of our long-lived assets are subject to impairment assessments. For additional information, see notes 6 and 7 to our consolidated financial statements.

Income Tax Accounting

We are required to estimate the amount of tax payable or refundable for the current year and the deferred tax assets and liabilities for the future tax consequences attributable to differences between the financial statement carrying amounts and income tax basis of assets and liabilities and the expected benefits of utilizing net operating loss and tax credit carryforwards, using enacted tax rates in effect for each taxing jurisdiction in which we operate for the year in which those temporary differences are expected to be recovered or settled. This process requires our management to make assessments regarding the timing and probability of the ultimate tax impact of such items.

Net deferred tax assets are reduced by a valuation allowance if we believe it more-likely-than-not such net deferred tax assets will not be realized. Establishing or reducing a tax valuation allowance requires us to make assessments about the timing of future events, including the probability of expected future taxable income and available tax planning strategies. At December 31, 2016, the aggregate valuation allowance provided against deferred tax assets was £2,519.6 million. The actual amount of deferred income tax benefits realized in future periods will likely differ from the net deferred tax assets reflected in our December 31, 2016 consolidated balance sheet due to, among other factors, possible future changes in income tax law or interpretations thereof in the jurisdictions in which we operate and differences between estimated and actual future taxable income. Any such factors could have a material effect on our current and deferred tax positions as reported in our consolidated financial statements. A high degree of judgment is required to assess the impact of possible future outcomes on our current and deferred tax positions.

Tax laws in jurisdictions in which we have a presence are subject to varied interpretation, and many tax positions we take are subject to significant uncertainty regarding whether the position will be ultimately sustained after review by the relevant tax authority. We recognize the financial statement effects of a tax position when it is more-likely-than-not, based on technical merits, that the position will be sustained upon examination. The determination of whether the tax position meets the more-likely-than-not threshold requires a facts-based judgment using all information available. In a number of cases, we have concluded that the more-likely-than-not threshold is not met and, accordingly, the amount of tax benefit recognized in our consolidated financial statements is different than the amount taken or expected to be taken in our tax returns. As of December 31, 2016, the amount of unrecognized tax benefits for financial reporting purposes, but taken or expected to be taken on tax returns, was £17.3 million, of which £3.9 million would have a favorable impact on our effective income tax rate if ultimately recognized, after considering amounts that we would expect to be offset by valuation allowances.

We are required to continually assess our tax positions, and the results of tax examinations or changes in judgment can result in substantial changes to our unrecognized tax benefits.

We have taxable outside basis differences on certain investments in non-U.S. subsidiaries. We do not recognize the deferred tax liabilities associated with these outside basis differences when the difference is considered essentially permanent in duration. In order to be considered essentially permanent in duration, sufficient evidence must indicate that the foreign subsidiary has invested or will invest its undistributed earnings indefinitely, or that earnings will be remitted in a tax-free liquidation. If circumstances change and it becomes apparent that some or all of the undistributed earnings will be remitted on a taxable basis in the foreseeable future, a net deferred tax liability must be recorded for some or all of the outside basis difference. The assessment of whether these outside basis differences are considered permanent in nature requires significant judgment and is based on management's intentions to reinvest the earnings of a foreign subsidiary indefinitely in light of anticipated liquidity requirements and other relevant factors. At December 31, 2016, income and withholding taxes for which a net deferred tax liability might otherwise be required have not been provided on an estimated £5.1 billion of cumulative temporary differences on non-U.S. entities, including cumulative translation adjustments. If our plans or intentions change in the future due to liquidity or other relevant considerations, we could decide that it would be prudent to repatriate significant funds or other assets from one or more of our subsidiaries, even though we would incur a tax liability in connection with any such repatriation. If our plans or intentions were to change in this manner, the recognition of all or a part of these outside basis differences could have an adverse impact on our consolidated results of operations.

For additional information regarding our income taxes, see note 9 to our consolidated financial statements.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk in the normal course of our business operations due to our ongoing investing and financing activities. Market risk refers to the risk of loss arising from adverse changes in foreign currency exchange rates and interest rates. The risk of loss can be assessed from the perspective of adverse changes in fair values, cash flows and future earnings. As further described below, we have established policies, procedures and processes governing our management of market risks and the use of derivative instruments to manage our exposure to such risks.

Cash

We invest our cash in highly liquid instruments that meet high credit quality standards. At December 31, 2016, £12.9 million or 58.4%, £7.9 million or 35.7% and £1.3 million or 5.9% of our consolidated cash balances were denominated in euros, U.S. dollars and pound sterling, respectively.

Foreign Currency Risk

We are exposed to foreign currency exchange rate risk with respect to our consolidated debt in situations where our debt is denominated in U.S. dollars and euros. Although we generally seek to match the denomination of our and our subsidiaries' borrowings with our functional currency, market conditions or other factors may cause us to enter into borrowing arrangements that are not denominated in our functional currency (unmatched debt). In these cases, our policy is to provide for an economic hedge against foreign currency exchange rate movements by using derivative instruments to synthetically convert unmatched debt into the applicable underlying currency. At December 31, 2016, substantially all of our debt was either directly or synthetically matched to our functional currency. For additional information regarding the terms of our derivative instruments, see note 5 to our consolidated financial statements.

In addition to the exposure that results from the mismatch of our borrowings and our functional currency, we are exposed to foreign currency risk to the extent that we enter into transactions denominated in currencies other than our functional currency (non-functional currency risk), such as equipment purchases, programming contracts, notes payable and notes receivable (including intercompany amounts). Changes in exchange rates with respect to amounts recorded in our consolidated balance sheets related to these items will result in unrealized (based upon period-end exchange rates) or realized foreign currency transaction gains and losses upon settlement of the transactions. Moreover, to the extent that our costs and expenses are denominated in currencies other than our functional currency, we will experience fluctuations in our costs and expenses solely as a result of changes in foreign currency exchange rates. In this regard, we currently expect that during 2017, (i) none of our revenue, (ii) approximately 1% to 3% of our direct costs of services and other operating and SG&A expenses (exclusive of share-based compensation expense) and (iii) approximately nil to 2% of our property and equipment additions will be denominated in non-functional currencies, including amounts denominated in U.S. dollars. Our expectations with respect to our non-functional currency transactions in 2017 may differ from actual results. Generally, we will consider hedging non-functional currency risks when the risks arise from agreements with third parties that involve the future payment or receipt of cash or other monetary items to the extent that we can reasonably predict the timing and amount of such payments or receipts and the payments or receipts are not otherwise hedged. In this regard, we have entered into related-party foreign currency forward contracts to hedge certain of these risks. Certain non-functional currency risks related to our direct costs of services and other operating and SG&A expenses and property and equipment additions were not hedged as of December 31, 2016. For additional information regarding our derivative instruments, see note 5 to our consolidated financial statements.

The relationship between (i) the euro and the U.S. dollar and (ii) the pound sterling, which is our reporting currency, is shown below, per one pound sterling:

	As of December 31,	
	2016	2015
Spot rates:		
Euro	1.1705	1.3559
U.S. dollar	1.2345	1.4734

	Year ended December 31,		
	2016	2015	2014
Average rates:			
Euro	1.2207	1.3767	1.2045
U.S. dollar	1.3500	1.5279	1.6474

Inflation Risk

We are subject to inflationary pressures with respect to labor, programming and other costs. While we attempt to increase our revenue to offset increases in costs, there is no assurance that we will be able to do so. Therefore, costs could rise faster than associated revenue, thereby resulting in a negative impact on our operating results, cash flows and liquidity. The economic environment in the U.K. and Ireland is a function of government, economic, fiscal and monetary policies and various other factors beyond our control that could lead to inflation. We are unable to predict the extent that price levels might be impacted in future periods by the current state of the economies in the U.K. and Ireland.

Interest Rate Risks

We are exposed to changes in interest rates primarily as a result of our borrowing activities, which include fixed-rate and variable-rate borrowings by our subsidiaries. Our primary exposure to variable-rate debt is through our LIBOR-indexed VM Credit Facilities.

In general, we seek to enter into derivative instruments to protect against increases in the interest rates on our variable-rate debt. Accordingly, we have entered into various derivative transactions to reduce exposure to increases in interest rates. We use interest rate derivative contracts to exchange, at specified intervals, the difference between fixed and variable interest rates calculated by reference to an agreed-upon notional principal amount. We may also use interest rate cap and collar agreements that lock in a maximum interest rate if variable rates rise, but also allow our company to benefit, to a limited extent in the case of collars, from declines in market rates. At December 31, 2016, we effectively paid a fixed interest rate on substantially all of our total third-party debt. The final maturity dates of our various portfolios of interest rate derivative instruments generally fall short of the respective maturities of the underlying variable-rate debt. In this regard, we use judgment to determine the appropriate maturity dates of our portfolios of interest rate derivative instruments, taking into account the relative costs and benefits of different maturity profiles in light of current and expected future market conditions, liquidity issues and other factors. For additional information regarding the terms of these interest rate derivative instruments, see note 5 to our consolidated financial statements.

Weighted Average Variable Interest Rate. At December 31, 2016, the outstanding principal amount of our variable-rate indebtedness aggregated £4.4 billion, and the weighted average interest rate (including margin) on such variable-rate indebtedness was approximately 3.3%, excluding the effects of interest rate derivative contracts, deferred financing costs, original issue premiums or discounts and commitment fees, all of which affect our overall cost of borrowing. Assuming no change in the amount outstanding, and without giving effect to any interest rate derivative contracts, deferred financing costs, original issue premiums or discounts and commitment fees, a hypothetical 50 basis point (0.50%) increase (decrease) in our weighted average variable interest rate would increase (decrease) our annual interest expense and cash outflows by £22.0 million. As discussed above and in note 5 to our consolidated financial statements, we use interest rate derivative contracts to manage our exposure to increases in variable interest rates. In this regard, increases in the fair value of these contracts generally would be expected to offset most of the economic impact of increases in the variable interest rates applicable to our indebtedness to the extent and during the period that principal amounts are matched with interest rate derivative contracts.

Counterparty Credit Risk

We are exposed to the risk that the counterparties to our derivative instruments and undrawn debt facilities will default on their obligations to us. We manage these credit risks through the evaluation and monitoring of the creditworthiness of, and concentration of risk with, the respective counterparties. In this regard, credit risk associated with our derivative instruments and undrawn debt facilities is spread across a relatively broad counterparty base of banks and financial institutions. Collateral is generally not posted by either party under the derivative instruments. Most of our cash currently is invested in either (i) AAA credit rated money market funds, including funds that invest in government obligations, or (ii) overnight deposits with banks having a minimum credit rating of A by Standard & Poor's or an equivalent rating by Moody's Investor Service. To date, neither the access to nor the value of our cash and cash equivalent balances have been adversely impacted by liquidity problems of financial institutions.

At December 31, 2016, our exposure to counterparty credit risk included (i) derivative assets with an aggregate fair value of £1,036.5 million, (ii) aggregate undrawn debt facilities of £675.0 million and (iii) cash and cash equivalent and restricted cash balances of £23.2 million**.**

We have entered into derivative instruments under master agreements with each counterparty that contain master netting arrangements that are applicable in the event of early termination by either party to such derivative instrument. The master netting arrangements under each of these master agreements are limited to the derivative instruments governed by the relevant master agreement and are independent of similar arrangements.

Under our derivative contracts, it is generally only the non-defaulting party that has a contractual option to exercise early termination rights upon the default of the other counterparty and to set off other liabilities against sums due upon such termination. However, in an insolvency of a derivative counterparty, under the laws of certain jurisdictions, the defaulting counterparty or its insolvency representatives may be able to compel the termination of one or more derivative contracts and trigger early termination payment liabilities payable by us, reflecting any mark-to-market value of the contracts for the counterparty. Alternatively, or in addition, the insolvency laws of certain jurisdictions may require the mandatory set off of amounts due under such derivative contracts against present and future liabilities owed to us under other contracts between us and the relevant counterparty. Accordingly, it is possible that we may be subject to obligations to make payments, or may have present or future liabilities owed to us partially or fully discharged by set off as a result of such obligations, in the event of the insolvency of a derivative counterparty, even though it is the counterparty that is in default and not us. To the extent that we are required to make such payments, our ability to do so will depend on our liquidity and capital resources at the time. In an insolvency of a defaulting counterparty, we will be an unsecured creditor in respect of any amount owed to us by the defaulting counterparty, except to the extent of the value of any collateral we have obtained from that counterparty.

In addition, where a counterparty is in financial difficulty, under the laws of certain jurisdictions, the relevant regulators may be able to (i) compel the termination of one or more derivative instruments, determine the settlement amount and/or compel, without any payment, the partial or full discharge of liabilities arising from such early termination that are payable by the relevant counterparty or (ii) transfer the derivative instruments to an alternative counterparty.

While we currently have no specific concerns about the creditworthiness of any counterparty for which we have material credit risk exposures, the current economic conditions and uncertainties in global financial markets have increased the credit risk of our counterparties and we cannot rule out the possibility that one or more of our counterparties could fail or otherwise be unable to meet its obligations to us. Any such instance could have an adverse effect on our cash flows, results of operations, financial condition and/or liquidity.

Although we actively monitor the creditworthiness of our key vendors, the financial failure of a key vendor could disrupt our operations and have an adverse impact on our revenue and cash flows.

Sensitivity Information

Information regarding the sensitivity of the fair value of certain of our more significant derivative instruments to changes in market conditions is set forth below. The potential changes in fair value set forth below do not include any amounts associated with the remeasurement of the derivative asset or liability into the applicable functional currency. For additional information, see notes 5 and 6 to our consolidated financial statements.

Cross-currency and Interest Rate Derivative Contracts

Holding all other factors constant, at December 31, 2016:

(i) an instantaneous increase (decrease) of 10% in the value of the pound sterling relative to the U.S. dollar would have decreased (increased) the aggregate fair value of the cross-currency and interest rate derivative contracts by approximately £821 million;

(ii) an instantaneous increase (decrease) in the relevant base rate of 50 basis points (0.50%) would have increased (decreased) the aggregate fair value of the cross-currency and interest rate derivative contracts by approximately £120 million; and

(iii) an instantaneous increase (decrease) of 10% in the value of the euro relative to the U.S. dollar would have decreased (increased) the aggregate fair value of the cross-currency derivative contracts by approximately £38 million.

Projected Cash Flows Associated with Derivative Instruments

The following table provides information regarding the projected cash flows associated with our derivative instruments. The pound sterling equivalents presented below are based on interest rates and exchange rates that were in effect as of December 31, 2016. These amounts are presented for illustrative purposes only and will likely differ from the actual cash payments required in future periods. For additional information regarding our derivative instruments see note 5 to our consolidated financial statements. For information regarding the counterparty credit risk associated with our derivative instruments, see the discussion under *Counterparty Credit Risk* above.

	Payments (receipts) due during:						
	2017	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
				in millions			
Projected derivative cash payments (receipts), net:							
Interest-related (a)	£ (35.6)	£ (49.4)	£ (39.2)	£ (39.1)	£ (29.0)	£ 27.7	£ (164.6)
Principal-related (b)	—	—	4.5	—	(86.1)	(1,024.4)	(1,106.0)
Total	£ (35.6)	£ (49.4)	£ (34.7)	£ (39.1)	£ (115.1)	£ (996.7)	£ (1,270.6)

(a) Includes the interest-related cash flows of our cross-currency and interest rate swap contracts.

(b) Includes the principal-related cash flows of our cross-currency swap contracts.