Annual Report
December 31, 2020

THE VIRGIN MEDIA GROUP
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United States

THE VIRGIN MEDIA GROUP

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PART I

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 *Part I. Business, Part I. Risk Factors, Part II. Management's Discussion and Analysis of Financial Condition and Results of Operations* and *Part II. Quantitative and Qualitative Disclosures About Market Risk* may contain forward-looking statements, including statements regarding our business, product, foreign currency and finance strategies, future network extensions, subscriber growth and retention rates, competitive, regulatory and economic factors, the timing and impacts of proposed transactions, the maturity of our markets, the potential impact of the outbreak of the coronavirus (**COVID-19**) on our company, 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, interest rate risks, target leverage levels, debt covenants, 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 *Part I. Risk Factors* and *Part II. 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 United Kingdom (**U.K.**) and Ireland;
- the competitive environment in the broadband internet, cable television 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 and broadband internet usage 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 broadband internet, cable television, 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 U.K. and Ireland 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;
- our ability to successfully acquire new businesses and, if acquired, to integrate, realize anticipated efficiencies from, and implement our business plan with respect to, the businesses we have acquired or that we expect to acquire;
- changes in laws or treaties relating to taxation, or the interpretation thereof, in the U.K. and Ireland;
- 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;
- our ability to navigate the potential impacts on our business of the U.K.'s departure from the E.U.;
- 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 program in the U.K. and Ireland (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;
- 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 Enterprises 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, epidemics, pandemics (such as COVID-19) 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" and "us" refer to the Virgin Media Group. Unless otherwise indicated, operational and statistical data, including subscriber statistics and product offerings, are as of December 31, 2020.

Introduction

Virgin Media Inc. (**Virgin Media**) and NewCo Holdco 5 Limited are indirect wholly-owned subsidiaries of Liberty Global plc (**Liberty Global**). The accompanying combined financial statements include the historical financial information of (i) Virgin Media and its subsidiaries and (ii) NewCo Holdco 5 Limited and its subsidiaries (**VM Ireland**) (collectively, the **Virgin Media Group**).

The Virgin Media Group provides broadband internet, video, fixed-line telephony, mobile and broadcasting services in the U.K. and Ireland, and is one of the largest providers of residential communications services in these countries 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 internet services than other digital subscriber line (**DSL**) market participants. As a result, we provide our customers with a leading next generation broadband internet service and one of the most advanced interactive television services available in the U.K. and Irish markets.

Our residential broadband internet subscribers access the internet at various download speeds ranging up to 1.1 Gbps, making the Virgin Media Group the largest gigabit speed provider in the U.K. and Ireland. Our Gig1 services are available in 46% of our U.K. footprint, representing 7.1 million premises, and in 98% of our Irish footprint. 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, ultra high definition (**UHD**), high definition (**HD**) 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 an international converged broadband internet, video, fixed-line telephony and mobile services company operating under the consumer brands Virgin Media, Telenet, UPC, the combined Sunrise UPC, as well as VodafoneZiggo, which is owned through a 50/50 joint venture. Liberty Global's substantial scale and commitment to innovation enable it to invest in the infrastructure and digital platforms that empower its customers to make the most of the digital revolution. Liberty Global delivers market-leading products through next-generation networks that connect customers subscribing to 49 million (at December 31, 2020) broadband internet, video, fixed-line telephony and mobile services across its brands. Liberty Global also has significant investments in ITV, All3Media, CANAL+ Polska, LionsGate, the Formula E racing series and several regional sports networks.

On May 7, 2020, Liberty Global entered into a Contribution Agreement (the **Contribution Agreement**) with, among others, Telefonica, SA (**Telefonica**). Pursuant to the Contribution Agreement, Liberty Global and Telefonica agreed to form a 50:50 joint venture (the **U.K. JV**), which will combine Virgin Media, along with certain other Liberty Global subsidiaries created as a result of the pending U.K. JV (together, the **U.K. JV Entities**) with Telefonica's mobile business in the U.K. to create a nationwide integrated communications provider. In advance of this transaction, we completed certain recapitalization financings, as described in note 8. The outstanding third-party debt associated with the U.K. JV Entities will be contributed in full to the U.K. JV, and the transaction will not trigger a change of control under the Virgin Media Group's debt agreements.

The U.K. JV intends to distribute available cash to the shareholders periodically and is expected to undertake periodic further recapitalizations, subject to market and operating conditions, to maintain a target net leverage ratio ranging between 4.0 and 5.0 times EBITDA (as defined in the applicable shareholders' agreement). The consummation of the transaction contemplated by the Contribution Agreement is subject to certain conditions, including competition clearance by the applicable regulatory authorities. The Contribution Agreement also includes customary termination rights, including a right of the parties to terminate the agreement if the transaction has not closed within 24 months following the date of the Contribution Agreement, which may be extended by six months under certain circumstances.

Operating Statistics

The following table shows our operating statistics as of December 31, 2020:

CABLE	U.K.	Ireland	Combined
Footprint			
Homes Passed[1]	15,310,800	946,500	16,257,300
Fixed-Line Customer Relationships[2]			
Fixed-line Customer Relationships	5,626,700	435,200	6,061,900
RGUs per Customer Relationship	2.38	2.28	2.37
Subscribers (RGUs)[3]			
Internet[4]	5,420,100	383,000	5,803,100
Video[5]	3,498,000	309,500	3,807,500
Telephony[6]	4,463,200	300,000	4,763,200
Total RGUs	13,381,300	992,500	14,373,800
Customer Bundling			
Fixed-mobile Convergence[7]	25.2%	11.3%	24.3%
Single-Play	20.4%	18.8%	20.2%
Double-Play	21.4%	34.3%	22.4%
Triple-Play	58.2%	46.9%	57.4%
MOBILE			
Mobile Subscribers[8]			
Postpaid	3,223,900	119,600	3,343,500
Prepaid	134,400	—	134,400
Total Mobile subscribers	3,358,300	119,600	3,477,900

(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.

(2) Fixed-line Customer Relationships are the number of customers who receive at least one of our broadband internet, video or telephony services that we count as Revenue Generating Units (**RGUs**), without regard to which or to how many services they subscribe. Fixed-line 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 Fixed-line Customer Relationships. We exclude mobile-only customers from Fixed-line Customer Relationships.

(3) RGU is separately an Internet Subscriber, Video 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 video service, fixed-line telephony service and broadband internet service, the customer would constitute three RGUs. Total RGUs is the sum of Internet, Video 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 internet, cable 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 or 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, 2020 RGU counts exclude our separately reported postpaid and prepaid mobile subscribers.

(4) Internet Subscriber is a home, residential multiple dwelling unit or commercial unit that receives internet services over our networks.

(5) 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. Video Subscribers 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.

(6) 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.

(7) 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.

(8) 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 Subscriber counts after a 30 day period of inactivity.

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 is more profitable 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, 2020, 80% of our cable customers received multiple services from us and 58% 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 sales channels, including inbound and outbound telesales, customer care centers and online. We also engage in direct face-to-face marketing initiatives through a dedicated national sales force, as well as comprehensive national and regional mass media advertising initiatives. During 2020, we permanently closed all U.K. retail stores. We also use outsourced call centers in the U.K., Philippines and India.

Broadband Internet

Connectivity is a critical building block for vibrant communities. As highlighted by the current COVID-19 pandemic, all aspects of society, including families, businesses, education and healthcare, to name a few, rely heavily on connectivity and the digital services that depend on it. To meet our customers' expectations of seamless connectivity, we are developing a fully digital, cloud-based "Connectivity Ecosystem" built on top of our fiber-rich fixed broadband network and mobile network. The Connectivity Ecosystem is orchestrated by a fully cloud-based digital journey, enabling fast and flexible introduction of new hardware and services, as well as cloud-to-cloud open application programming interface integration, which simplifies the on-boarding of new services and devices. The devices used within our Connectivity Ecosystem are connected and protected through our security gateway and VPN, both at home and on the go. At home, our customers can benefit from the gigabit speeds enabled by our "Hub 3 & Hub 4 routers," as well as "Intelligent WiFi," which has optimization functionalities, such as the ability to adapt to the number of people and devices online at any given time in order to improve and extend wireless connectivity reach and speeds. In addition, we introduced our first "Smart Home" bundles, enabling those customers to take their smart home ambitions to the next level, including enhanced entertainment, home automation and home security.

Our Hub 3 & Hub 4 routers are our next generation intelligent WiFi and telephony gateways that enables us to maximize the impact of our ultrafast broadband networks by providing reliable wireless connectivity anywhere in the home. This gateway can be self-installed and allows customers to customize their home WiFi service. We also offer our Connect App that, among other things, allows our customers to find their best WiFi access. In addition, we provide intelligent WiFi boosters, which increase speed, reliability and coverage by adapting to the environment at home. We recently also brought to market and are looking to expand the availability of our new Gigabit Hub 4 router based on DOCSIS 3.1 technology that provides even better in-home WiFi service to customers.

Internet speed is of crucial importance to our customers, as they spend more time streaming video and other bandwidth-heavy services on multiple devices. Our extensive broadband network enables us to deliver ultra high-speed internet service across our markets in the U.K. As of December 31, 2020, we provided broadband internet services to approximately 5.4 million subscribers. We are one of the leading providers of broadband internet access in the U.K. Our residential subscribers access the internet via cable modems connected to their internet capable devices, or wirelessly via a WiFi gateway device. We offer multiple tiers of broadband internet service up to 1.1 Gbps and are now the largest gigabit speed provider in the U.K. with our Gig1 service available in 46% of our U.K. footprint, representing 7.1 million premises. We won the award for Fastest Broadband Provider in the U.K. in 2020. The speed of service depends on the location and the tier of service selected. By leveraging our existing fiber-rich broadband networks and our Network Extension, we are in a position to deliver gigabit services by deploying the next generation DOCSIS 3.1 technology. DOCSIS 3.1 technology is an international standard that defines the requirements for data transmission over a cable system. Not only does DOCSIS 3.1 technology improve our internet speeds, but it also allows for network growth.

We offer value-added broadband services for an incremental charge. These services include Intelligent WiFi features, security (e.g., anti-virus, anti-spyware, firewall and spam protection), Smart Home services and online storage solutions and web spaces. Subscribers to our internet service pay a monthly fee based on the tier of service selected. In addition to the monthly fee, customers pay an activation service fee upon subscribing to an internet service. This one-time fee may be waived for promotional reasons. We determine pricing for each different tier of internet service through an analysis of speed, market conditions and other factors.

We have deployed “Community WiFi” via routers in the home, which provides secure access to the internet for our customers. Community WiFi is enabled by a cable modem WiFi access point (**WiFi Modem**) in a Hub 3 router, Hub 4 router or a set-top box of our internet customers. Community WiFi is created through the sharing of access to the public channel of our customers’ home wireless routers. The public channel is a separate network from the secure private network used by the customer within the home and is automatically enabled when the WiFi Modem is installed. Public WiFi access points (covering train stations, hotels, bars, restaurants and other public places) are also available for no additional cost.

Television

Our digital cable platform includes access to over 230 linear television channels, advanced interactive features and a range of premium subscription-based and PPV services. As of December 31, 2020, we provided digital cable services to approximately 3.5 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 Go, 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 Group plc (**BT**). 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 Set-Top Boxes

We offer three advanced digital set-top boxes, which include multiple tuners enabling recording of multiple programs at the same time. Set-top boxes equipped with digital cable recorders digitally record television programming to a hard disk in real-time, which also 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 (subject to certain conditions), which provide converged television and broadband internet capabilities in the U.K. The Virgin Media V6 box combines 4k ultra-high definition (**UHD/4K)** video with improved streaming functionalities and more processing power. The Virgin Media V6 box has eight tuners, allowing viewers to record six programs while watching a seventh they previously recorded. The TiVo service, combined with the existing digital cable-on-demand service, makes available television shows, movies and children’s programs in addition to supporting web video services such as Netflix, BBC iPlayer, Prime Video and YouTube. As of December 31, 2020, we had approximately 3.4 million TiVo customers, of which more than 2.4 million are using our latest box.

Virgin Media recently introduced its latest TV platform, Virgin TV 360, offering customers a seamless and more personal connected entertainment experience. Virgin TV 360 boasts all of the top TV channels and streaming apps such as Netflix, Amazon Prime Video and BBC iPlayer, all with UHD/4K and high dynamic range viewing capabilities. The upgraded platform also offers a host of new features including a voice activated remote control, Profiles, a new Mini box and Startover. Virgin TV 360 is powered by Horizon, the next-generation entertainment platform developed by Liberty Global, and with access to regular updates and innovations, is Virgin Media’s most advanced and intuitive TV platform to date.

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 and other digital cable-on-demand content including live PPV events. Content is available in broadcast standard definition (**SD**), high definition (**HD**) and UHD/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 internet speed.

The primary categories of content available within Virgin TV On Demand are "catch-up" television programming, boxsets, children's programming and movies (on a PPV and premium subscription basis). 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, but we also offer catch-up television content from All 4, My5, ITV Hub and other pay TV 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 volume in line with the customer's digital cable subscription tier.

The offering includes "Virgin TV Ultra HD" which is a selection of TV series that are mostly exclusive to Virgin TV customers in UHD. 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 Sony, Viacom, NBCU and A&E Networks. Tailored advertising is also inserted across many providers within the basic television SVOD and free catch-up services.

Virgin Movies

Our PPV movie service, Virgin Movies, offers hundreds of titles from all the major studios and the majority of independent distributors, 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 of our digital cable customers have access to Virgin Movies, which, after purchase, may be viewed multiple times within a 48-hour window.

Virgin Media Store

Our Electronic Sell-Through offers television customers and non-customers the opportunity to buy and own movies (usually available before the DVD release or rental) and TV box sets (including series from HBO and Showtime which were previously unavailable to Virgin TV customers). After registering online for a Virgin Media Store Account, content can be purchased and viewed via the Virgin Media Store website. In addition, Virgin TV customers can buy and watch content on their TV via a Virgin TV box powered by TiVo and can also stream or download to watch offline on a compatible mobile device with our Virgin Media Store application (**app**).

Virgin TV Go & Virgin TV Control

Our Virgin TV Go app allows our television customers to stream more than 100 live television channels (depending on your TV package) on up to five devices at no extra cost through their web browser or via mobile apps for compatible Android, iOS and Window devices.

Our TiVo or V6 box customers with iOS or Android mobile devices can manage their box remotely with the Virgin TV Control app. When in the home, these mobile devices can act as a remote control for their boxes. Customers with compatible iOS or Android devices and a V6 box can also watch selected recordings from their V6 box within the home or download them to their devices for offline viewing using the Virgin TV Control app.

Virgin TV Go and Virgin TV Control are available at no extra cost to our digital cable customers. Virgin Media subscribers of Sky Sports 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 (fiber-to-the-home/-cabinet/-building/-node is referred to herein as **FTTx**) networks. We also provide telephony services through voice over internet protocol (**VoIP**) technology and fiber network. 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 inclusive calls to mobile customers, dependent on their specific call plans, 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, 2020, we provided fixed-line telephony services to approximately 4.5 million residential subscribers.

Mobile

Our mobile communication services are currently provided using the mobile network owned by BT/EE Limited (**EE**) through an MVNO arrangement. In 2017, we moved from a light MVNO to a full MVNO arrangement due to a revised agreement with EE, and in October 2020, we completed the SIM swap migration so that all customers are now using our core network. We offer a broad range of mobile communications products and services available on 4G and 3G, including mobile data services, voice and short message service (**SMS**). We also offer a broad range of handsets, including Android and Apple iOS-based smartphones, and mobile internet services, which complement our fixed broadband internet offering.

In November 2019, we entered into a new five-year MVNO agreement with Vodafone U.K. that will replace our existing MVNO arrangement with EE from the start of 2022. The agreement with Vodafone U.K. has enabled the launch of 5G services for our mobile customers in the U.K. from January 2021.

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 3.5 million WiFi hotspots across the U.K., and a further 2.4 million in Europe and the United States (**U.S.**).

Our customer base comprises both postpaid customers, who subscribe to our services for periods ranging from a minimum of 30 days for an airtime contract to up to 36 months for a ‘Freestyle’ handset purchase agreement, and prepaid customers, who top up their accounts prior to using the services and have no minimum contracted term. ‘Freestyle’ mobile contracts provide customers with the flexibility to purchase a handset independently of an airtime contract.

As of December 31, 2020, we had approximately 3.4 million mobile services customers, of which approximately 3.2 million were postpaid customers.

We continue to focus on increasing our proportion of higher-value postpaid customers, expanding our range of higher-value mobile handsets and cross-selling into homes already connected to our cable network.

Business

Through the Virgin Media Business brand, we offer a broad portfolio of business-to-business (**B2B**) voice, data and internet-based solutions to connect, protect and empower small and medium businesses, large enterprises and public sector organizations in the U.K., ranging from data networks, internet cloud and security services to unified communications and cloud collaboration services.

We sell both directly to end customers and through wholesale partners. We also provide dark fiber aggregation solutions to our large wholesale partners and public sector organizations. Business 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 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.

Data, Internet and Security

We offer a full range of high performance internet and data network solutions to securely connect business users and devices to private datacenters, cloud services and applications needed to run their business. In addition to internet and data networks, we offer a new generation of services such as Software Defined Wide Area Networks (**SD-WAN**). SD-WAN gives businesses more control and visibility of data and applications with fast, secure and easy access to the cloud and a next-generation security services. SD-WAN can simplify current infrastructure to accelerate digital transformation. SD-WAN helps businesses move fast without losing control and scale fast and quickly to create new customer touchpoints, giving users the services they need, when and where they need them.

Ethernet

Our Ethernet network has over 300 Ethernet nodes and is capable of carrying a variety of services and high bandwidth applications simultaneously. We have been delivering market-leading Ethernet services for over 15 years, ensuring our Ethernet product portfolio can support stringent real-time communications applications, including VoIP and HD-quality video-conferencing. 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.

Voice and Mobile Services

We offer a comprehensive range of fixed and collaboration services for B2B customers, from simple voice connectivity to unified communications, cloud collaboration and cloud contract center solutions. Our Unified Communications (**UC**) solutions integrate communication options such as phone, video conferencing, instant message and email into a single platform. It allows businesses to improve productivity, enabling their people to collaborate anytime, anywhere and on any device. Our cloud collaboration solutions take things a step further, giving business customers the same full suite of voice, video, chat and contact center applications with the simplicity and flexibility of being hosted in the cloud.

In addition, we provide mobile services to public and private sector B2B customers, providing voice and 4G data services as a reseller of O2's and EE's business services. As a result, we now offer our B2B customers a one-supplier solution for both their fixed and mobile communications needs.

*Bundled offers for small and medium enterprises (**SME**) and small office and home office (**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. Virgin Media Business offers the U.K.'s fastest, widely available broadband internet speed for small businesses, a service offering up to 500 Mbps download speed over Virgin Media's own ultrafast network. SOHO broadband customers are supported by additional 4G mobile data start-up and backup service, offering flexibility between fixed and mobile connectivity.

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. The data is then transmitted to distribution points via coaxial cable for digital broadband signals and digital television and via twisted copper cables for fixed-line telephony. The final connection into each home from the fiber access network comprises two components combined into a single drop cable (twisted copper and coaxial cable). For video and high-speed data services we only use high capacity coaxial cable, which has considerable spectrum and associated bandwidth capabilities and which concurrently supports a full portfolio of linear and digital cable-on-demand services as well as high-speed broadband internet services for both consumers and business customers. Using DOCSIS 3.0, we currently offer download speeds of up to 500 Mbps for consumers and B2B customers on our hybrid-fiber-coaxial network. Using DOCSIS 3.1, we currently offer download speeds of up to 1.1 Gbps for consumers in selected “Gigacities” regions. We have also conducted trials of higher downstream speeds. For fixed-line telephony services, historically we have used the twisted copper pair access network. However, we more recently started to deliver voice services into the home over the coaxial cable. As a result of the extensive use of fiber 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 internet access technologies in the U.K. In recent years, we completed the upgrade from analogue to digital across all of our hybrid fiber coaxial access network footprint. As of December 31, 2020, virtually all of the homes served by our cable network could receive all of our broadband, digital television and fixed-line telephony services. We expect to leverage the latest 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 multi-Gigabit customer download speeds.

During 2015, we initiated the Network Extension. For more information regarding the Network Extension, see “*Strategy and Management Focus - Management’s Discussion and Analysis of Financial Condition and Results of Operations - Overview*”.

Competition

We face intense competition from a variety of entertainment and communications service providers, which offer broadband internet, television, fixed-line telephony and mobile services. In addition, the speed of technological advances and product innovations is 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 enables concurrent delivery of internet access, together with real-time television and digital cable-on-demand content at higher speeds. Our competitors are typically reliant on the access infrastructure of the U.K.’s incumbent telecommunications provider, BT, which has traditionally been based on copper-pair technology from the local exchange or cabinet to the customer’s home. BT is upgrading its infrastructure to provide data services capable of higher speeds, using FTTP technology, but service providers using BT’s copper-based services are subject to performance constraints as the service degrades over distance which affects data download speeds (a characteristic that does not affect cable). 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 serving B2B customers, many aspects of the network can be leveraged at very low incremental costs 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 other providers who serve either residential or B2B customers, but not both.

We also face intense competition in the mobile retail sector, 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 broadband internet, video and fixed-line telephony services to residential users exclusively in areas served by our cable network, whilst offering mobile services throughout the U.K. 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 owns and operates mobile operator, EE), Sky (which is owned by Comcast), 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 sector for broadband internet services. Of those competitors, BT Group (including EE) is the largest retail provider, serving approximately 34% of the total number of broadband internet customers in the U.K. We serve approximately 20% of the total broadband sector in the U.K.

BT provides broadband internet access services to both its own retail arm and third party retail providers over its own "Openreach" network, using a mixture of DSL (copper network-based) technologies and FTTP. In 2020, BT announced its intention to pause the rollout of its G fast technology, a DSL standard applied over the copper local loops, which reached speeds of up to 300 Mbps+, until at least April 2021, having already reached 2.8 million premises across the U.K. Instead, BT has focused its efforts on rollout of an FTTP service supporting 1 Gbps to 4.0 million homes and businesses by March 2021, with current plans to build FTTP in 251 locations, with a target to cover 20 million homes throughout the U.K. by mid- to late-2020s, including 3.2 million in rural areas. In pursuit of those objectives, BT has announced that its FTTP network already reaches 3.5 million premises across the U.K.

Operators such as Sky, TalkTalk and EE have traditionally deployed 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 internet market arising from providers delivering services over the BT network, we may be subject to increased competition in the provision of broadband internet services from new-entrant FTTP providers, mobile internet and technological developments (such as long-term evolution, or "**LTE**", and 5G mobile technology) and other wireless technologies, such as WiFi and Worldwide Interoperability for Microwave Access (**Wi-Max**). For example, EE and Vodafone's 4G mobile coverage has each reached 99% of the U.K. population, and both providers are rolling out 5G to an increasing number of locations across the U.K., with Vodafone now covering 100 locations and EE covering 125 cities and large towns.

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 50% of U.K. television households. Our digital television services compete primarily with those of Sky and BT. Sky is the primary pay satellite television platform in the U.K. and Ireland. Sky owns the U.K. rights to SD, HD and UHD/4K 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.

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 in 2019, retained its exclusive rights to the UEFA Champions League and the UEFA Europa League until 2024. The BT Sport channels are available over BT's internet protocol television platform, or "**IPTV**," Sky's satellite system and our cable network. BT has also launched a BT Sport UHD channel.

Residential customers may also receive digital terrestrial television (**DTT**), which is delivered to customer 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.

The BBC and ITV plc (**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+. A free-to-air internet-connected television service “YouView” is also available to U.K. homes, a joint venture which includes Arqiva, BBC, BT, Channel 4, Channel 5, 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 internet and telephony) with providers BT and TalkTalk.

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 internet connection, through its Sky On Demand, Sky Go and NowTV services. In addition, Netflix, Amazon, Google, Apple and others launched IPTV products. In 2019, ITV and the BBC launched a new joint venture subscription streaming service in the U.K., “Britbox,” which contains archive material as well as some newly commissioned content.

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 and FTTP services mentioned above and next-generation LTE services. We expect continued advances in communications technology and in content, such as an increasing adoption of UHD.

Fixed-line Telephony

We compete primarily with BT in providing telephony services to residential customers in the U.K. BT occupies an established position as the former state provider. We also compete with other telecommunications companies that provide telephony services. These include TalkTalk and Sky, and mobile telephone operators such as EE, O2, 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 telephony 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. 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 sector, 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, 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. MNO to launch 5G in May 2019, with plans to rollout to more than 70 cities and towns by March 2020. EE met its expectations by rolling out further across the U.K., now reaching 112 cities and large towns in 2020. Vodafone, O2 and 3 U.K. also rolled out 5G services in a number of towns and cities throughout the U.K. during 2020. In November 2019, we entered into a new 5-year MVNO deal with Vodafone that would enable the launch of 5G services for our mobile customers in the U.K. in the near future.

Business

The U.K. B2B telecommunications industry 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, which acquired C&W Worldwide in July 2012, 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 which target small B2B customers.

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

Ireland

Our operations in Ireland are conducted through VM Ireland, which is the largest cable television operator in Ireland by number of customers, and through Virgin Media Television Limited (**VMTV**), which is the largest independent television channel in Ireland. VM Ireland provides broadband internet, video 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, 2020, VM Ireland provided services to an aggregate of 435,200 customers, comprising approximately one million RGUs (including 383,000 broadband internet subscribers, 309,500 video subscribers and 300,000 fixed-line telephony subscribers) across a footprint of 946,500 Homes Passed. In addition, VM Ireland provided services to 119,600 mobile subscribers. VM Ireland provides digital video services via cable. Highlights of VM Ireland and VMTV include:

- For video subscribers, the Virgin TV product suite offers different packages ranging to a top tier with 142 video channels and 31 radio channels, along with a variety of premium channels, HD programming, a PPV service and a complimentary VTV Anywhere app available via online and mobile;

- Virgin TV service was previously offered on Liberty Global's "Horizon 3" set-top box platform. Starting in October 2020, VM Ireland has been migrating to the new Virgin TV 360 box, which was launched via the "Bring on Amazing" advertising campaign, which utilizes the next iteration of the Liberty platform, "Horizon 4";

- 98% of VM Ireland's footprint is now capable of receiving download speeds of up to 1 Gbps, with 1 Gbp products launched commercially in August 2020;

- Community WiFi networks have been launched in a number of urban centers with plans to activate this network throughout our Ireland footprint;

- Digital telephony, via VoIP, with multiple value-added features;

- A mobile telephony service via an MVNO arrangement with Three Ireland (Hutchison) Limited. This service is available to all consumers in the Republic of Ireland; and

- VMTV continued to be Ireland's number one commercial broadcaster offering three free-air channels and six extra sports channels with extensive sports coverage across the 2020 UEFA Champions League and Europa League.

Regulatory Matters

Overview

Legislative Framework

During 2020, our business activities have been subject to the laws and regulations of the E.U., the U.K. and Ireland. From January 1, 2021, the laws and regulations of the E.U. will continue to apply within Ireland, however, they will cease to apply to the U.K. business following the termination of the Brexit transition period and the U.K.'s exit from the Single Market.

The U.K. formally left the E.U. on January 31, 2020, commonly referred to as "**Brexit**," and entered into a transition period until December 31, 2020. On December 24, 2020, the U.K. and the E.U. reached the "Trade and Cooperation Agreement" referred to as the "**E.U.-U.K. Agreement**." On December 30, 2020, the E.U.-U.K. Agreement was approved by the U.K. Parliament, with retrospective ratification from the E.U. Parliament expected to follow in 2021. In the meantime, the E.U.-U.K. Agreement has been provisionally brought into effect. The E.U.-U.K. Agreement focuses on four main sectors, namely (1) trade, (2) economic and social cooperation, (3) security and (4) governance. Trade in goods between the E.U. and the U.K. will take place on a zero tariff and zero quota basis. Additionally, even though checks will apply to all traded goods, customs procedures will be simplified. Principles on state aid are also contained in the E.U.-U.K. Agreement to prevent either side from granting unfair subsidies, and a dispute settlement mechanism is provided to ensure businesses from the E.U. and the U.K. compete on a level playing field. In the services sector, the U.K. will no longer benefit from the freedom to supply services across the E.U., and free movement of persons between the E.U. and the U.K. has ended. In addition, the E.U.-U.K. Agreement does not cover audiovisual services. With respect to data movement between the two regions, the E.U. will allow personal data to flow to the U.K. for four months (extendable to six months) without any changes, as it continues its adequacy assessment of the U.K.'s data protection regime, while the U.K. indicated that free flow of data to the E.U. will be allowed. In relation to the telecommunications sector, the U.K. and the E.U. have agreed to maintain the existing levels of liberalization in their markets, including standard provisions on authorizations, access to and use of telecoms networks, interconnection, fair and transparent regulation and the allocation of scarce resources. Service providers from either the E.U. or the U.K. will not have to wait for prior authorization before they deliver services. The E.U.-U.K. Agreement contains measures to encourage cooperation on the promotion of fair and transparent rates for international mobile roaming. The effects of Brexit could adversely affect our business, results of operations and financial condition, as more fully detailed in *Risk Factors* included in Part I of this annual report. There can be no assurance that future U.K. policy in this area will remain as favorable to our company as is currently the case.

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 were 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 Electronic Communications Code (the "**Code**") is the primary source of communications regulation in the E.U. The Code came into effect on December 20, 2018, as part of the Digital Single Market strategy with a deadline to be transposed into national law by December 21, 2020. Although many of the rules under the Regulatory Framework have been included in the Code, there are significant changes required to be implemented by Member States, with most Member States reported to be late with the implementation of the changes that were prescribed by the Code.

The Code, similar to the Regulatory Framework, primarily seeks to develop open markets for communication services within Europe. It harmonizes the rules within the E.U. for the establishment and operation of electronic communication networks, including cable television and traditional telephony networks, and the offer of electronic communication services, such as telephony (including OTT services), internet and, to some degree, television services. The Code also includes a number of provisions aimed at providing incentives to boost private sector investment in very high capacity networks and stimulating the harmonization of spectrum licensing to encourage investment in mobile networks, with the intent to result in more advanced services. The Code does not generally address content matters, including radio and television programming, which are specifically regulated by the Audiovisual Media Services (**AVMS**) Directive.

In the U.K., the Code has been largely transposed into U.K. law. Ofcom published its final statement on October 27, 2020, which set out the end-user requirements albeit differing transition periods have been implemented for certain aspects of the Code to give U.K. operators time to implement, particularly as a result of the impact of COVID-19.

In the U.K., the Regulatory Framework is implemented through (i) the Communications Act 2003 (as amended), 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.

Telecommunications companies in the U.K., including the Virgin Media Group, 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. In addition, Ofcom regulates both linear and on-demand programming, with regulatory requirements, which were derived from the AVMS Directive.

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. A new European Telecommunications Code is due to be transposed into Irish law in 2021. This code will revise the existing regulatory framework in Ireland, which has been in place since 2011.

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 citizens in relation to communications matters and furthering the interests of consumers, in relevant markets where appropriate, by promoting competition. Ofcom is also responsible for regulating the BBC, a role previously undertaken by the BBC Trust. In December 2020, it was also announced that Ofcom has been appointed as the regulatory body responsible for online harms in the U.K., but the legislation which underpins the regulatory framework, the Online Safety Bill, still needs to progress through Government and Parliament before being passed. The U.K. Competition and Markets Authority (**CMA**) has jurisdiction with respect to competition matters.

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. VMTV Ireland, a wholly-owned subsidiary of Virgin Media Limited, has broadcasting licenses from the BAI for its television channels: Virgin Media One, Virgin Media Two, Virgin Media Three and Virgin Media Sport. A new media commission will replace the BAI later this year when a bill providing for online media and safety regulation is enacted into Irish law. This legislation will also transpose the audio video media services directive into Irish law.

End of Contract Notifications and Annual Best Tariff Notifications

In 2019, Ofcom issued new regulatory requirements originating from the Code that, effective from February 2020, obligate providers to (i) alert customers who are approaching the end of a minimum contract term to the fact that their contract period is coming to an end and to set out the best new price that the provider can offer them and (ii) once a year, alert customers who are out of contract to that fact and again confirm the best new price the provider can offer them. In both cases, providers must also set out the price available to new customers for an equivalent service offering. These new requirements adversely impacted our revenue and increased certain of our costs in the U.K. during 2020, and we expect additional and potentially more significant adverse impacts on our operating results in the U.K. in future periods.

Broadband Internet Expansion

At the end of 2019, super-fast broadband internet was available to more than 95% of U.K. premises. To stimulate private investment in this endeavor, the U.K. government has been using money from the publicly funded BBC license fee, underspend from the Analogue TV Switch-Off Project and other sources of public investment. The state aid measure permitting this subsidy was renewed (and amended) in 2016 and was expected, through amendments to its "underspend" provisions, to result in up to an additional 1% to 2% super-fast coverage, making it available to over 97% of the U.K. population by the end of 2020.

The U.K. government has also been supporting the market rollout of full fiber and 5G services. Such support has included public funding for the creation of a match-funded "full fiber deployment" fund, business rate relief for the deployment of new full fiber networks and public funding for a strategic program of full fiber and 5G trials. The U.K. government's November 2017 budget included £190.0 million for the first and second phases of its local full fiber deployment fund and £160.0 million for the first phase of the 5G trials. In the second half of 2019, the U.K. government set out its ambition for all premises to have access to a gigabit capable service by the end of 2025. To facilitate this, it announced a gigabit capability public fund of £5 billion for areas that are not commercially viable. As further detailed in the U.K. government's Spending Review issued in November 2020, £1.2 billion of the £5 billion gigabit capability fund would be available to subsidize the rollout of gigabit capable broadband in the hardest to reach areas of the U.K. between now and 2025, with the possibility of additional draw downs from the gigabit capability fund if industry has the capacity to use such funds. In addition, the National Infrastructure Strategy, which was published alongside the Spending Review, highlighted that the U.K. government is now working with industry to target a minimum of 85% gigabit capable coverage by 2025, while seeking to accelerate rollout further to get as close to 100% as possible.

The Telecommunications Infrastructure Bill received Royal Assent in February 2018, which gave effect to the U.K. government's plans to provide full business rate relief for new fiber infrastructure built during the 2017-2022 rating period. Secondary legislation followed in April 2018, clarifying that the relief also applies to newly lit fiber and any plant and machinery used to build the infrastructure. In addition, the U.K. government published its Telecoms Infrastructure Review in July 2018. This Review explored whether the conditions for investment in fiber are optimal in the U.K. and what policy changes should be considered to encourage greater investment in new digital infrastructure. The Government concluded that, with the right policy support, infrastructure based competition will deliver FTTP/Gigabit (**Gbit**) capable networks to approximately 90% of U.K. premises. To facilitate this, the U.K. government intends to introduce a notification regime for multiple dwelling unit wayleaves, introduce a requirement for new housing developments to have Gbit-capable access and increase consistency in street works and duct access. To this end, following consultation, the Telecommunications Infrastructure (Leasehold Property) Bill was presented to parliament in October 2019 and is expected to be passed in 2021, with the bill currently awaiting its third reading in the House of Lords. New building regulations requiring new housing developments to have Gbit-capable access are expected to be consulted on in the first quarter of 2021 and made law during the first half of 2021. The U.K. government conducted its fundamental review into business rates over the summer of 2020 and is expected to publish its recommendations in the first half of 2021.

In November 2015, the U.K. government announced that everyone would have a legal right to request a broadband internet connection of at least 10 Mbps regardless of where they live. To facilitate this, a broadband Universal Service Obligation (**USO**) was introduced via secondary legislation, which took effect in March 2020. The USO is aimed, in particular, at addressing the final 5% of the population in the U.K. without access to a broadband connection of a reasonable speed. Ofcom is responsible for implementation, including designation of the Universal Service Providers (**USPs**), currently BT and KCOM Group PLC. Additionally, Ofcom is responsible for deciding whether the USO constitutes an "unfair burden" on the USPs and, if so, designing an industry funding mechanism to compensate the USPs. In May 2020, Ofcom issued a statement confirming its approach to assessing any unfair burden claims as well as determining which operators would be required to contribute to a universal service industry fund. Ofcom allows USPs to request a review of Ofcom's potential compensation claims for any efficiently incurred 'unfair net cost burden' once per year. If Ofcom accepts a request for review, it will consider whether it is fair for the USP to bear some or all of the burden, as well as consider the cost to Ofcom and the industry of establishing and administering an industry fund. The net burden would be assessed based on the incremental cost of delivering the USO, less the benefits associated with being the USP. Ofcom intends to determine which operators would contribute to the fund and how much they would contribute at a later date. Ofcom has also indicated the USPs cannot make this request any earlier than March 2021. In the meantime, the number of consumers who would be eligible for the universal service is expected to decline, as providers continue to upgrade and expand their networks. From March 20, 2020, residents and businesses have been able to apply to the USPs and request a decent broadband connection, up to a cost threshold of £3,400 if they meet certain criteria. In October 2020, Ofcom launched an investigation into BT's compliance with the USO and whether it was accurately assessing the excess costs associated with any given connection.

The Irish government is investing in a national broadband network which will guarantee the universal availability of high-speed broadband internet, with download speeds of up to 30 Mbps and upload speeds of 6 Mbps by 2022.

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.

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, sales and marketing standards and general consumer protection measures. 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. In 2017, Ofcom commenced an own-initiative investigation into whether our early termination charges on residential customers who leave before the end of their minimum contract period breach General Condition 9.3 (by disincentivizing switching) and/or the Consumer Rights Act 2015. On November 16, 2018, Ofcom issued its confirmation decision finding that the Virgin Media Group had breached General Conditions 9.3 and 9.2(j) and imposed a fine of £7.0 million. The Virgin Media Group appealed Ofcom's confirmation decision to the Competition Appeal Tribunal (**CAT**). On January 27, 2020, the CAT dismissed the Virgin Media Group's appeal on all grounds and upheld Ofcom's earlier decision.

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. As per the Code, the review period has been increased to five years.

Broadband Internet Services

Regulation of Broadband Markets. In March 2018, Ofcom completed its last review of the Wholesale Local Access market (incorporating physical or passive network access via methods such as LLU and duct access). Ofcom found that BT continues to hold Significant Market Power and imposed corresponding remedies on it until April 2021. These remedies include price controls on "virtual" access to its wholesale 40/10 Mbps FTTx product, the maintenance of access and pricing controls on its wholesale copper products and improvements to the existing physical infrastructure access product (third party access to BT's duct and pole estate).

Future Approach to Regulation. In July 2018, Ofcom published a Strategic Policy Position, setting out its intended future approach to regulation from April 2021 (aimed at creating regulatory certainty to support investment in full fiber broadband internet). It includes an intention to take a more holistic consideration of business and residential markets (ultimately combining previously separate markets) and to consider different regulatory approaches in different parts of the country, reflecting the varying levels of network competition. In January 2020, Ofcom published the provisional conclusions from its holistic review of the residential broadband internet and business connectivity markets, setting out its intended approach to regulating them (to apply for a five year period beginning in April 2021). It proposes categorizing areas of the country and applying regulation depending on the level of competition in those areas. In both non-competitive areas (~30% of premises) and in potentially competitive areas (~70% of premises), BT Openreach will continue to be required to provide wholesale access to its network; however, in the latter, such wholesale access will be limited to BT Openreach's entry-level superfast broadband internet service and the price will rise in line with inflation. Although Ofcom has not identified any competitive areas at this stage, once it does so, all regulation will be lifted from those areas.

Ofcom intends to regulate BT Openreach's wholesale business connections (or 'leased lines') in a similar way to residential broadband internet by varying its approach geographically to reflect the level of current or prospective competition and increasing charges in line with inflation.

Ofcom Review of Business Connectivity Markets. Ofcom published the conclusions of its last review of the business connectivity (leased lines) market in the third quarter of 2019. The review maintained the existing approach, to market definition, (flat) price caps for some wholesale BT services and a narrow dark fiber remedy on BT (in areas where infrastructure competition is non-existent and unlikely to occur). It also introduced an extension of the duct and pole remedy applying to BT to enable its use for (standalone) business grade services. Ofcom published its latest review of the business connectivity market in January 2020, as part of the broader, holistic review of the connectivity markets as discussed above.

In Ireland, Eircom Limited (**Eir**) has been designated as having Significant Market Power in the wholesale broadband internet access market (virtual access and bitstream) and the wholesale physical network access market. In November 2018, ComReg published a decision which has led to a reduction in FTTC-based virtual unbundled access and bitstream prices. Separately, in November 2018, ComReg published an information notice requiring Eir to reduce charges that apply to new FTTH connections and increase charges that apply to migrating customers. These charges took effect from January 1, 2019. The High Court challenge by Sky Ireland was withdrawn and the parties settled in November 2019. ComReg published a consultation document on the new Access Network Model in the fourth quarter of 2020 as well as a separate consultation on Civil Engineering Infrastructure pricing.

ComReg has notified stakeholders that it will undertake a new market review of Physical Infrastructure Access with consultation and any decision is expected in 2021.

In Ireland, ComReg's review of the business connectivity services is complete. In a previous leased line market analysis decision, 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.

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. In the U.K., BT is subject to partial regulation of its call origination services. ComReg is currently conducting a review of these markets.

Mobile Telephony Services

As an MVNO in Ireland, we are subject to E.U. regulations relating to retail prices for roaming services. These regulations: set limits on certain wholesale 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 prohibited the imposition of additional retail charges for roaming rates within the E.U.

Prior to January 1, 2021, as an MVNO, Virgin Media was also subject to the E.U. regulations relating to retail prices for roaming services (the same as in Ireland). Following the expiration of the Brexit transition period on December 31, 2020, the U.K. is no longer subject to the same E.U. regulations. Instead, the Trade and Cooperation Agreement between the E.U. and the U.K. simply states that the parties will endeavor to cooperate on promoting transparent and reasonable rates for international mobile roaming services. However, the U.K. previously introduced a number of consumer measures aimed at providing safeguards for consumers, which will continue to apply. Such measures include limits on the amount that customers can be charged for using mobile data abroad before having to opt in if they wish to use more data and alert warnings as customers reach various milestones in data allowances included within their packages.

Mobile termination charges applied by MNOs are regulated by Ofcom in the U.K. and ComReg in Ireland under a Significant Market Power regime. In the U.K., under our MVNO agreement with EE, these mobile termination charges are passed on to us. Ofcom has set mobile termination charges for the period of 2018-2021, with rates reducing by approximately 5% from their starting levels by the end of this period. In August 2020, Ofcom launched a consultation on its review of the Wholesale Voice Markets 2021-26, which, going forward, from April 2021, seeks to regulate both fixed and mobile voice market. In its consultation, Ofcom proposed to continue to impose caps on the charges for terminating both mobile and fixed calls. In November 2019, we entered into a new five-year MVNO arrangement with a new MNO host, Vodafone U.K., that will replace our existing MVNO arrangement with EE in 2021.

The European Commission published its Eurorates regulation in 2020. It is anticipated that these rates will take effect in May 2021.

As the Virgin Media Group offers loan financing to certain customers who purchase a mobile handset, we are also regulated by the Financial Conduct Authority (**FCA**), which regulates and supervises financial market conduct matters. The FCA has focused strongly on conduct risk and on customer outcomes and will continue to do so. This has included a focus on the design and operation of products, the behavior of customers and the operation of markets.

Fixed-line Telephony Services

The Virgin Media Group has been designated by Ofcom as a provider with Significant Market Power on fixed voice termination. As a result, the rates it charges other providers for termination on its network are subject to regulation. This requires, among 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.

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, or "the **Act**," came into effect at the end of 2016 with transitional provisions covering most of 2018. In 2018, the Act was amended to limit the acquisition of data by law enforcement to serious crime, and require data requests to be authorized by an independent body (the Office for Communications Data Authorizations). In November 2020, the government introduced the Telecoms Security Bill, which imposes a new security framework on telecoms providers and provides the Secretary of State for Digital, Culture, Media and Sport with new powers to direct providers to remove High Risk Vendors from their networks. This bill is expected to be passed into law by spring 2021. In Ireland, there is a requirement to disclose customer data to law enforcement and the security services under various laws which will be updated, 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 expenditures 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 17 to our combined 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 (**HMRC**). HMRC claimed that amounts charged to certain of our customers for payment handling services are subject to VAT, while our company took the position that such charges were exempt from VAT under existing law. At the time of HMRC's initial challenge in 2009, we remitted all related VAT amounts claimed by HMRC, and continued to make such VAT payments pending a ruling on our appeal to the First Tier Tribunal. As the likelihood of loss was not considered probable and we believed that the amounts paid would be recoverable, such amounts were recorded as a receivable on our combined balance sheet. In January 2020, the First Tier Tribunal rejected our appeal and ruled in favor of HMRC. Accordingly, during the fourth quarter of 2019 we recorded a net provision for litigation of £41.3 million. We have been granted permission to appeal the case to the Upper Tribunal, with the appeal being stayed pending the outcome of a related case. The timing of the final outcome of the litigation remains uncertain, although any further hearing on this matter is unlikely to occur before the third quarter of 2021.

In a separate matter, 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. HMRC 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 appealed this decision. As part of the appeal process, we were required to make aggregate payments of £67.0 million, comprising (i) the challenged amount of £63.7 million (which we paid during the fourth quarter of 2015) and (ii) related interest of £3.3 million (which we paid during the first quarter of 2016). No provision was recorded by our company at that time as the likelihood of loss was not considered to be probable. The aggregate amount paid does not include penalties, which could be significant in the event that penalties were to be assessed. In September 2018, the court rejected our appeal and ruled in favor of HMRC. Accordingly, during the third quarter of 2018, we recorded a provision for litigation of £63.7 million and related interest expense of £3.3 million in our combined statement of operations. The First Tier Tribunal gave permission to appeal to the Upper Tribunal and we submitted grounds for appeal on February 22, 2019. We subsequently lost the appeal at the Upper Tribunal and in October 2020 our request to further appeal the case was denied by the Court of Appeal.

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

Effective April 1, 2017, the rateable value of our existing network and other assets in the U.K. increased significantly. This increase affects 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 change has significantly increased our network infrastructure charges and we expect further but declining increases to these charges through the first quarter of 2022. We continue to believe that these increases are excessive, and retain the right of appeal should more favorable agreements be reached with other operators. The rateable value of our network and other assets in the U.K. remains subject to review by the U.K. government.

In late February 2020, we became aware that one of our databases did not have adequate access security protection and was accessed without permission. We immediately took remedial actions, ceased access to the database and commenced an investigation. The information in the database did not include any individual's passwords or financial details, such as credit card information or bank account numbers. We have taken steps to inform those individuals impacted and relevant regulatory authorities. The database had information pertaining to approximately 900,000 individuals (including customers and non-customers), representing a number that would be less than 15% of our total customer base. During the fourth quarter of 2020, we were formally notified by the relevant regulatory authorities that they consider this matter to be closed without enforcement action.

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.

Patents, Trademarks, Copyrights and Licenses

We own or have the right to use patents or copyrights which in some cases are, and in other cases may be, of material importance to 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., Republic of Ireland, the Isle of Man and Channel Islands, and are subject to renewal on terms to be agreed. They entitle us to use the "Virgin" name for the broadband internet, television, 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. That exclusivity includes the use of "Virgin Media" for the provision of consumer communication services and "Virgin Media Business" for the provision of business communication services.

Our license agreements provide for an annual royalty of 0.25% of certain consumer, business and content revenues, subject to a minimum annual royalty. The minimum annual royalty for the license applicable to our consumer operations is £8.5 million. The minimum annual royalty for the license applicable to our business operations was £1.5 million at the date of the license. However, an adjustment for inflation has been applied to the minimum annual royalty for our business operations each year on the anniversary of the commencement date of the license. For the period of 12 months from December 16, 2020, the minimum annual royalty will be £2.0 million.

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 Reading, Berkshire.

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 (**CPE**) 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, 2020, we had approximately 11,460 employees in the U.K. and approximately 900 employees in Ireland. We also had approximately 760 temporary employees in the U.K. and approximately 30 temporary employees in Ireland. There are no employees in the U.K. covered by collective bargaining or recognition agreements, however, there is collective bargaining in Ireland. For employee consultation purposes, we work with and recognize our National and Divisional Employee Voice Forums.

MANAGEMENT

Lutz Schüler, 53, was appointed our Chief Executive Officer (**CEO**) in May 2019. Prior to becoming our CEO, Mr. Schüler served as our Chief Operating Officer from September 2018 and as the CEO of Unitymedia GmbH from January 2011 to August 2018. Mr. Schüler has significant experience in the telecommunications market, with many years of strategic and operational experience and extensive experience in marketing, sales and operations across a wide range of products. He has served in several senior management roles with Telefónica Germany since 1998. From 2006 to 2010, he was Managing Director, Marketing & Sales for Telefónica Germany. Before joining Telefónica Germany in 1998, he worked as product manager with VIAG Interkom GmbH and T-Mobile. Mr. Schüler studied business administration at the University of Augsburg and holds a master's degree in business administration.

Gregor McNeil, 50, was appointed Acting Chief Financial Officer (**CFO**) of the Virgin Media Group in November 2020 and has previously held a number of senior roles at the company and at Liberty Global over the past decade. He joined the Virgin Media Group in 2010 as a Finance Director, becoming a member of the Company's Executive Committee as Managing Director of Consumer in 2015. In 2017 Gregor joined Cable and Wireless Communications, Liberty Global's former business in Latin America and the Caribbean, as CFO before re-joining the Virgin Media Group this year. Gregor is a qualified chartered accountant.

Jeff Dodds, 46, re-joined the Virgin Media Group as Managing Director-Mobile in May 2017, and is now Chief Customer Officer and Managing Director. Previously, Mr. Dodds spent almost five years with the company, most recently as Chief Marketing Officer. Prior to re-joining, Mr. Dodds worked for TalkTalk as Managing Director responsible for Mobile. Before that, he spent two years living and working in the Netherlands as the CEO of telecoms business Tele2, where he oversaw the build and launch of its 4G mobile network. Prior to this, Mr. Dodds was the Group Marketing Director for Callaway Golf Europe, and prior to that he worked at Honda UK.

Rob Evans, 54, became our Managing Director for Lightning in April 2017. Prior to this, Mr. Evans was Managing Director of Core Networks & Operations within the Liberty Global T&I organization from January 2016 to February 2017 and Chief Information, Network and Technology Officer with us from April 2015 to December 2015. Before 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.

Tony Hanway, 52, became the CEO of Virgin Media Ireland in October 2015. Prior to joining the Virgin Media Group, 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 (U.K.) and Gateway Computers.

Mine Hifzi, 53, 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, 56, became the Managing Director for our B2B division in September 2013. Prior to joining the Virgin Media Group, 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.

Kay Schwabedal, 58, was appointed Chief Digitization Officer in October 2019. Initially carving out his career at P&G and McKinsey in marketing and consulting, Mr. Schwabedal has held a number of CEO and Chief Experience Officer leadership roles in GE, Vodafone and KPN's operating companies, building challenger IT outsourcing and fixed and mobile telecommunication businesses. Most recently, Mr. Schwabedal built a digital transformation unit for METRO AG. Mr. Schwabedal has undertaken many entrepreneurial engagements throughout his career including his role as CEO in Bavaria Boats, a leveraged buy-out, as founding partner of the Lead X investment fund and positions on supervisory boards. Mr.

Schwabedal holds a joint degree in Mechanical Engineering and Business Administration (Dipl.-Wirtschaftsingenieur) and a master's degree in business administration.

Philipp Wohland, 45, joined the Virgin Media Group as Chief Transformation Officer in 2019, later assuming responsibility for the People Teams in October 2019. Prior to this, Mr. Wohland was Senior Vice President of People and Transformation at Unity Media in Germany, where he led on large-scale transformation initiatives. Mr. Wohland has significant strategic and operational experience having also worked as Senior Vice President of Strategy leading Unity Media's major corporate development from 2008. Prior to Unity Media, Mr. Wohland worked as a project manager at Roland Berger Strategy Consultants from 2000.

Jeanie York, 50, was appointed as Chief Technology and Information Officer at the Virgin Media Group in January 2019. Prior to this, she spent almost six years at Liberty Global, joining as Vice President of Network Operations and later becoming Managing Director in 2017, where her role included responsibility for network engineering and operations. Before joining Liberty Global, Ms. York held a number of senior management positions at Qwest and CenturyLink over a period of 15 years.

PRINCIPAL SHAREHOLDER

Virgin Media and NewCo Holdco 5 Limited are indirect wholly-owned subsidiaries of Liberty Global. Liberty Global is an international converged broadband internet, video, fixed-line telephony and mobile services company operating under the consumer brands Virgin Media, Telenet, UPC, the combined Sunrise UPC, as well as VodafoneZiggo, which is owned through a 50/50 joint venture. Liberty Global's substantial scale and commitment to innovation enable it to invest in the infrastructure and digital platforms that empower its customers to make the most of the digital revolution. Liberty Global delivers market-leading products through next-generation networks that connect customers subscribing to 49 million (at December 31, 2020) broadband internet, video, fixed-line telephony and mobile services across its brands. Liberty Global also has significant investments in ITV, All3Media, CANAL+ Polska, LionsGate, the Formula E racing series and several regional sports networks.

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 three groups:

- risks relating to our industry and our business;
- risks relating to our indebtedness, taxes and other financial matters; and
- risks relating to our management, principal shareholder and related parties.

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 Regulation in Our Industry and Our Business

We operate in increasingly 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 service providers utilizing our or our competitors' high-speed internet connections. In the provision of telephony and broadband internet services, we are experiencing increasing competition from the incumbent telecommunications operator and other service providers in each country in which we operate, as well as providers of mobile voice and data. 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 internet services, or "quad-play" bundles including mobile telephony services. Developments in the DSL, as well as investments into FTTx technology by the incumbent telecommunications operator and alternative providers, in particular the deployment of full fiber networks, have improved the attractiveness of our competitors' products and services and strengthened their competitive position. Developments in wireless technologies, such as 5G and fixed wireless access, are creating additional competitive challenges.

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 the influx of new market entrants as a result of changes in the regulatory framework of the industries in which we operate, as well as strategic alliances and cooperative relationships among industry participants. Increased competition could result in increased customer churn, reductions of customer acquisition rates for some products and services and significant price and promotional competition in our markets. In combination with difficult economic environments, these competitive pressures could adversely impact our ability to increase or, in certain cases, maintain the revenue, average revenue per RGU or mobile subscriber, as applicable (**ARPU**), RGUs, mobile subscribers, Segment Adjusted EBITDA (as defined in *Discussion and Analysis of our Results of Operations - General,* included in Part II of this annual report), Segment Adjusted EBITDA margins (Segment Adjusted EBITDA divided by revenue) and liquidity of our operating segments.

Changes in technology may limit the competitiveness of and demand for our services. Technology in the video, telecommunications and data services industries is changing rapidly, including advances in current technologies and the emergence of new technologies. New technologies, products and services may impact consumer behavior and therefore demand for our products and services. The ability to anticipate changes in technology and consumer tastes and to develop and introduce new and enhanced products and services on a timely basis will affect our ability to continue to grow, increase our revenue and number of subscribers and remain competitive. New products and services, once marketed, may not meet consumer expectations or demand, can be subject to delays in development and may fail to operate as intended. 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 a material adverse impact on our revenue and Segment Adjusted EBITDA (as defined in *Discussion and Analysis of our Results of Operations - General,* included in Part II of this annual report).

Our significant property and equipment additions, namely in connection with our Network Extension, may not generate a positive return. Significant additions to our property and equipment are, or in the future may be, required to add customers to our networks and to upgrade or expand our broadband communications networks and upgrade CPE to enhance our service offerings and improve the customer experience. Additions to our property and equipment, which are currently underway, including in connection with our Network Extension, require significant capital expenditures for equipment and associated labor costs to build out and/or upgrade our networks as well as for related CPE. Additionally, significant competition, the introduction of new technologies, the expansion of existing technologies, such as FTTx and advanced DSL technologies, the impact of natural disasters or adverse regulatory developments could cause us to decide to undertake previously unplanned builds or upgrades of our networks and CPE.

No assurance can be given that any rebuilds, upgrades or extensions of our network (including the Network Extension) will increase penetration rates, increase cable or mobile ARPU, or otherwise generate positive returns as anticipated, or that we will have adequate capital available to finance such rebuilds, upgrades or extensions. Additionally, costs related to our Network Extension and property and equipment additions could end up being greater than originally anticipated or planned. If this is the case, we may require additional financing sooner than anticipated or we may have to delay or abandon some or all of our development and expansion plans or otherwise forego market opportunities. Additional financing may not be available on favorable terms, if at all, and our ability to incur additional debt will be limited by our debt agreements. If we are unable to, or elect not to, pay for costs associated with adding new customers, expanding, extending or upgrading our networks or making our other planned or unplanned additions to our property and equipment, or are delayed in making such investments, our growth could be limited and our competitive position could be harmed.

Adverse economic developments could reduce customer spending for our cable television, broadband internet, 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 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 Adjusted EBITDA, Segment Adjusted EBITDA 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 departure from the E.U.). We are currently unable to predict the extent of any of these potential adverse effects. For a description of the risks associated with the U.K.'s departure from the E.U., see "*The U.K.'s departure from the E.U. could have a material adverse effect on our business, financial condition, results of operations or liquidity*" below.

Our fixed-line telephony revenue is declining and unlikely to improve. Business and residential fixed-line telephony usage is declining across the industry. 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 telephony 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 against our systems as well as third party sites, which could affect the security of our customers' accounts. Cyber security breaches, internal security breaches, physical security breaches or other unauthorized or accidental access to our servers, other information systems or databases could result in tampering with, or the theft or publication of, sensitive business information or personal consumer information or the deletion or modification of records, or could otherwise cause interruptions in our operations. 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. To date, other than the non-permitted access of one of our databases (see note 17 to our combined financial statements included in Part II of this annual report), we have not been subject to cyberattacks or network disruptions that, individually or in the aggregate, have been material to our operations or financial condition. Although we have not detected another material security breach or cybersecurity incident to date, we have been the target of events of this nature and expect to be subject to similar attacks in the future.

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 internet 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 CPE could lead to delays in completing extensions to our networks and 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 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 the respective 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 commercially reasonable 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 (in other industries) 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 in another industry (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 license, 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 and services. We have historically obtained a significant amount of our premium programming and some of our basic programming and PPV 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.

The Sky Sports channels, Sky Cinema channels and the BT Sport channels are available in our entertainment service, however, there can be no assurance that we will be able to continue carriage of such channels at a reasonable cost after the current contracts end.

Other significant programming and app suppliers include the BBC, ITV, Channel 4, UKTV, Viacom Inc. (including Five), Discovery Communications Inc., Disney, Sky, NBC/Universal, Turner, a division of Time Warner Inc., Netflix and Amazon. 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. Additionally, we are frequently negotiating and renegotiating programming agreements and our annual costs for programming can vary. There can be no assurance that we will be able to renegotiate or renew the terms of our programming agreements on acceptable terms or at all. There has also been a rise in the number of direct-to-consumer offering from content owners which impacts negotiations and the content, rights and restrictions available. Programming and copyright costs represent a significant portion of our operating costs and are subject to rise in future periods due to various factors, including (1) 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 (2) rate increases.

If we are unable to obtain or retain attractively priced competitive content, demand for our existing and future video services could decrease, thereby limiting our ability to attract new customers, maintain existing customers and/or migrate customers from lower tier programming to higher tier programming, thereby inhibiting our ability to execute our business plans. Furthermore, we may be placed at a competitive disadvantage if certain of our competitors obtain exclusive programming rights, particularly with respect to popular sports and movie programming, and as certain players in the OTT market, for example Netflix, Amazon and Disney, increasingly produce their own exclusive content and distribute direct to consumers.

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 of 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, ComReg 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, Ofcom may attempt to require us to make available access to our ducts or may attempt to impose regulation on the cable network, which is currently unregulated.

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.

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.'s departure 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 U.K. formally exited the E.U. on January 31, 2020. On December 24, 2020, the U.K. and the E.U. reached the "Trade and Cooperation Agreement," referred to as the E.U.-U.K. Agreement. On December 30 2020, the E.U.-U.K. Agreement was approved by the U.K. Parliament, with retrospective ratification from the E.U. Parliament expected to follow in 2021. In the meantime, the E.U.-U.K. Agreement has been provisionally brought into effect. The E.U.-U.K. Agreement focuses on four main sectors, namely trade, economic and social cooperation, security and governance. For more information regarding the E.U.-U.K. Agreement, see *Business - Regulatory Matters - Overview* discussion above. Examples of the potential 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. For example, a sustained period of weakness in the British pound sterling or the euro could have an adverse impact on our liquidity, including our ability to fund repurchases of our equity securities and other U.S. dollar-denominated liquidity requirements;

- shortages of labor necessary to conduct our business, including our Network Extension;
- disruption to our supply chain and related increased cost of supplies;
- a weakened U.K. economy resulting in decreased consumer demand for our products and services;
- 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; 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, 2020, the outstanding principal amount of our combined third-party debt, together with our finance lease obligations, aggregated £11,944.4 million, including £2,012.7 million that is classified as current on our combined balance sheet and £9,547.8 million that is not due until 2026 or thereafter.

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 outstanding indebtedness that could require a partial or comprehensive refinancing in future periods. Borrowings under our credit facilities are currently due between 2023 and 2029, while the maturities of our outstanding senior and senior secured notes currently range from 2026 to 2030. See note 8 to our combined 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 certain entities;
- enter into certain sale and leaseback transactions and certain vendor financing arrangements;
- create liens;
- enter into agreements that restrict the ability of certain of our entities 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 if the drawings under the revolving credit facility exceed a certain percentage of the commitments under such revolving credit facility, 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 interest. 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 operating entities to meet our obligations. Certain entities within the Virgin Media Group are holding companies with no independent operations or significant assets other than investments in their operating entities. Each of these holding companies depends upon the receipt of sufficient funds from their operating entities to meet their 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 operating entities 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 operating entities 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 U.S. dollar and the euro, 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 CPE 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.

In July 2017, the U.K. Financial Conduct Authority (the authority that regulates LIBOR) announced that it intends to stop compelling banks to submit rates for the calculation of LIBOR after 2021. Additionally, the European Money Markets Institute (the authority that administers EURIBOR) has announced that measures will need to be undertaken by the end of 2021 to reform EURIBOR to ensure compliance with E.U. Benchmarks Regulation. In November 2020, ICE Benchmark administration (the entity that administers LIBOR) announced its intention to continue publishing USD LIBOR rates until June 30, 2023, with the exception of the one-week and two-month rates which, along with all GBP LIBOR rates, it intends to cease publishing after December 31, 2021. While this extension allows additional runway on existing contracts using USD LIBOR rates, companies are still encouraged to transition away from using USD LIBOR as soon as practicable and should not enter into new contracts that use USD LIBOR after 2021. The methodology for EURIBOR has been reformed and EURIBOR has been granted regulatory approval to continue to be used. Currently, it is not possible to predict the exact transitional arrangements for calculating applicable reference rates that may be made in the U.K., the U.S., the Eurozone or elsewhere given that a number of outcomes are possible, including the cessation of the publication of one or more reference rates.

In October 2020, the International Swaps and Derivatives Association (the ISDA) launched a new supplement (the Fallback Supplement), which effective January 25, 2021, will amend the standard definitions for interest rate derivatives to incorporate fallbacks for derivatives linked to certain key interbank offered rates (IBOR**s**). The ISDA also launched a new protocol (the Fallback Protocol), also effective January 25, 2021, that will enable market participants to incorporate these revisions into their legacy non-cleared derivatives with other counterparties that choose to adhere to the protocol. The fallbacks for a particular currency will apply following a permanent cessation of the IBOR in that currency and will be adjusted versions of the risk-free rates identified in each currency. Our loan documents contain provisions that contemplate alternative calculations of the base rate applicable to our LIBOR-indexed and EURIBOR-indexed debt to the extent LIBOR or EURIBOR (as applicable) are not available, which alternative calculations we do not anticipate will be materially different from what would have been calculated under LIBOR or EURIBOR (as applicable). Additionally, no mandatory prepayment or redemption provisions would be triggered under our loan documents in the event that either the LIBOR rate or the EURIBOR rate is not available. It is possible, however, that any new reference rate that applies to our LIBOR-indexed or EURIBOR-indexed debt could be different than any new reference rate that applies to our LIBOR-indexed or EURIBOR-indexed derivative instruments. We anticipate managing this difference and any resulting increased variable-rate exposure through modifications to our debt and/or derivative instruments, however future market conditions may not allow immediate implementation of desired modifications and the company may incur significant associated costs.

We are subject to increasing operating costs and inflation risks, which may adversely affect our results of operations. While our operations attempt to increase our subscription rates to offset increases in programming and operating costs, there is no assurance that they will be able to do so. Our ability to increase subscription rates is subject to regulatory controls in both the U.K. and Ireland. Also, our ability to increase subscription rates may be constrained by competitive pressures. Therefore, operating costs may rise faster than associated revenue, resulting in a material negative impact on our cash flow and net earnings (loss). We are also impacted by inflationary increases in salaries, wages, benefits and other administrative costs in the U.K. and Ireland.

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 the extent to which we transfer funds to and repatriate funds from our operating entities, 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.

We may have exposure to additional tax liabilities. We are subject to income taxes as well as non-income based taxes, such as VAT in the U.K., the U.S. and Ireland. In addition, the tax jurisdictions that we operate in have complex and subjective rules regarding the valuation of intercompany services, cross-border payments between affiliated companies and the related effects on income tax, VAT and transfer tax. 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 regularly under audit by tax authorities in the jurisdictions in which we operate. Although we believe that our tax estimates are reasonable, any material differences as a result of final determinations of tax audits or tax disputes could have an adverse effect on our financial position and results of operations in the period or periods for which determination is made.

We are subject to changing tax laws, treaties and regulations in and between countries in which we operate, including treaties between and among the U.K. and the U.S. Also, various income tax proposals in the jurisdictions in which we operate could result in changes to the existing laws on which our deferred taxes are calculated. A change in these tax laws, treaties or regulations, or in the interpretation thereof, could result in a materially higher income or non-income tax expense, and any such material changes could cause a material change in our effective tax rate. In this regard, there have been significant changes or proposed changes to the tax laws in numerous jurisdictions in which we operate, the impacts of which have been reflected accordingly in our financial statements.

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 combined 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. 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.

We are exposed to sovereign debt and currency instability risks that could have an adverse impact on our liquidity, financial condition and cash flows. Our operations are subject to macroeconomic and political risks that are outside of our control. For example, high levels of sovereign debt, 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. With regard to currency instability issues, concerns exist in the eurozone with respect to individual macro-fundamentals on a country-by-country basis, as well as with respect to the overall stability of the European monetary union and the suitability of a single currency to appropriately deal with specific fiscal management and sovereign debt issues in individual eurozone countries. The realization of these concerns could lead to the exit of one or more countries from the European monetary union and the re-introduction of individual currencies in these countries, or, in more extreme circumstances, the possible dissolution of the European monetary union entirely, which could result in the redenomination of a portion or, in the extreme case, all of our euro-denominated assets, liabilities and cash flows to the new currency of the country in which they originated. This could result in a mismatch in the currencies of our assets, liabilities and cash flows. Any such mismatch, together with the capital market disruption that would likely accompany any such redenomination event, could have a material adverse impact on our liquidity and financial condition. Furthermore, any redenomination event would likely be accompanied by significant economic dislocation, particularly within the eurozone countries, which in turn could have an adverse impact on demand for our products and services, and accordingly, on our revenue and cash flows. Moreover, any changes from euro to non-euro currencies within the countries in which we operate would require us to modify our billing and other financial systems. No assurance can be given that any required modifications could be made within a time frame that would allow us to timely bill our customers or prepare and file required financial reports. In light of the significant exposure that we have to the euro through our euro-denominated borrowings, derivative instruments, cash balances and cash flows, a redenomination event could have a material adverse impact on our company.

We are exposed to the risk of default by the counterparties to our cash investments, derivative and other financial instruments, and undrawn debt facilities. Although we seek to manage the credit risks associated with our cash investments, derivative and other financial instruments, and undrawn debt facilities, we are exposed to the risk that our counterparties will default on their obligations to us. While we regularly review our credit exposures and currently have no specific concerns about the creditworthiness of any counterparty for which we have material credit risk exposures, 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 of default or failure could have an adverse effect on our cash flows, results of operations, financial condition and/or liquidity. In this regard, (i) we may incur losses to the extent that we are unable to recover debts owed to us, including cash deposited and the value of financial losses, (ii) we may incur significant costs to recover amounts owed to us, and such recovery may take a long period of time or may not be possible at all, (iii) our derivative liabilities may be accelerated by the default of our counterparty, (iv) we may be exposed to financial risks as a result of the termination of affected derivative contracts, and it may be costly or impossible to replace such contracts or otherwise mitigate such risks, (v) amounts available under committed credit facilities may be reduced and (vi) disruption to the credit markets could adversely impact our ability to access debt financing on favorable terms, or at all.

At December 31, 2020, our exposure to counterparty credit risk included (i) derivative assets with an aggregate fair value of £4.2 million, (ii) cash and cash equivalent and restricted cash balances of £61.9 million and (iii) aggregate undrawn debt facilities of £1,000.0 million. For more information on our derivative contracts, see note 5 to our combined financial statements included in Part II of this annual report.

We are exposed to the risks arising from widespread epidemic diseases in the countries in which we operate, such as the outbreak of COVID-19, which could have a material adverse impact on our business, financial condition and results of operations. In March 2020, the World Health Organization declared COVID-19 to be a global pandemic. In response to the COVID-19 pandemic, emergency measures have been imposed by governments worldwide, including travel restrictions, restrictions on social activity and the shutdown of non-essential businesses. These measures have adversely impacted the global economy, disrupted global supply chains and created significant volatility and disruption of financial markets. While it is not currently possible to estimate the duration and severity of the COVID-19 pandemic or the adverse economic impact resulting from the preventative measures taken to contain or mitigate its outbreak, an extended period of global economic disruption could have a material adverse impact on our business, financial condition and results of operations in future periods, including with respect to, among other items, (i) our ability to access capital necessary to fund property and equipment additions, debt service requirements, acquisitions and other investment opportunities, the repurchase of equity securities or other liquidity needs, (ii) the ability of our customers to pay for our products and services, (iii) our ability to maintain or increase our residential and business subscriber levels, (iv) our ability to offer attractive programming, particularly in consideration of the recent cancellation of numerous worldwide sporting events, and (v) the ability of our suppliers and vendors to provide products and services to us. We may also be adversely impacted by any government mandated regulations on our business that could be implemented in response to the COVID-19 pandemic. In addition, countries may seek new or increased revenue sources due to fiscal deficits that result from measures taken to mitigate the adverse economic impacts of COVID-19, such as by imposing new taxes on the products and services we provide. We are currently unable to predict the extent of any of these potential adverse effects.

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.

PART II

Independent Auditors' Report

The Board of Directors
Virgin Media Inc.:

Report on the Financial Statements

We have audited the accompanying combined financial statements of the Virgin Media Group, as defined in note 1 of the combined financial statements, which comprise the combined balance sheets as of December 31, 2020 and 2019, and the related combined statements of operations, comprehensive earnings (loss), equity, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes to the combined financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these combined 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 combined 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 combined 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 combined financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combined financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the combined 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 combined 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 combined 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 combined financial statements referred to above present fairly, in all material respects, the financial position of the Virgin Media Group, as defined in note 1 of the combined financial statements, as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020 in accordance with U.S. generally accepted accounting principles.

The purpose of our audit work and to whom we owe our responsibilities

Our report has been prepared for Virgin Media Inc solely in accordance with the terms of our engagement. It has been released to Virgin Media Inc on the basis that our report shall not be copied, referred to or disclosed, in whole (save for Virgin Media Inc's own internal purposes) or in part, without our prior written consent.

Our report was designed to meet the agreed requirements of Virgin Media Inc determined by Virgin Media Inc's needs at the time. Our report should not therefore be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than Virgin Media Inc for any purpose or in any context. Any party other than Virgin Media Inc who obtains access to our report or a copy and chooses to rely on our report (or any part of it) will do so at its own risk. To the fullest extent permitted by law, KPMG LLP will accept no responsibility or liability in respect of our report to any other party.

/s/ KPMG LLP

London, England
March 12, 2021

THE VIRGIN MEDIA GROUP
COMBINED BALANCE SHEETS

	December 31, 2020		December 31, 2019	
	in millions			
ASSETS				
Current assets:				
Cash and cash equivalents	£	22.0	£	34.5
Trade receivables, net		488.7		639.6
Related-party receivables (note 13)		694.5		34.8
Derivative instruments (notes 5, 6 and 13)		66.7		82.5
Prepaid expenses		61.2		64.0
Other current assets (notes 4 and 13)		150.3		148.4
Total current assets		1,483.4		1,003.8
Property and equipment, net (notes 7 and 9)		5,944.8		6,078.7
Goodwill (note 7)		6,017.7		6,005.8
Deferred income taxes (note 10)		1,743.2		1,540.4
Related-party notes receivable (note 13)		4,807.8		4,963.6
Other assets, net (notes 4, 5, 6, 7, 9, 10 and 15)		723.3		987.4
Total assets	£	20,720.2	£	20,579.7

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

THE VIRGIN MEDIA GROUP
COMBINED BALANCE SHEETS — (Continued)

	December 31, 2020		December 31, 2019	
	in millions			
LIABILITIES AND COMBINED EQUITY				
Current liabilities:				
Accounts payable (note 13)	£	370.2	£	361.5
Deferred revenue (notes 4 and 13)		340.8		357.8
Current portion of debt and finance lease obligations (notes 8, 9 and 13)		2,040.3		1,868.9
Other current liabilities (notes 4, 5, 6, 9, 13 and 14)		1,160.3		972.1
Total current liabilities		3,911.6		3,560.3
Long-term debt and finance lease obligations (notes 8, 9 and 13)		9,887.6		10,177.4
Other long-term liabilities (notes 4, 5, 6, 9, 10, 13, 14 and 15)		818.2		612.2
Total liabilities		14,617.4		14,349.9
Commitments and contingencies (notes 5, 6, 8, 9, 10, 14, 15 and 17)				
Combined equity:				
Parent entities:				
Additional paid-in capital		7,727.6		7,873.4
Accumulated deficit		(1,679.0)		(1,709.4)
Accumulated other comprehensive earnings, net of taxes		64.5		83.2
Total combined equity attributable to parent entities		6,113.1		6,247.2
Noncontrolling interest		(10.3)		(17.4)
Total combined equity		6,102.8		6,229.8
Total liabilities and combined equity	£	20,720.2	£	20,579.7

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

THE VIRGIN MEDIA GROUP
COMBINED STATEMENTS OF OPERATIONS

	Year ended December 31,		
	2020	**2019**	**2018**
		in millions	
Revenue (notes 4 and 18)	£ 5,128.5	£ 5,168.2	£ 5,150.3
Operating costs and expenses (exclusive of depreciation and amortization, shown separately below):			
Programming and other direct costs of services (note 13)	1,597.9	1,611.8	1,574.2
Other operating (note 13)	786.5	708.1	683.4
Selling, general and administrative (**SG&A**) (notes 12 and 13)	716.3	704.3	675.1
Related-party fees and allocations, net (note 13)	325.7	225.4	110.6
Depreciation and amortization	1,344.1	1,738.2	1,798.2
Impairment, restructuring and other operating items, net (note 14)	24.1	93.7	101.9
	4,794.6	5,081.5	4,943.4
Operating income	333.9	86.7	206.9
Non-operating income (expense):			
Interest expense (note 13)	(556.4)	(640.5)	(655.1)
Interest income – related-party (note 13)	252.6	284.6	314.1
Realized and unrealized gains (losses) on derivative instruments, net (notes 5, 6 and 13)	(264.3)	(160.4)	471.3
Foreign currency transaction gains (losses), net	174.7	202.2	(364.0)
Realized and unrealized gains (losses) due to changes in fair values of certain debt, net (notes 6 and 8)	7.5	(20.8)	0.8
Losses on debt extinguishment, net (note 8)	(138.2)	(115.5)	(28.8)
Other income (expense), net	(1.2)	5.4	10.4
	(525.3)	(445.0)	(251.3)
Loss before income taxes	(191.4)	(358.3)	(44.4)
Income tax benefit (note 10)	230.7	21.0	7.4
Net earnings (loss)	39.3	(337.3)	(37.0)
Net earnings attributable to noncontrolling interest	(7.1)	(5.1)	—
Net earnings (loss) attributable to parent entities	£ 32.2	£ (342.4)	£ (37.0)

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

THE VIRGIN MEDIA GROUP
COMBINED STATEMENTS OF COMPREHENSIVE EARNINGS (LOSS)

	Year ended December 31,		
	2020	2019	2018
		in millions	
Net earnings (loss)	£ 39.3	£ (337.3)	£ (37.0)
Other comprehensive earnings (loss), net of taxes (note 16):			
Foreign currency translation adjustments	(19.6)	4.0	25.1
Pension-related adjustments and other	0.9	(10.0)	(2.4)
Other comprehensive earnings (loss)	(18.7)	(6.0)	22.7
Comprehensive earnings (loss)	20.6	(343.3)	(14.3)
Comprehensive earnings attributable to noncontrolling interest	(7.1)	(5.1)	—
Comprehensive earnings (loss) attributable to parent entities	£ 13.5	£ (348.4)	£ (14.3)

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

THE VIRGIN MEDIA GROUP
COMBINED STATEMENTS OF EQUITY

	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive earnings, net of taxes	Total combined equity
	in millions			
Balance at January 1, 2018	£ 7,787.5	£ (1,330.0)	£ 66.5	£ 6,524.0
Net loss	—	(37.0)	—	(37.0)
Other comprehensive earnings, net of taxes (note 16)	—	—	22.7	22.7
Share-based compensation (note 12)	21.5	—	—	21.5
Tax losses surrendered by Liberty Global subsidiaries (notes 10 and 13)	17.4	—	—	17.4
Capital charge in connection with the exercise of share-based incentive awards (note 13)	(8.1)	—	—	(8.1)
Other	0.6	—	—	0.6
Balance at December 31, 2018	£ 7,818.9	£ (1,367.0)	£ 89.2	£ 6,541.1

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

	Parent entities					
	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive earnings, net of taxes	Total combined equity attributable to parent entities	Non-controlling interest	Total combined equity
	in millions					
Balance at January 1, 2019	£ 7,818.9	£ (1,367.0)	£ 89.2	£ 6,541.1	£ —	£ 6,541.1
Net loss	—	(342.4)	—	(342.4)	5.1	(337.3)
Other comprehensive loss, net of taxes (note 16)	—	—	(6.0)	(6.0)	—	(6.0)
Share-based compensation (note 12)	40.2	—	—	40.2	—	40.2
Tax losses surrendered by Liberty Global subsidiaries (notes 10 and 13)	38.9	—	—	38.9	—	38.9
Conversion of related-party loans receivable and related accrued interest to equity	(32.4)	—	—	(32.4)	—	(32.4)
Capital charge in connection with the exercise of share-based incentive awards (note 13)	(23.0)	—	—	(23.0)	—	(23.0)
Impact of consolidation by Virgin Media of certain variable interest entities	22.5	—	—	22.5	(22.5)	—
Deemed contribution of technology-related services (note 13)	5.5	—	—	5.5	—	5.5
Other	2.8	—	—	2.8	—	2.8
Balance at December 31, 2019	£ 7,873.4	£ (1,709.4)	£ 83.2	£ 6,247.2	£ (17.4)	£ 6,229.8

THE VIRGIN MEDIA GROUP
COMBINED STATEMENTS OF EQUITY — (Continued)

	Parent entities					
	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive earnings, net of taxes	Total combined equity attributable to parent entities	Non-controlling interest	Total combined equity
	in millions					
Balance at January 1, 2020, before effect of accounting change	£ 7,873.4	£ (1,709.4)	£ 83.2	£ 6,247.2	£ (17.4)	£ 6,229.8
Impact of ASU No. 2016-13 (note 2)	—	(1.8)	—	(1.8)	—	(1.8)
Balance at January 1, 2020, as adjusted for accounting change	7,873.4	(1,711.2)	83.2	6,245.4	(17.4)	6,228.0
Net earnings	—	32.2	—	32.2	7.1	39.3
Other comprehensive loss, net of taxes	—	—	(18.7)	(18.7)	—	(18.7)
Technology-related transfer pricing transition fee (note 10 and 13)	(143.6)	—	—	(143.6)	—	(143.6)
Share-based compensation (note 12)	44.5	—	—	44.5	—	44.5
Tax losses surrendered to Liberty Global subsidiaries (notes 10 and 13)	(44.0)	—	—	(44.0)	—	(44.0)
Deemed contribution of technology-related services (note 13)	15.7	—	—	15.7	—	15.7
Capital charge in connection with the exercise of share-based incentive awards (note 13)	(13.8)	—	—	(13.8)	—	(13.8)
Capital charge for technology-related services (note 13)	(7.1)	—	—	(7.1)	—	(7.1)
Other	2.5	—	—	2.5	—	2.5
Balance at December 31, 2020	£ 7,727.6	£ (1,679.0)	£ 64.5	£ 6,113.1	£ (10.3)	£ 6,102.8

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

THE VIRGIN MEDIA GROUP
COMBINED STATEMENTS OF CASH FLOWS

	Year ended December 31,		
	2020	2019	2018
		in millions	
Cash flows from operating activities:			
Net earnings (loss)	£ 39.3	£ (337.3)	£ (37.0)
Adjustments to reconcile net earnings (loss) to net cash provided by operating activities:			
Share-based compensation expense	53.7	48.3	28.7
Related-party fees and allocations, net	325.7	225.4	110.6
Depreciation and amortization	1,344.1	1,738.2	1,798.2
Impairment, restructuring and other operating items, net	24.1	93.7	101.9
Amortization of deferred financing costs and non-cash interest	12.0	15.7	16.1
Realized and unrealized losses (gains) on derivative instruments, net	264.3	160.4	(471.3)
Foreign currency transaction losses (gains), net	(174.7)	(202.2)	364.0
Realized and unrealized losses (gains) due to changes in fair values of certain debt, net	(7.5)	20.8	(0.8)
Losses on debt extinguishment, net	138.2	115.5	28.8
Deferred income tax benefit	(246.3)	(45.0)	(12.7)
Changes in operating assets and liabilities, net of the effect of acquisitions and dispositions:			
Receivables and other operating assets	194.4	77.2	51.1
Payables and accruals	193.3	120.8	224.4
Net cash provided by operating activities	2,160.6	2,031.5	2,202.0
Cash flows from investing activities:			
Repayments from (advances to) related parties, net	(888.5)	(371.0)	89.2
Capital expenditures, net	(433.9)	(428.1)	(431.8)
Other investing activities, net	(0.3)	2.2	0.4
Net cash used by investing activities	£ (1,322.7)	£ (796.9)	£ (342.2)

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

THE VIRGIN MEDIA GROUP
COMBINED STATEMENTS OF CASH FLOWS — (Continued)

	Year ended December 31,		
	2020	2019	2018
		in millions	
Cash flows from financing activities:			
Repayments and repurchases of third-party debt and finance lease obligations	£ (6,585.1)	£ (5,253.9)	£ (4,045.9)
Borrowings of third-party debt	5,813.7	4,128.2	2,126.8
Payment of financing costs and debt premiums	(153.0)	(120.7)	(28.0)
Net cash received related to derivative instruments	139.0	96.2	74.6
Net repayments of related-party debt	(29.9)	(0.9)	(0.4)
Other financing activities, net	(21.3)	(39.9)	13.0
Net cash used by financing activities	(836.6)	(1,191.0)	(1,859.9)
Effect of exchange rate changes on cash and cash equivalents and restricted cash	1.9	(9.3)	(0.7)
Net increase (decrease) in cash and cash equivalents and restricted cash	3.2	34.3	(0.8)
Cash and cash equivalents and restricted cash:			
Beginning of period	58.7	24.4	25.2
End of period	£ 61.9	£ 58.7	£ 24.4
Cash paid for interest	£ 536.1	£ 693.8	£ 635.3
Net cash paid (refunded) for taxes	£ 4.1	£ (6.9)	£ 3.0
Details of end of period cash and cash equivalents and restricted cash:			
Cash and cash equivalents	£ 22.0	£ 34.5	£ 16.8
Restricted cash included in other current assets and other assets, net	39.9	24.2	7.6
Total cash and cash equivalents and restricted cash	£ 61.9	£ 58.7	£ 24.4

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

(1) Basis of Presentation

Virgin Media Inc. (**Virgin Media**) and NewCo Holdco 5 Limited are indirect wholly-owned subsidiaries of Liberty Global plc (**Liberty Global**). The accompanying combined financial statements include the historical financial information of (i) Virgin Media and its subsidiaries and (ii) NewCo Holdco 5 Limited and its subsidiaries (**VM Ireland**) (collectively, the **Virgin Media Group**). Virgin Media and NewCo Holdco 5 Limited are each parent entities of the Virgin Media Group in these combined financial statements. Prior to the fourth quarter of 2020, VM Ireland was wholly-owned by Virgin Media. During the fourth quarter of 2020, in connection with certain internal reorganization transactions completed by Liberty Global associated with the pending transactions contemplated by the Contribution Agreement (as defined below), VM Ireland was acquired by another subsidiary of Liberty Global outside of the Virgin Media Group (the **Ireland Transaction**). Following the Ireland Transaction, VM Ireland remains subject to the "restricted subsidiary" provisions of the facilities agreement and bond indentures governing the debt of the Virgin Media Group. Accordingly, the accompanying financial statements are prepared on a combined basis as a result of these changes in reporting entities.

The Virgin Media Group provides broadband internet, video, fixed-line telephony and mobile services to consumers and businesses in the United Kingdom (**U.K.**) and Ireland. In these notes, the terms, "we," "our," "our company" and "us" refer to the Virgin Media Group.

These combined financial statements have been prepared in accordance with accounting principles generally accepted in the United States (**GAAP**). Unless otherwise indicated, convenience translations into pound sterling are calculated as of December 31, 2020.

On May 7, 2020, Liberty Global entered into a Contribution Agreement (the **Contribution Agreement**) with, among others, Telefonica, SA (**Telefonica**). Pursuant to the Contribution Agreement, Liberty Global and Telefonica agreed to form a 50:50 joint venture (the **U.K. JV**), which will combine our operations in the U.K., along with certain other Liberty Global subsidiaries created as a result of the pending U.K. JV (together, the **U.K. JV Entities**) with Telefonica's mobile business in the U.K. to create a nationwide integrated communications provider. In advance of this transaction, we completed certain recapitalization financings, as described in note 8. The outstanding third-party debt associated with the U.K. JV Entities will be contributed in full to the U.K. JV, and the transaction will not trigger a change of control under the Virgin Media Group's debt agreements.

The U.K. JV intends to distribute available cash to the shareholders periodically and is expected to undertake periodic further recapitalizations, subject to market and operating conditions, to maintain a target net leverage ratio ranging between 4.0 and 5.0 times EBITDA (as defined in the applicable shareholders' agreement). The consummation of the transaction contemplated by the Contribution Agreement is subject to certain conditions, including competition clearance by the applicable regulatory authorities. The Contribution Agreement also includes customary termination rights, including a right of the parties to terminate the agreement if the transaction has not closed within 24 months following the date of the Contribution Agreement, which may be extended by six months under certain circumstances.

These combined financial statements reflect our consideration of the accounting and disclosure implications of subsequent events through March 12, 2021, the date of issuance.

(2) Accounting Changes and Recent Accounting Pronouncements

Accounting Changes

ASU 2018-15

In August 2018, the Financial Accounting Standards Board (**FASB**) issued Accounting Standards Update (**ASU**) No. 2018-15, *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract* (**ASU 2018-15**), which requires entities to defer implementation costs incurred that are related to the application development stage in a cloud computing arrangement that is a service contract. ASU 2018-15 requires deferred implementation costs to be amortized over the term of the cloud computing arrangement and presented in the same expense line item as the cloud computing arrangement. All other implementation costs are generally expensed as incurred. We adopted ASU 2018-15 on January 1, 2020 on a prospective basis. As a result of the adoption of ASU 2018-15, (i) certain implementation costs that were previously expensed as incurred are now deferred as prepaid expenses and amortized over the term of the cloud computing arrangement and (ii) certain costs associated with developing interfaces between a cloud computing arrangement and internal-use software that were previously capitalized as property and equipment are now deferred as prepaid expenses and amortized over the term of the cloud computing arrangement. The adoption of ASU 2018-15 did not have a significant impact on our combined financial statements.

ASU 2016-13

In June 2016, the FASB issued ASU No. 2016-13, *Measurement of Credit Losses on Financial Statements* (**ASU 2016-13**), which changes the recognition model for credit losses related to assets held at amortized cost. ASU 2016-13 eliminates the threshold that a loss must be considered probable to recognize a credit loss and instead requires an entity to reflect its current estimate of lifetime expected credit losses. We adopted ASU 2016-13 on January 1, 2020 on a modified retrospective basis by recording a cumulative effect adjustment of £1.8 million to our accumulated deficit related to increases to our allowances for certain trade and notes receivable.

ASU 2016-02

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (**ASU 2016-02**), which, for most leases, results in lessees recognizing right-of-use (**ROU**) assets and lease liabilities on the balance sheet. ASU 2016-02, as amended by ASU No. 2018-11, *Targeted Improvements*, requires lessees and lessors to recognize and measure leases at the beginning of the earliest period presented using one of two modified retrospective approaches. A number of optional practical expedients may be applied in transition. We adopted ASU 2016-02 on January 1, 2019.

The main impact of the adoption of ASU 2016-02 relates to the recognition of ROU assets and lease liabilities on our combined balance sheet for those leases classified as operating leases under previous GAAP. In transition, we have applied the practical expedients that permit us not to reassess (i) whether expired or existing contracts contain a lease under the new standard, (ii) the lease classification for expired or existing leases or (iii) whether previously-capitalized initial direct costs would qualify for capitalization under the new standard. In addition, we have not used hindsight during transition.

Upon adoption of ASU 2016-02, on January 1, 2019 we recorded ROU assets of £137.3 million and lease liabilities of £138.4 million related to operating leases. In addition, (i) we reclassified our existing prepaid lease expense, accrued lease expense and lease incentive liabilities, resulting in a net reduction of our ROU assets of £1.1 million and (ii) restructuring liabilities related to operating leases of £1.9 million are now reflected as operating lease liabilities. The adoption of ASU 2016-02 did not have a significant impact on our combined statements of operations or cash flows.

We have implemented a new lease accounting system and related internal controls over financial reporting to meet the requirements of ASU 2016-02.

For additional information regarding our leases, see note 9.

Recent Accounting Pronouncements

ASU 2019-12

In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes* (**ASU 2019-12**), which is intended to improve consistency and simplify several areas of existing guidance. ASU 2019-12 removes certain exceptions to the general principles related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. ASU 2019-12 is effective for annual reporting periods beginning after December 15, 2021, including interim periods within those fiscal years, with early adoption permitted. We do not expect the adoption of ASU 2019-12 to have a significant impact on our combined financial statements.

(3) Summary of Significant Accounting Policies

Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities 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, certain components of revenue, programming and copyright costs, 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.

Principles of Combination

The accompanying combined 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 combination.

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 as there are no restrictions on our ability, contractual or otherwise, to redeem our investments at the stated net asset value.

Restricted cash consists of cash held in restricted accounts, including cash held in escrow related to our pension plans. 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.

Our significant non-cash investing and financing activities are disclosed in our combined statements of equity and in notes 5, 7, 8, 9 and 13.

Cash Flow Statement

For the purpose of determining the classification of cash flows in our combined statements of cash flows, payments 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). Interest-bearing cash advances to related parties and repayments thereof are classified as investing activities. Receipts on related-party receivables are first applied to principal (included as cash flows from investing activities) and then to capitalized interest (included as cash flows from operating activities). All other related-party borrowings, advances and repayments are reflected as financing activities.

For the purpose of our combined 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 combined statements of cash flows.

The capital expenditures that we report in our combined statements of cash flows do not include amounts that are financed under capital-related vendor financing or finance 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.

Trade Receivables

Our trade receivables are reported net of an allowance for doubtful accounts. Such allowance aggregated £28.4 million and £22.9 million at December 31, 2020 and 2019, respectively. The allowance for doubtful accounts is based upon our current estimate of lifetime expected credit losses 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 residential and business 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 concerning 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 combined 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. We generally 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 combined 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 combined 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 and disconnecting customer locations and repairing or maintaining drops, are expensed as incurred. We did not capitalize any interest with respect to construction activities 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 finance 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, as well as our obligations under certain lease arrangements to restore the property to its original condition at the end of the lease term. Given the nature of our operations, most of our rights of way and certain leased premises are considered integral to our business. Accordingly, for most of our rights of way and certain lease agreements, the possibility is remote that we will incur significant removal costs in the foreseeable future and, as such, we do not have sufficient information to make a reasonable estimate of fair value for these asset retirement obligations.

As of December 31, 2020 and 2019, the recorded value of our asset retirement obligations was £30.5 million and £29.7 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 value 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. Any excess of the carrying amount over the fair value would be charged to operations as an impairment loss. 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.

Leases

For leases with a term greater than 12 months, we recognize on the lease commencement date (i) ROU assets representing our right to use an underlying asset and (ii) lease liabilities representing our obligation to make lease payments over the lease term. Lease and non-lease components in a contract are generally accounted for separately.

We initially measure lease liabilities at the present value of the remaining lease payments over the lease term. Options to extend or terminate the lease are included only when it is reasonably certain that we will exercise that option. As most of our leases do not provide enough information to determine an implicit interest rate, we generally use a portfolio level incremental borrowing rate in our present value calculation. We initially measure ROU assets at the value of the lease liability, plus any initial direct costs and prepaid lease payments, less any lease incentives received.

With respect to our finance leases, (i) ROU assets are generally depreciated on a straight-line basis over the shorter of the lease term or the useful life of the asset and (ii) interest expense on the lease liability is recorded using the effective interest method. Operating lease expense is recognized on a straight-line basis over the lease term. For leases with a term of 12 months or less (short-term leases), we do not recognize ROU assets or lease liabilities. Short-term lease expense is recognized on a straight-line basis over the lease term.

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. 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 manner. Interest and penalties related to income tax liabilities are included in income tax benefit or expense in our combined statements of operations.

For additional information regarding our income taxes, see note 10.

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 combined 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 combined statements of 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 combined statements of cash flows. The impacts of material transactions generally are recorded at the applicable spot rates in our combined statements of operations and cash flows. The effect of exchange rates on cash balances held in foreign currencies are separately reported in our combined statements of cash flows.

Transactions denominated in currencies other than our functional currencies are recorded based on exchange rates at the time such transactions arise. Changes in exchange rates with respect to amounts recorded on our combined balance sheets related to these non-functional currency transactions result in transaction gains and losses that are reflected in our combined 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 broadband internet, video and fixed-line telephony services over our cable network to customers in the period the related services are provided, with the exception of revenue recognized pursuant to certain contracts that contain promotional discounts, as described below. Installation fees related to services provided over our cable network are generally deferred and recognized as revenue over the contractual period, or longer if the upfront fee results in a material renewal right.

Sale of Multiple Products and Services. We sell broadband internet, video, 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 products or services based on the relative standalone selling price for each respective product or service.

Mobile Revenue — General. Consideration from mobile contracts is allocated to the airtime service component and the handset component based on the relative standalone selling prices of each component. When we offer handsets and airtime services in separate contracts entered into at the same time, we account for these contracts as a single contract.

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

Mobile Revenue — Handset Revenue. Revenue from the sale of handsets is recognized at the point in which the goods have been transferred to the customer. Some of our mobile handset contracts that permit the customer to take control of the handset upfront and pay for the handset in installments over a contractual period may contain a significant financing component. For contracts with terms of one year or more, we recognize any significant financing component as revenue over the contractual period using the effective interest method. We do not record the effect of a significant financing component if the contractual period is less than one year.

B2B Revenue. We defer upfront installation and certain nonrecurring fees received on business-to-business (**B2B**) contracts where we maintain ownership of the installed equipment. The deferred fees are amortized into revenue on a straight-line basis, generally over the longer of the term of the arrangement or the expected period of performance. From time to time, we also enter into agreements with certain B2B customers pursuant to which they are provided the right to use certain elements of our network. If these agreements are determined to contain a lease that meets the criteria to be considered a sales-type lease, we recognize revenue from the lease component when control of the network element is transferred to the customer.

Contract Costs. Incremental costs to obtain a contract with a customer, such as incremental sales commissions, are generally recognized as assets and amortized to SG&A expenses over the applicable period benefited, which generally is the contract life. If, however, the amortization period is less than one year, we expense such costs in the period incurred. Contract fulfillment costs, such as costs for installation activities for B2B customers, are recognized as assets and amortized to other operating costs over the applicable period benefited, which is generally the substantive contract term for the related service contract.

Promotional Discounts. For subscriber promotions, such as discounted or free services during an introductory period, revenue is recognized uniformly over the contractual period if the contract has substantive termination penalties. If a contract does not have substantive termination penalties, revenue is recognized only to the extent of the discounted monthly fees charged to the subscriber, if any.

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

Sales and Other Value-Added Taxes (**VAT**). Revenue is recorded net of applicable sales and other VAT.

For additional information regarding our revenue recognition and related costs, see note 4. For a disaggregation of our revenue by major category and by reportable and geographic segment, see note 18.

Share-based Compensation

We recognize all share-based payments from Liberty Global to our employees, including grants of employee share-based incentive awards, based on their grant-date fair values and Liberty Global's estimates of forfeitures. We recognize share-based compensation expense as a charge to operations over the vesting period based on the grant-date fair value of outstanding awards, which may differ from the fair value of such awards on any given date. Our share of 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 combined statements of operations.

We use the straight-line method to recognize share-based compensation expense for Liberty Global's outstanding share awards to our employees 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 related to Liberty Global shares is generally based on a combination of (i) historical volatilities of Liberty Global shares for a period equal to the expected average life of the awards and (ii) volatilities implied from publicly-traded options for Liberty Global shares.

For additional information regarding our share-based compensation, see note 12.

Litigation Costs

Legal fees and related litigation costs are expensed as incurred.

(4) Revenue Recognition and Related Costs

Contract Balances

If we transfer goods or services to a customer but do not have an unconditional right to payment, we record a contract asset. Contract assets typically arise from the uniform recognition of introductory promotional discounts over the contract period and accrued revenue for handset sales. Our contract assets were £3.1 million and £11.3 million as of December 31, 2020 and 2019, respectively. The current and long-term portions of our contract asset balances are included within other current assets and other assets, net, respectively, on our combined balance sheets.

We record deferred revenue when we receive payment prior to transferring goods or services to a customer. We primarily defer revenue for (i) installation and other upfront services and (ii) other services that are invoiced prior to when services are provided. Our deferred revenue balances were £359.6 million and £380.1 million as of December 31, 2020 and 2019, respectively. The decrease in deferred revenue during 2020 is primarily due to the recognition of £357.0 million of revenue that was included in our deferred revenue balance at December 31, 2019, partially offset by advanced billings recorded during the period. The long-term portions of our deferred revenue balances are included within other long-term liabilities on our combined balance sheets.

Contract Costs

Our aggregate assets associated with incremental costs to obtain and fulfill our contracts were £74.5 million and £53.4 million at December 31, 2020 and 2019, respectively. The current and long-term portions of our assets related to contract costs are included within other current assets and other assets, net, respectively, on our combined balance sheets. During 2020, 2019 and 2018 we amortized £82.1 million, £60.0 million and £57.6 million, respectively, to operating costs and expenses associated with our assets related to contract costs.

Unsatisfied Performance Obligations

A large portion of our revenue is derived from customers who are not subject to contracts. Revenue from customers who are subject to contracts is generally recognized over the term of such contracts, which is typically 12 months for our residential service contracts, one to three years for our mobile service contracts and one to five years for our B2B service contracts.

(5) Derivative Instruments

In general, we enter into derivative instruments to protect against (i) increases in the interest rates on our variable-rate debt and (ii) foreign currency movements, particularly with respect to borrowings that are denominated in a currency other than the functional currency of the borrowing entity. 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 (**€**) and the Indian rupee. Generally, we do not apply hedge accounting to our derivative instruments. Accordingly, changes in the fair values of most of our derivative instruments are recorded in realized and unrealized gains or losses on derivative instruments, net, in our combined statements of operations.

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

	December 31, 2020			December 31, 2019		
	Current	Long-term	Total	Current	Long-term	Total
	in millions					
Assets (a):						
Cross-currency and interest rate derivative contracts (b)	£ 66.3	£ 279.7	£ 346.0	£ 82.5	£ 431.1	£ 513.6
Foreign currency forward and option contracts	0.4	—	0.4	—	—	—
Total	£ 66.7	£ 279.7	£ 346.4	£ 82.5	£ 431.1	£ 513.6
Liabilities (a):						
Cross-currency and interest rate derivative contracts (b)	£ 146.2	£ 607.7	£ 753.9	£ 133.1	£ 402.8	£ 535.9
Foreign currency forward and option contracts	1.9	—	1.9	0.5	—	0.5
Foreign currency forward contracts — related-party	0.1	—	0.1	—	—	—
Total	£ 148.2	£ 607.7	£ 755.9	£ 133.6	£ 402.8	£ 536.4

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

(b) We consider credit risk relating to our and our counterparties' nonperformance in the fair value assessment of our derivative instruments. In all cases, the adjustments take into account offsetting liability or asset positions. The changes in the credit risk valuation adjustments associated with our cross-currency and interest rate derivative contracts resulted in net gains (losses) of £77.3 million, £45.3 million and (£31.8 million) during 2020, 2019 and 2018, respectively. These amounts are included in realized and unrealized gains (losses) on derivative instruments, net, in our combined statements of operations. For further information regarding our fair value measurements, see note 6.

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

	Year ended December 31,		
	2020	2019	2018
		in millions	
Cross-currency and interest rate derivative contracts	£ (262.6)	£ (160.0)	£ 470.0
Foreign currency forward and option contracts:			
Third-party	(1.7)	0.5	—
Related-party	—	(0.9)	1.3
Total	£ (264.3)	£ (160.4)	£ 471.3

The net cash received or paid related to our derivative instruments is classified as an operating, investing or financing activity in our combined 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. The following table sets forth the classification of the net cash inflows (outflows) of our derivative instruments:

	Year ended December 31,		
	2020	2019	2018
		in millions	
Operating activities	£ (42.7)	£ 120.7	£ 135.5
Financing activities	139.0	96.2	74.6
Total	£ 96.3	£ 216.9	£ 210.1

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, 2020, our exposure to counterparty credit risk included derivative assets with an aggregate fair value of £4.2 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 are limited to the derivative instruments and derivative-related debt instruments, governed by the relevant master agreement and are independent of similar arrangements. For additional information regarding our derivative-related debt, see note 8.

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

Cross-currency Derivative Contracts

We generally match the denomination of our borrowings with the functional currency of the supporting operations or, when it is more cost effective, we 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, 2020, substantially all of our debt was either directly or synthetically matched to the functional currency of the borrowing entity. The following table sets forth the total notional amounts and the related weighted average remaining contractual lives of our cross-currency swap contracts at December 31, 2020:

Notional amount due from counterparty		Notional amount due to counterparty			Weighted average remaining life
in millions					in years
$	11,499.0	£	8,699.5	(a)	5.5
£	1,005.5	$	1,445.0	(b)	4.1
€	500.0	£	445.6		7.5
£	394.2	$	500.0		4.5
$	166.6	€	150.0		7.5

(a) Includes certain derivative instruments that are "forward-starting," such that the initial exchange occurs at a date subsequent to December 31, 2020. These instruments are typically entered into in order to extend existing hedges without the need to amend existing contracts.

(b) These derivative instruments 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 coupon-related payments and receipts.

Interest Rate Swap Contracts

The following table sets forth the total pound sterling equivalents of the notional amounts and the related weighted average remaining contractual lives of our interest rate swap contracts at December 31, 2020:

Pay fixed rate (a)			Receive fixed rate		
Notional amount		Weighted average remaining life	Notional amount		Weighted average remaining life
in millions		in years	in millions		in years
£	12,979.0	4.2	£	3,830.8	4.2

(a) Includes forward-starting derivative instruments.

Interest Rate Swap Options

From time to time, we enter into interest rate swap options (**swaptions**), which give us the right, but not the obligation, to enter into certain interest rate swap contracts at set dates in the future. Such contracts typically have a life of no more than three years. At the transaction date, the strike rate of this contract was above the corresponding market rate. The following table sets forth certain information regarding our swaption at December 31, 2020:

Notional amount		Underlying swap currency	Weighted average option expiration period (a)	Weighted average strike rate (b)
in millions			in years	
£	1,936.2	£	0.2	2.41%

(a) Represents the weighted average period until the date on which we have the option to enter into the interest rate swap contracts.

(b) Represents the weighted average interest rate that we would pay if we exercised our option to enter into the interest rate swap contracts.

Basis Swaps

Our basis swaps involve the exchange of attributes used to calculate our floating interest rates, including (i) the benchmark rate, (ii) the underlying currency and/or (iii) the borrowing period. We typically enter into these swaps to optimize our interest rate profile based on our current evaluations of yield curves, our risk management policies and other factors. At December 31, 2020, the total pound sterling equivalent of the notional amount due from the counterparty, including forward-starting derivative instruments, was £3,393.9 million (including £3,317.4 million subject to a 0.0% floor) and the related weighted average remaining contractual life of our basis swap contracts was 0.5 years.

Interest Rate Caps and Floors

From time to time, we enter into interest rate cap and floor agreements. Purchased interest rate caps lock in a maximum interest rate if variable rates rise, but also allow our company to benefit from declines in market rates. Purchased interest rate floors protect us from interest rates falling below a certain level, generally to match a floating rate floor on a debt instrument. At December 31, 2020, the pound sterling equivalent notional amounts of our purchased interest rate caps and floors were £1,568.4 million and £3,317.4 million, respectively.

Impact of Derivative Instruments on Borrowing Costs

Excluding forward-starting instruments and swaptions, the impact of the derivative instruments that mitigate our foreign currency and interest rate risk, as described above, was an increase of 71 basis points to our borrowing costs as of December 31, 2020.

Foreign Currency Forwards and Options

We enter into foreign currency forward and option contracts with respect to non-functional currency exposure. As of December 31, 2020, the total of the notional amount of our foreign currency forward and option contracts was £96.7 million.

(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, 2020 are unlikely to represent the value that will be paid or received upon the ultimate settlement or disposition of these assets and liabilities.

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 2020, certain of our swaptions were transferred from Level 3 to Level 2 in connection with the expiration of the associated option period. The notional amount of such swaptions was not significant.

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.

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, respectively. The recurring fair value measurements of these instruments are determined using discounted cash flow models. With the exception of the inputs for certain swaptions, 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 mostly includes currency rates, 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 use a Monte Carlo based approach to 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. The inputs used for our credit risk valuations, including our and our counterparties' credit spreads, represent our most significant 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 these parameters to have a significant impact on the valuations of these instruments, we have determined that these valuations (other than the valuations of the aforementioned swaptions) fall under Level 2 of the fair value hierarchy. Due to the lack of Level 2 inputs for the swaption valuations, we believe these valuations fall under Level 3 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, respectively.

Fair value measurements are also used in connection with nonrecurring valuations performed in connection with acquisition accounting and impairment assessments. The nonrecurring valuations associated with acquisition accounting primarily include the valuation of reporting units, customer relationship and other intangible assets and property and equipment. Unless a reporting unit has a readily determinable fair value, the valuation of reporting units is based at least in part on discounted cash flow analyses. With the exception of certain inputs for our weighted average cost of capital and discount rate calculations that are derived from pricing services, the inputs used in our discounted cash flow analyses, such as forecasts of future cash flows, are based on our assumptions. 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. Most 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 2020 or 2019.

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

Description	December 31, 2020	Fair value measurements at December 31, 2020 using: Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
		in millions	
Assets:			
Cross-currency and interest rate derivative contracts	£ 346.0	£ 346.0	£ —
Foreign currency forward and option contracts	0.4	0.4	—
Total assets	£ 346.4	£ 346.4	£ —
Liabilities:			
Cross-currency and interest rate derivative contracts	£ 753.9	£ 736.6	£ 17.3
Foreign currency forward and option contracts	1.9	1.9	—
Foreign currency forward contracts — related-party	0.1	0.1	—
Total liabilities	£ 755.9	£ 738.6	£ 17.3

Description	December 31, 2019	Fair value measurements at December 31, 2019 using: Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
		in millions	
Assets:			
Cross-currency and interest rate derivative contracts	£ 513.6	£ 513.6	£ —
Liabilities:			
Derivative instruments:			
Cross-currency and interest rate derivative contracts	£ 535.9	£ 517.2	£ 18.7
Foreign currency forward and option contracts	0.5	0.5	—
Debt	34.4	34.4	—
Total liabilities	£ 570.8	£ 552.1	£ 18.7

(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, 2020	December 31, 2020	December 31, 2019
		in millions	
Distribution systems	3 to 30 years	£ 9,316.0	£ 8,749.6
Customer premises equipment	5 years	2,101.3	2,238.3
Support equipment, buildings and land	3 to 50 years	1,753.3	1,718.5
Total property and equipment, gross		13,170.6	12,706.4
Accumulated depreciation		(7,225.8)	(6,627.7)
Total property and equipment, net (a)		£ 5,944.8	£ 6,078.7

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(a) For additional information regarding finance leases included within our property and equipment, see note 9.

Depreciation expense related to our property and equipment was £1,266.0 million, £1,384.1 million and £1,408.8 million during 2020, 2019 and 2018, respectively.

During 2020, 2019 and 2018, we recorded non-cash increases to our property and equipment related to vendor financing arrangements of £713.7 million, £838.6 million and £1,057.2 million, respectively, which exclude related VAT of £124.1 million, £146.5 million and £188.0 million, respectively, that were also financed under these arrangements.

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

Goodwill

The changes in the carrying amounts of our goodwill during 2020 and 2019 are due to foreign currency translation adjustments.

If, among other factors, (i) our enterprise value or Liberty Global's equity values were to decline 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

At December 31, 2020, all of our intangible assets subject to amortization related to our customer relationships, which, as of such date, had estimated useful lives ranging from five to eight years. The details of our intangible assets subject to amortization, which are included in other assets, net, on our combined balance sheets, are set forth below:

	December 31, 2020	December 31, 2019
	in millions	
Gross carrying amount	£ 617.8	£ 2,527.9
Accumulated amortization	(587.8)	(2,419.6)
Net carrying amount	£ 30.0	£ 108.3

Amortization expense related to intangible assets with finite useful lives was £78.1 million, £354.1 million and £389.4 million during 2020, 2019 and 2018, respectively. Based on our amortizable intangible asset balances at December 31, 2020, we expect that amortization expense will be as follows for the next five years and thereafter (in millions):

2021	£ 27.0
2022	0.9
2023	0.9
2024	0.8
2025	0.4
Thereafter	—
Total	£ 30.0

(8) Debt

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

	December 31, 2020: Weighted average interest rate (a)	December 31, 2020: Unused borrowing capacity (b)	Principal amount December 31, 2020	Principal amount December 31, 2019
			in millions	
VM Senior Secured Notes	4.92 %	£ —	£ 4,393.6	£ 4,461.2
VM Credit Facilities (c)	2.78 %	1,000.0	4,006.0	4,126.7
VM Senior Notes	4.50 %	—	1,125.4	1,194.2
Vendor financing (d)	4.33 %	—	2,090.5	1,835.0
Other (e)	1.91 %	—	280.5	337.1
Total third-party debt before deferred financing costs, discounts and premiums (f)	3.99 %	£ 1,000.0	£ 11,896.0	£ 11,954.2

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

	December 31,	
	2020	2019
	in millions	
Total third-party debt before deferred financing costs, discounts and premiums	£ 11,896.0	£ 11,954.2
Deferred financing costs, discounts and premiums, net	(44.1)	(17.5)
Total carrying amount of third-party debt	11,851.9	11,936.7
Finance lease obligations (note 9)	48.4	52.9
Total third-party debt and finance lease obligations	11,900.3	11,989.6
Related-party debt (note 13)	27.6	56.7
Total debt and finance lease obligations	11,927.9	12,046.3
Current maturities of debt and finance lease obligations	(2,040.3)	(1,868.9)
Long-term debt and finance lease obligations	£ 9,887.6	£ 10,177.4

(a) Represents the weighted average interest rate in effect at December 31, 2020 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 deferred financing costs, the weighted average interest rate on our aggregate third-party variable- and fixed-rate indebtedness was 4.65% at December 31, 2020. For information regarding our derivative instruments, see note 5.

(b) The VM Credit Facilities include the VM Revolving Facility, a multi-currency revolving facility with maximum borrowing capacity equivalent to £1,000.0 million, which was undrawn at December 31, 2020. Unused borrowing capacity represents the maximum availability under the VM Credit Facilities (as defined and described below) at December 31, 2020 without regard to covenant compliance calculations or other conditions precedent to borrowing. At December 31, 2020, based on the most restrictive applicable leverage covenants and leverage-based restricted payment tests, the equivalent of £571.5 million of unused borrowing capacity was available to be borrowed and there were no additional restrictions on our ability to make loans or distributions from this availability to other entities within the Virgin Media Group. Upon completion of the relevant December 31, 2020 compliance reporting requirements, and based on the most restrictive applicable leverage covenants and leverage-based restricted payment tests, we expect the equivalent of £751.9 million of unused borrowing capacity will be available, with no additional restriction to loan or distribute. Our above expectations do not consider any actual or potential changes to our borrowing levels or any amounts loaned or distributed subsequent to December 31, 2020, or the impact of additional amounts that may be available to borrow, loan or distribute under certain defined baskets within the VM Credit Facilities.

(c) Principal amounts include £12.9 million and £103.6 million at December 31, 2020 and 2019, respectively, of borrowings pursuant to excess cash facilities under the VM Credit Facilities. These borrowings are owed to certain special purpose financing entities outside of the Virgin Media Group that have issued notes to finance the purchase of receivables due from our company to certain other third parties for amounts that we have vendor financed. To the extent the proceeds from these notes exceed the amount of vendor financed receivables available to be purchased, the excess proceeds are used to fund these excess cash facilities under our senior credit facilities.

(d) Represents amounts owed to various creditors pursuant to interest-bearing vendor financing arrangements that are used to finance certain of our property and equipment additions and operating expenses. These arrangements extend our repayment terms beyond a vendor's original due dates (e.g. extension beyond a vendor's customary payment terms, which are generally 90 days or less) and as such are classified outside of accounts payable on our combined balance sheets. These obligations are generally due within one year and include VAT that was also financed under these arrangements. Repayments of vendor financing obligations are included in repayments and repurchases of third-party debt and finance lease obligations in our combined statements of cash flows.

(e) The December 31, 2020 principal amount includes £204.0 million related to the 2020 Receivables Notes, as defined and described below. The December 31, 2019 principal amount includes amounts associated with certain derivative-related borrowing instruments, including £34.4 million carried at fair value. The fair value of this debt at December 31, 2019 includes credit risk valuation adjustments that resulted in a net loss of £1.2 million during 2019, which is included in realized and unrealized gains (losses) due to changes in fair values of certain debt, net, in our combined statement of operations. These derivative-related borrowing instruments were redeemed during the fourth quarter of 2020. For further information regarding our fair value measurements, see note 6. In addition, the December 31, 2019 principal amount includes £199.5 million of debt collateralized by certain trade receivables of our company (the **VM Receivables Financing**). During the third quarter of 2020, the amount outstanding under the VM Receivables Financing was repaid, and the associated trade receivables were sold to a third party (the **VM Receivables Financing Sale**).

(f) As of December 31, 2020 and 2019, our third-party debt had an estimated fair value of £12.1 billion and £12.3 billion, respectively. The estimated fair values of our debt instruments are generally 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, to the extent available, and other relevant factors. For additional information regarding fair value hierarchies, see note 6.

General Information

Credit Facilities. We have entered into a senior secured credit facility agreement with certain financial institutions and senior credit facility agreements with certain special purpose financing entities outside of the Virgin Media Group (as described under *VM Credit Facilities* below) (the "**credit facilities**"). Our credit facilities contain certain covenants, the more notable of which are as follows:

- Our credit facilities contain certain net leverage ratios, as specified in the relevant credit facility, which are required to be complied with (i) on an incurrence basis and/or (ii) in respect of our senior secured credit facilities, when the associated revolving credit facilities have been drawn, on a net basis, beyond a specified percentage of the total available revolving credit commitments, on a maintenance basis;

- Subject to certain customary and agreed exceptions, 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 and (iv) make certain restricted payments to our direct and/or indirect parent companies through dividends, loans or other distributions;

- Our credit facilities require that certain entities within the Virgin Media Group (i) guarantee the payment of all sums payable under the relevant credit facility and (ii) in respect of our senior secured credit facilities, grant first-ranking security over substantially all of their 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, under certain circumstances, may cancel the group's commitments thereunder and declare the loan(s) thereunder due and payable at par after the applicable notice period following the occurrence of a change of control (as specified in the senior secured credit facilities);

- In addition to certain mandatory prepayment events, the individual lender under each of our senior credit facilities, under certain circumstances, may cancel its commitments thereunder and declare the loan(s) thereunder due and payable at a price of 101% after the applicable notice period following the occurrence of a change of control (as specified in the relevant senior credit facility);

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

- 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;

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

- Our senior credit facilities provide that any failure to pay principal at its stated maturity (after the expiration of any applicable grace period) of, or any acceleration with respect to, other indebtedness of the borrower or certain entities within the Virgin Media Group over agreed minimum thresholds (as specified under the applicable senior credit facility), is an event of default under the respective senior credit facility.

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 the issuer of such notes 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 such issuer, (ii) contain, in most instances, certain guarantees from Virgin Media and certain other entities within the Virgin Media Group (as specified in the applicable indenture) and (iii) with respect to our senior secured notes, are secured by certain pledges or liens over substantially all of our assets. In addition, the indentures governing our senior and senior secured notes contain certain covenants, the more notable of which are as follows:

- Our notes provide that any failure to pay principal at its stated maturity (after the expiration of any applicable grace period) of, or any acceleration with respect to, other indebtedness of the issuer or certain entities within the Virgin Media Group over agreed minimum thresholds (as specified under the applicable indenture), is an event of default under the respective notes;

- Subject to certain materiality qualifications and other customary and agreed exceptions, our notes contain (i) certain customary incurrence-based covenants and (ii) certain restrictions that, among other things, restrict our ability to (a) incur or guarantee certain financial indebtedness, (b) make certain disposals and acquisitions, (c) create certain security interests over our assets and (d) make certain restricted payments to our direct and/or indirect parent companies through dividends, loans or other distributions;

- If certain of the entities within the Virgin Media Group (as specified in the applicable indenture) sell certain assets, we must, subject to certain materiality qualifications and other customary and agreed exceptions, offer to repurchase the applicable notes at par, or if a change of control (as specified in the applicable indenture) occurs, we 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 original principal amount of the notes 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 the Virgin Media Group as of December 31, 2020 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	Carrying value (a)
				in millions		
VM Senior Notes:						
2030 VM Senior Notes:						
2030 VM Dollar Senior Notes	July 15, 2030	5.000%	$ 925.0	$ 925.0	£ 677.6	£ 674.3
2030 VM Euro Senior Notes	July 15, 2030	3.750%	€ 500.0	€ 500.0	447.8	445.3
VM Senior Secured Notes:						
2026 VM Dollar Senior Secured Notes	August 15, 2026	5.500%	$ 750.0	$ 750.0	549.4	546.3
2027 VM Sterling Senior Secured Notes	April 15, 2027	5.000%	£ 675.0	£ 675.0	675.0	672.5
2029 VM Senior Secured Notes:						
2029 VM Dollar Senior Secured Notes	May 15, 2029	5.500%	$ 1,425.0	$ 1,425.0	1,043.9	1,046.4
2029 VM Sterling Senior Secured Notes	May 15, 2029	5.250%	£ 340.0	£ 340.0	340.0	340.1
2030 VM Senior Secured Notes:						
2030 VM Dollar Senior Secured Notes	August 15, 2030	4.500%	$ 915.0	$ 915.0	670.3	671.8
2030 VM 4.125% Sterling Senior Secured Notes	August 15, 2030	4.125%	£ 480.0	£ 480.0	480.0	477.1
2030 VM 4.25% Sterling Senior Secured Notes	January 15, 2030	4.250%	£ 635.0	£ 635.0	635.0	627.3
Total					£ 5,519.0	£ 5,501.1

(a) Amounts are net of deferred financing costs, discounts and premiums, including amounts recorded in connection with the acquisition accounting for the Virgin Media Group, where applicable.

The VM Notes are non-callable prior to the applicable Call Dates as presented in the below table. At any time prior to the respective Call Date, the Virgin Media Group 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.

VM Notes	Call Date
2030 VM Dollar Senior Notes	July 15, 2025
2030 VM Euro Senior Notes	July 15, 2025
2026 VM Dollar Senior Secured Notes	August 15, 2021
2027 VM Sterling Senior Secured Notes	April 15, 2022
2029 VM Dollar Senior Secured Notes	May 15, 2024
2029 VM Sterling Senior Secured Notes	May 15, 2024
2030 VM 4.25% Sterling Senior Secured Notes	October 15, 2024
2030 VM Dollar Senior Secured Notes	August 15, 2025
2030 VM 4.125% Sterling Senior Secured Notes	August 15, 2025

The Virgin Media Group may redeem some or all of the VM Senior Notes and the 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				
	2030 VM Dollar Senior Notes	2030 VM Euro Senior Notes	2026 VM Dollar Senior Secured Notes	2027 VM Sterling Senior Secured Notes	2029 VM Dollar Senior Secured Notes
12-month period commencing	July 15	July 15	August 15	April 15	May 15
2021	N.A.	N.A.	102.750%	N.A.	N.A.
2022	N.A.	N.A.	101.375%	102.500%	N.A.
2023	N.A.	N.A.	100.688%	101.250%	N.A.
2024	N.A.	N.A.	100.000%	100.625%	102.750%
2025	102.500%	101.875%	100.000%	100.000%	101.375%
2026	101.250%	100.938%	N.A.	100.000%	100.000%
2027	100.625%	100.469%	N.A.	N.A.	100.000%
2028 and thereafter	100.000%	100.000%	N.A.	N.A.	100.000%

	Redemption Price			
	2029 VM Sterling Senior Secured Notes	2030 VM 4.25% Sterling Senior Secured Notes	2030 VM Dollar Senior Secured Notes	2030 VM 4.125% Sterling Senior Secured Notes
12-month period commencing	May 15	October 15	August 15	August 15
2024	102.625%	102.125%	N.A.	N.A.
2025	101.313%	101.063%	102.250%	102.063%
2026	100.000%	100.531%	101.125%	101.031%
2027	100.000%	100.000%	100.563%	100.516%
2028 and thereafter	100.000%	100.000%	100.000%	100.000%

VM Credit Facilities

The VM Credit Facilities are the senior and senior secured credit facilities of the Virgin Media Group. The details of our borrowings under the VM Credit Facilities as of December 31, 2020 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:						
L (b)	January 15, 2027	LIBOR +3.25%	£ 400.0	£ 400.0	£ —	£ 397.4
M (b)	November 15, 2027	LIBOR +3.25%	£ 500.0	500.0	—	495.5
N (b)	January 31, 2028	LIBOR +2.50%	$ 3,300.0	2,417.4	—	2,406.2
O (c)	January 31, 2029	EURIBOR +2.50%	€ 750.0	671.7	—	668.5
VM Revolving Facility (d)	January 31, 2026	LIBOR +2.75%	£ 1,000.0	—	1,000.0	—
Total Senior Secured Facilities				3,989.1	1,000.0	3,967.6
Senior Facilities:						
VM Financing Facility I (e)	September 15, 2024	5.500%	£ 2.7	2.7	—	2.7
VM Financing Facility II (e)	April 15, 2023	5.750%	£ 1.3	1.3	—	1.3
VM Financing Facility III (e)	July 15, 2028	4.875%	£ 10.6	10.6	—	8.8
VM Financing Facility IV (e)	July 15, 2028	5.000%	$ 3.1	2.3	—	2.3
Total Senior Facilities				16.9	—	15.1
Total				£ 4,006.0	£ 1,000.0	£ 3,982.7

(a) Amounts are net of deferred financing costs and discounts, where applicable.

(b) VM Facility L, VM Facility M and VM Facility N are each subject to a LIBOR floor of 0.00%.

(c) VM Facility O is subject to a EURIBOR floor of 0.00%.

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

(e) Amounts represent borrowings that are owed to certain special purpose financing entities outside of the Virgin Media Group that have issued notes to finance the purchase of receivables due from our company to certain other third parties for amounts that we have vendor financed. To the extent that the proceeds from these notes exceed the amount of vendor financed receivables available to be purchased, the excess proceeds are used to fund these excess cash facilities under our senior credit facilities.

Financing Transactions

Below we provide summary descriptions of certain financing transactions completed during 2020, 2019 and 2018. A portion of our financing transactions may include non-cash borrowings and repayments. During 2020, 2019 and 2018, non-cash borrowings and repayments aggregated nil, £2,587.0 million and £99.3 million, respectively.

2020 Financing Transactions

Trade Receivables Transaction. In May 2020, Virgin Media Trade Receivables Financing plc, a third-party special purpose financing entity created for the purpose of facilitating the offering of certain notes, issued £215.3 million principal amount of sterling-denominated senior secured notes (the **2020 Receivables Notes**). The 2020 Receivables Notes are collateralized by certain of our trade receivables, creating a variable interest in which we are the primary beneficiary and, accordingly, we are required to include Virgin Media Trade Receivables Financing plc in these combined financial statements. The offering of these notes resulted in net proceeds of £214.4 million (the **May 2020 Proceeds**), which were utilized as described below.

Senior Notes Transactions. In June 2020, we issued $675.0 million (£494.5 million) principal amount of 2030 VM Dollar Senior Notes at par. The net proceeds from the issuance of these notes, together with the May 2020 Proceeds, were used to redeem in full (i) €460.0 million (£412.0 million) outstanding principal amount of 2025 VM Euro Senior Notes and (ii) $388.7 million (£284.7 million) outstanding principal amount of 2025 VM Dollar Senior Notes. We then issued (a) an additional $250.0 million (£183.1 million) principal amount of 2030 VM Dollar Senior Notes at 101% of par and (b) €500.0 million (£447.8 million) principal amount of 2030 VM Euro Senior Notes at par. The net proceeds from the issuance of these notes were used (1) to redeem in full (A) $497.0 million (£364.1 million) outstanding principal amount of 2024 VM Dollar Senior Notes, (B) $71.6 million (£52.5 million) outstanding principal amount of 2022 VM 4.875% Dollar Senior Notes, (C) $51.5 million (£37.7 million) outstanding principal amount of 2022 VM 5.25% Dollar Senior Notes and (D) £44.1 million outstanding principal amount of 2022 VM Sterling Senior Notes and (2) for general corporate purposes. In connection with these transactions, we recognized a net loss on debt extinguishment of £46.2 million related to (I) the payment of £40.8 million of redemption premiums and (II) the write-off of £5.4 million of unamortized deferred financing costs, discounts and premiums.

Senior Secured Notes Transactions. In June 2020, we issued (i) $650.0 million (£476.2 million) principal amount of 2030 VM Dollar Senior Secured Notes at par and (ii) £450.0 million principal amount of 2030 VM 4.125% Sterling Senior Secured Notes at par. The net proceeds from the issuance of these notes, together with existing cash, were used to (a) redeem in full £525.0 million outstanding principal amount of 2027 VM 4.875% Sterling Senior Secured Notes, (b) redeem in full £360.0 million outstanding principal amount of 2029 VM 6.25% Sterling Senior Secured Notes and (c) redeem £80.0 million of the £521.3 million outstanding principal amount of 2025 VM Sterling Senior Secured Notes. In connection with these transactions, we recognized a net loss on debt extinguishment of £52.4 million related to (1) the payment of £51.7 million of redemption premiums and (2) the write-off of £0.7 million of unamortized deferred financing costs, discounts and premiums.

In November 2020, we issued, via a private placement, an additional (i) $265.0 million (£194.1 million) principal amount of 2030 VM Dollar Senior Secured Notes, (ii) £235.0 million principal amount of 2030 VM 4.25% Sterling Senior Secured Notes and (iii) £30.0 million principal amount of 2030 VM 4.125% Sterling Senior Secured Notes. The net proceeds from the issuance of these notes were used (a) to redeem in full the £441.3 million outstanding principal amount of 2025 VM Sterling Senior Secured Notes and (b) for general corporate purposes. In connection with this transaction, we recognized a loss on debt extinguishment of £4.0 million related to the payment of redemption premiums.

Vendor Financing Notes Transactions. In June 2020, Virgin Media Vendor Financing Notes III Designated Activity Company (**Virgin Media Financing III Company**) and Virgin Media Vendor Financing Notes IV Designated Activity Company (**Virgin Media Financing IV Company**, and together with Virgin Media Financing III Company, the **2020 VM Financing Companies**) were created for the purpose of issuing certain vendor financing notes. The 2020 VM Financing Companies are third-party special purpose financing entities that are outside of the Virgin Media Group.

Virgin Media Financing III Company issued (i) £500.0 million principal amount of 4.875% vendor financing notes at par and (ii) £400.0 million principal amount of 4.875% vendor financing notes at 99.5% of par, each due July 15, 2028 (together, the **VM Vendor Financing III Notes**). Virgin Media Financing IV Company issued $500.0 million (£366.3 million) principal amount of 5.0% vendor financing notes due July 15, 2028 at par (the **VM Vendor Financing IV Notes**, and together with the VM Vendor Financing III Notes, the **June 2020 Vendor Financing Notes**). The net proceeds from the June 2020 Vendor

Financing Notes were used by the 2020 VM Financing Companies to purchase certain vendor-financed receivables owed by our company from previously-existing third-party special purpose financing entities (the **Original VM Financing Companies**) and various other third parties. As a result, we paid £33.5 million of redemption premiums, which is included in losses on debt extinguishment, net, in our combined statement of operations for the year ended December 31, 2020. To the extent that the proceeds from the June 2020 Vendor Financing Notes exceed the amount of vendor-financed receivables available to be purchased from the Original VM Financing Companies and various other third parties, the excess proceeds are used to fund excess cash facilities under certain of our senior credit facilities. As additional vendor financed receivables become available for purchase, the 2020 VM Financing Companies can request that we repay any amounts available under these excess cash facilities.

2019 and 2018 Financing Transactions

During 2019 and 2018, we completed a number of financing transactions that generally resulted in lower interest rates and extended maturities. In connection with these transactions, we recognized losses on debt extinguishment of £115.5 million and £28.8 million during 2019 and 2018, respectively. These losses primarily include (i) the payment of redemption premiums of £96.0 million and £22.0 million, respectively, and (ii) the write-off of net unamortized deferred financing costs, discounts and premiums of £22.8 million and £6.3 million, respectively.

Other 2020 Financing Transactions

Facility Transactions. In September 2020, in connection with the pending formation of the U.K. JV, (i) VMED O2 UK Holdco 4 Limited (the **New VM Credit Facility Borrower**), an entity outside of the Virgin Media Group that is included in the U.K. JV Entities, entered into (a) a £1,500.0 million term loan facility (**VM O2 Facility P**) and (b) a €750.0 million (£671.7 million) term loan facility (**VM O2 Facility R**) and (ii) a subsidiary of Virgin Media entered into a $1,300.0 million (£952.3 million) term loan facility (**VM O2 Facility Q**, and together with VM O2 Facility P and VM O2 Facility R, the **VM O2 Facilities**). VM O2 Facility P will be issued at par, mature on January 31, 2026 and bear interest at a rate of LIBOR +2.75%. VM O2 Facility R will be issued at 99.0% of par, mature on January 31, 2029 and bear interest at a rate of EURIBOR +3.25%, subject to a EURIBOR floor of 0.0%. VM O2 Facility Q will be issued at 98.5% of par, mature on January 31, 2029 and bear interest at a rate of LIBOR +3.25%, subject to a LIBOR floor of 0.0%.

At December 31, 2020, the VM O2 Facilities were undrawn and are only available to be drawn and utilized upon consummation of the U.K. JV. Accordingly, our unused borrowing capacity at December 31, 2020 excludes the availability under the VM O2 Facilities, as applicable. In the event that the formation of the U.K. JV is not successfully completed, the VM O2 Facilities will be cancelled.

Senior Secured Notes Transactions. In addition to the facility transactions described above, certain of the U.K. JV Entities outside of the Virgin Media Group issued (i) $1,350.0 million (£988.9 million) principal amount of U.S. dollar-denominated senior secured notes (the **2031 VM O2 Dollar Senior Secured Notes**), (ii) €950.0 million (£850.8 million) principal amount of euro-denominated senior secured notes (the **2031 VM O2 Euro Senior Secured Notes**) and (iii) £600.0 million principal amount of sterling-denominated senior secured notes (the **2029 VM O2 Sterling Senior Secured Notes**, and together with the 2031 VM O2 Dollar Senior Secured Notes and the 2031 VM O2 Euro Senior Secured Notes, the **VM O2 Notes**). The 2031 VM O2 Dollar Senior Secured Notes and 2031 VM O2 Euro Senior Secured Notes were each issued at par, mature on January 31, 2031 and bear interest at a rate of 4.25% and 3.25%, respectively. The 2029 VM O2 Sterling Senior Secured Notes were issued at par, mature on January 31, 2029 and bear interest at a rate of 4.0%. The VM O2 Notes are not currently obligations of the Virgin Media Group. Upon formation of the U.K. JV, the proceeds from the issuance of the VM O2 Notes will be used to fund certain facility loans under the existing Virgin Media senior secured credit facility agreement to the New VM Credit Facility Borrower. The New VM Credit Facility Borrower will use such loan proceeds, together with the proceeds from the VM O2 Facilities, for the purpose of (a) funding a dividend, distribution or other payment to VMED O2 UK Limited (which, upon formation of the U.K. JV, will become the ultimate parent company of the U.K. JV), and ultimately to Liberty Global and Telefonica, and (b) paying fees and expenses related to the formation of the U.K. JV.

If the formation of the U.K. JV is not consummated on or before May 7, 2022 (the **Long Stop Date**) or, if the Long Stop Date is postponed in accordance with the terms of the agreement, on or before November 7, 2022, or upon the occurrence of certain other events, the VM O2 Notes will be redeemed at a redemption price equal to 100% of the principal amount of the applicable VM O2 Notes plus accrued and unpaid interest and additional amounts, if any, up to but excluding the date of the redemption.

Maturities of Debt

The pound sterling equivalents of the maturities of our debt as of December 31, 2020 are presented below:

	Third-party debt	Related-party debt	Total
		in millions	
Year ending December 31:			
2021	£ 2,008.3	£ 27.6	£ 2,035.9
2022	31.4	—	31.4
2023	309.2	—	309.2
2024	27.4	—	27.4
2025	5.3	—	5.3
Thereafter	9,514.4	—	9,514.4
Total debt maturities (a)	11,896.0	27.6	11,923.6
Deferred financing costs, discounts and premiums, net	(44.1)	—	(44.1)
Total debt	£ 11,851.9	£ 27.6	£ 11,879.5
Current portion	£ 2,008.3	£ 27.6	£ 2,035.9
Noncurrent portion	£ 9,843.6	£ —	£ 9,843.6

(a) Amounts include vendor financing obligations of £2,090.5 million, as set forth below (in millions):

Year ending December 31:	
2021	£ 2,001.7
2022	31.4
2023	27.4
2024	24.7
2025	5.3
Total vendor financing maturities (1)	£ 2,090.5
Current portion	£ 2,001.7
Noncurrent portion	£ 88.8

(1) The 2020 VM Financing Companies have issued an aggregate £1,266.3 million equivalent in notes maturing in July 2028. The net proceeds from these notes are used by the 2020 VM Financing Companies to purchase from various third parties certain vendor financed receivables owed by our company. To the extent that the proceeds from these notes exceed the amount of vendor financed receivables available to be purchased, the excess proceeds are used to fund excess cash facilities under our senior credit facilities. The 2020 VM Financing Companies can request the excess cash facilities be repaid by our company as additional vendor financed receivables become available for purchase.

(9) Leases

General

We enter into operating and finance leases for network equipment, real estate and vehicles. We provide residual value guarantees on certain of our vehicle leases.

Lease Balances

A summary of our ROU assets and lease liabilities is set forth below:

	December 31,	
	2020	2019
	in millions	
ROU assets:		
Operating leases (a)	£ 138.9	£ 144.2
Finance leases (b)	43.4	49.4
Total ROU assets	£ 182.3	£ 193.6
Lease liabilities:		
Operating leases (c)	£ 152.0	£ 157.6
Finance leases (d)	48.4	52.9
Total lease liabilities	£ 200.4	£ 210.5

(a) Our operating lease ROU assets are included in other assets, net, on our combined balance sheets. At December 31, 2020, the weighted average remaining lease term for operating leases was 8.8 years and the weighted average discount rate was 4.4%. During 2020 and 2019, we recorded non-cash additions to our operating lease ROU assets of £29.8 million and £41.6 million, respectively.

(b) Our finance lease ROU assets are included in property and equipment, net, on our combined balance sheets. At December 31, 2020, the weighted average remaining lease term for finance leases was 29.1 years and the weighted average discount rate was 6.8%. During 2020, 2019 and 2018, we recorded non-cash additions to our finance lease ROU assets of nil, £5.5 million and £6.8 million, respectively.

(c) The current and long-term portions of our operating lease liabilities are included within other current liabilities and other long-term liabilities, respectively, on our combined balance sheets.

(d) The current and long-term portions of our finance lease liabilities are included within current portion of debt and finance lease obligations and long-term debt and finance lease obligations, respectively, on our combined balance sheets.

A summary of our aggregate lease expense is set forth below:

	Year ended December 31,	
	2020	2019
	in millions	
Finance lease expense:		
Depreciation and amortization	£ 6.9	£ 8.5
Interest expense	3.9	4.1
Total finance lease expense	10.8	12.6
Operating lease expense (a)	40.5	37.1
Total lease expense	£ 51.3	£ 49.7

(a) Our operating lease expense is included in other operating expenses, SG&A expenses and impairment, restructuring and other operating items, net, in our combined statements of operations.

A summary of our cash outflows from operating and finance leases is set forth below:

	Year ended December 31,	
	2020	2019
	in millions	
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflows from operating leases	£ 40.5	£ 39.4
Operating cash outflows from finance leases	3.9	4.1
Financing cash outflows from finance leases	4.5	7.6
Total cash outflows from operating and finance leases	£ 48.9	£ 51.1

Maturities of our operating and finance lease liabilities as of December 31, 2020 are presented below. Amounts represent the pound sterling equivalents based on December 31, 2020 exchange rates:

	Operating leases	Finance leases
	in millions	
Year ending December 31:		
2021	£ 34.3	£ 8.1
2022	28.8	9.7
2023	25.5	7.3
2024	21.2	3.5
2025	11.5	3.5
Thereafter	54.0	131.9
Total payments	175.3	164.0
Less: present value discount	(23.3)	(115.6)
Present value of lease payments	£ 152.0	£ 48.4
Current portion	£ 29.5	£ 4.4
Noncurrent portion	£ 122.5	£ 44.0

(10) Income Taxes

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

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

	Year ended December 31,		
	2020	2019	2018
		in millions	
U.K.	£ (187.8)	£ (342.6)	£ (10.2)
U.S.	4.3	7.9	(14.1)
Ireland	(7.9)	(23.6)	(20.1)
Total	£ (191.4)	£ (358.3)	£ (44.4)

Income tax benefit consists of:

	Current	Deferred	Total
		in millions	
Year ended December 31, 2020:			
U.K.	£ (1.0)	£ 246.2	£ 245.2
U.S. (a)	(14.6)	0.1	(14.5)
Total	£ (15.6)	£ 246.3	£ 230.7
Year ended December 31, 2019:			
U.K.	£ (0.9)	£ 52.7	£ 51.8
U.S. (a)	(23.1)	(7.7)	(30.8)
Total	£ (24.0)	£ 45.0	£ 21.0
Year ended December 31, 2018:			
U.S. (a)	£ —	£ 5.9	£ 5.9
U.K.	(5.3)	6.8	1.5
Total	£ (5.3)	£ 12.7	£ 7.4

(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 attributable to our loss before income taxes differs from the amounts computed using the U.S. federal income tax rate of 21.0% as a result of the following factors:

	Year ended December 31,		
	2020	2019	2018
		in millions	
Computed "expected" tax benefit	£ 40.2	£ 75.2	£ 9.3
Enacted tax law and rate changes (a)	182.5	(6.1)	25.6
Non-deductible or non-taxable interest and other expenses (b)	22.8	(3.0)	(18.4)
Basis and other differences in the treatment of items associated with investments in subsidiaries (c)	(14.7)	(29.3)	(52.4)
International rate differences (d)	(4.7)	(9.9)	(3.6)
Change in valuation allowances	2.3	(2.7)	56.5
Non-deductible or non-taxable foreign currency exchange results	0.9	1.9	(5.8)
Other, net	1.4	(5.1)	(3.8)
Total income tax benefit	£ 230.7	£ 21.0	£ 7.4

(a) On July 22, 2020, legislation was enacted in the U.K. to maintain the corporate income tax rate at 19.0%, reversing previous legislation that had reduced the U.K. rate to 17.0% from April 1, 2020. The impact of this rate change on our deferred balances was recorded during the third quarter of 2020.

(b) The 2020 amount includes the impact of a technology-related transfer pricing transition fee, as further described in note 13.

(c) These amounts reflect the net impact of differences in the treatment of income and loss items between financial reporting and tax accounting related to investments in subsidiaries and affiliates including the effects of foreign earnings.

(d) Amounts reflect statutory rates in the U.K. and Ireland, which are lower than the U.S. federal income tax rate. In March 2021, legislation was introduced in U.K. Finance Bill 2021 to increase the U.K. corporate income tax rate to 25.0% from April 1, 2023. This U.K. rate change has yet to be enacted; therefore, the impact on our deferred tax balances will not be recorded until the quarter of enactment.

The components of our net deferred tax assets are as follows:

	December 31,	
	2020	2019
	in millions	
Deferred tax assets	£ 1,743.2	£ 1,540.4
Deferred tax liabilities (a)	(1.8)	(1.3)
Net deferred tax asset	£ 1,741.4	£ 1,539.1

(a) Our deferred tax liabilities are included in other long-term liabilities on our combined balance sheets.

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, 2020	December 31, 2019
	in millions	
Deferred tax assets:		
Capital and net operating loss carryforwards	£ 2,538.7	£ 2,277.6
Property and equipment, net	1,580.0	1,434.4
Other future deductible amounts	75.8	49.4
Deferred tax assets	4,194.5	3,761.4
Valuation allowance	(2,407.6)	(2,172.9)
Deferred tax assets, net of valuation allowance	1,786.9	1,588.5
Deferred tax liabilities:		
Intangible assets	(5.2)	(18.4)
Property and equipment, net	(18.9)	(13.5)
Other future taxable amounts	(21.4)	(17.5)
Deferred tax liabilities	(45.5)	(49.4)
Net deferred tax asset	£ 1,741.4	£ 1,539.1

Our deferred income tax valuation allowance increased £234.7 million in 2020. This increase primarily reflects the net effect of the enacted tax rate change in the U.K.

We had property and equipment on which future U.K. tax deductions can be claimed of £13.6 billion and £13.9 billion at December 31, 2020 and 2019, respectively. The maximum amount of these “capital allowances” that can be claimed in any one year is approximately 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 2020 and 2019 deferred tax assets related to property and equipment, net, in the above table.

The significant components of our tax loss carryforwards and related tax assets at December 31, 2020 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	£ 2,299.5	Indefinite
Amount attributable to net operating losses (a)	874.0	166.1	Indefinite
Other	829.6	73.1	Various
Total	£ 13,806.4	£ 2,538.7	

(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, 2020, tax losses with an aggregate tax effect of £44.0 million were surrendered to Liberty Global and its U.K. subsidiaries outside of the Virgin Media Group by our U.K. subsidiaries. These surrendered tax assets are reflected as a decrease to additional paid-in capital in our combined statement of 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. The majority 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. entities. No additional income taxes have been provided for any undistributed foreign earnings, or any additional outside basis difference inherent in these subsidiaries, as these amounts continue to be reinvested in foreign operations. Determination of the amount of any applicable deferred taxes on such outside basis difference is not practicable.

Through subsidiaries of Virgin Media, 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 entities within the Virgin Media Group based on tax laws currently in effect and reasonable interpretations of these laws.

The Tax Cuts and Jobs Act (the **2017 U.S. Tax Act**) was signed into U.S. law on December 22, 2017. Significant changes to the U.S. income tax regime include the imposition of taxes on a one-time deemed mandatory repatriation of earnings and profits of foreign corporations (the **Mandatory Repatriation Tax**) and a new tax on global intangible low-taxed income (the **GILTI Tax**).

The Mandatory Repatriation Tax requires that the aggregate post-1986 earnings and profits of our foreign corporations be included in our U.S. taxable income. As of December 31, 2020, we do not have a liability for the Mandatory Repatriation Tax.

The GILTI Tax will require U.S. entities that are shareholders in foreign corporations to include in their taxable income for each year beginning after December 31, 2017, their pro rata share of global intangible low-taxed income. The GILTI Tax is calculated as the excess of the net foreign corporation income over a deemed return. The GILTI Tax is reported as a period cost when it is incurred.

We 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 entities within the Virgin Media Group for years prior to 2016 are no longer subject to examination by tax authorities.

The changes in our unrecognized tax benefits are summarized below:

	2020	2019	2018
		in millions	
Balance at January 1	£ 100.7	£ 126.6	£ 98.8
Reductions for tax positions of prior years	(4.8)	(21.7)	—
Foreign currency translation	(2.7)	(4.0)	6.6
Additions for tax positions of prior years	—	0.1	16.2
Additions based on tax positions related to the current year	—	—	5.0
Lapse of statute of limitations	—	(0.3)	—
Balance at December 31	£ 93.2	£ 100.7	£ 126.6

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

As of December 31, 2020, 2019 and 2018 our unrecognized tax benefits included £93.2 million, £100.7 million and £120.5 million, respectively, 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.

During 2021, it is reasonably possible that the expiration of certain statutes of limitation could result in reductions to our unrecognized tax benefits related to tax positions taken as of December 31, 2020. The amount of any such reductions could range up to £33.0 million, all of which would have a positive impact on our effective tax rate. Other than the potential impacts of the expected expiration of certain statutes of limitation, we do not expect any material changes to our unrecognized tax benefits during 2021. No assurance can be given as to the nature or impact of any changes in our unrecognized tax positions during 2021.

(11) Combined Equity

The Virgin Media Group has 111 shares of common stock outstanding.

(12) 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 of our employees. Share-based compensation expense allocated to our company by Liberty Global is reflected as an increase to combined equity and is offset by any amounts recharged to us by Liberty Global, as further described in note 13. 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 combined statements of operations:

	Year ended December 31,		
	2020	2019	2018
		in millions	
Performance-based incentive awards (a)	£ 5.0	£ 8.6	£ 5.0
Non-performance based incentive awards (b)	41.8	34.4	17.3
Other (c)	6.9	5.3	6.4
Total	£ 53.7	£ 48.3	£ 28.7

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

(b) In 2019, Liberty Global changed its policy to provide that all new equity grants would have ten-year contractual terms in order to more closely align with common market practice. Accordingly, the Black-Scholes fair values of the outstanding awards increased, resulting in the recognition of an aggregate incremental share-based compensation expense allocated to our company of £1.0 million during 2020.

(c) Represents annual incentive compensation and defined contribution plan liabilities that have been or are expected to be settled with Liberty Global ordinary shares. In the case of the annual incentive compensation, shares have been or will be issued to senior management and key employees pursuant to a shareholding incentive program. The shareholding incentive program allows these employees to elect to receive up to 100% of their annual incentive compensation in ordinary shares of Liberty Global in lieu of cash.

As of December 31, 2020, £54.2 million of total unrecognized compensation cost related to our Liberty Global share-based incentive awards is expected to be recognized by our company over a weighted-average period of approximately 1.9 years.

The following table summarizes incentive awards held by our employees with respect to Liberty Global ordinary shares:

	Class A		Class C	
	December 31,			
	2020	2019	2020	2019
Outstanding:				
Options	29,980	48,275	1,431,958	1,959,224
SARs	5,406,582	4,395,016	11,009,997	9,136,930
RSUs	776,975	239,220	1,569,640	496,948
PSUs	475,821	695,680	951,642	1,391,360
Exercisable:				
Options	29,980	48,275	1,387,393	1,890,387
SARs	2,212,649	1,984,942	4,622,611	4,317,189

Share Incentive Plans — Liberty Global Ordinary Shares

Incentive Plans

As of December 31, 2020, Liberty Global is 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 shares with respect to which awards may be issued under the Liberty Global 2014 Incentive Plan is 155 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, 2020, the Liberty Global 2014 Incentive Plan had 60,799,181 ordinary shares available for grant.

Awards (other than performance-based awards) under the Liberty Global 2014 Incentive Plan generally (i) vest (a) prior to 2020, 12.5% on the six month anniversary of the grant date and then at a rate of 6.25% each quarter thereafter and (b) commencing in 2020, annually over a three-year period and (ii) expire (1) prior to 2019, seven years after the grant date and (2) commencing in 2019, 10 years after the grant date. RSUs vest on the date of the first annual general meeting of Liberty Global shareholders following the grant date.

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

In April 2019, the compensation committee of Liberty Global's board of directors approved the grant of PSUs to executive officers and key employees (the **2019 PSUs**) pursuant to a performance plan that is based on the achievement of a specified OCF CAGR during the two-year period ending December 31, 2020. The 2019 PSUs include over- and under-performance payout opportunities should the OCF CAGR exceed or fail to meet the target, as applicable. A performance range of 50% to 125% of the target OCF CAGR will generally result in award recipients earning 50% to 150% of their target 2019 PSUs, subject to reduction or forfeiture based on individual performance. The earned 2019 PSUs will vest 50% on April 1, 2021 and 50% on October 1, 2021.

During 2018, the compensation committee of Liberty Global's board of directors approved the grant of PSUs to executive officers and key employees (the **2018 PSUs**) pursuant to a performance plan that is based on the achievement of a specified OCF CAGR during the two-year period that ended on December 31, 2019. The 2018 PSUs include over- and under performance payout opportunities should the OCF CAGR exceed or fail to meet the target, as applicable. A performance range of 50% to 125% of the target OCF CAGR will generally result in award recipients earning 50% to 150% of their target 2018 PSUs, subject to reduction or forfeiture based on individual performance. The earned 2018 PSUs will vest 50% on each of April 1, 2020 and 50% on October 1, 2020. The target OCF CAGR for the 2018 PSUs was determined on October 26, 2018 and, accordingly, associated compensation expense has been recognized prospectively from that date.

In February 2016, Liberty Global's compensation committee approved the grant of PSUs to executive officers and key employees (the **2016 PSUs**). The performance plan for the 2016 PSUs covered a three-year period that ended on December 31, 2018 and included a performance target based on the achievement of a specified compound annual growth rate (**CAGR**) in an Adjusted EBITDA 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 (**Adjusted EBITDA CAGR**). The 2016 PSUs, as adjusted through the 2017 Award Modification, required delivery of an Adjusted EBITDA CAGR of 6.0% during the three-year performance period for Liberty Global depending on the respective class of shares underlying the award. Participants earned 82.3% of their targeted awards under the 2016 PSUs, which vested 50% on each of April 1, 2019 and October 1, 2019.

(13) Related-party Transactions

Our related-party transactions consist of the following:

	Year ended December 31,		
	2020	2019	2018
		in millions	
Charges included in:			
Programming and other direct costs of services	£ (8.5)	£ (19.6)	£ (9.5)
Other operating	(23.9)	(27.7)	(21.8)
SG&A	(9.8)	(5.9)	(11.0)
Allocated share-based compensation expense	(50.5)	(44.9)	(27.1)
Fees and allocations, net:			
Operating and SG&A (exclusive of depreciation and share-based compensation)	(23.7)	(19.1)	(16.3)
Depreciation	(150.4)	(71.5)	(36.3)
Share-based compensation	(78.7)	(67.9)	(34.1)
Management fee	(72.9)	(66.9)	(23.9)
Total fees and allocations, net	(325.7)	(225.4)	(110.6)
Included in operating income	(418.4)	(323.5)	(180.0)
Interest expense	(2.0)	(1.6)	(3.0)
Interest income	252.6	284.6	314.1
Realized and unrealized gains (losses) on derivative instruments, net	(0.1)	(0.9)	1.3
Included in net earnings (loss)	£ (167.9)	£ (41.4)	£ 132.4
Property and equipment transfers in (out), net	£ 10.5	£ (1.2)	£ 27.1

General. The Virgin Media Group charges fees and allocates costs and expenses to certain other Liberty Global subsidiaries and certain Liberty Global subsidiaries outside of the Virgin Media Group charge fees and allocate costs and expenses to the Virgin Media Group. 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 combined 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 primarily consist of interconnect, roaming, lease and access fees and other services provided to our company by other Liberty Global subsidiaries.

Other operating expenses. Amounts consist of the net effect of (i) charges of £28.0 million, £32.9 million and £28.0 million during 2020, 2019 and 2018, respectively, for network and technology services provided to our company by other Liberty Global subsidiaries and (ii) recharges of £4.1 million, £5.2 million and £6.2 million during 2020, 2019 and 2018, respectively, for network and technology services provided by our company to other Liberty Global subsidiaries.

SG&A expenses. Amounts consist of the net effect of (i) charges of £23.8 million, £22.7 million and £26.7 million during 2020, 2019 and 2018, respectively, for services provided to our company by other Liberty Global subsidiaries and (ii) recharges of £14.0 million, £16.8 million and £15.7 million during 2020, 2019 and 2018, respectively, primarily related to support function staffing and other services provided by our company to other Liberty Global subsidiaries.

Allocated share-based compensation expense. Amounts are allocated to our company by Liberty Global and represent share-based compensation expense associated with the Liberty Global share-based incentive awards held by certain of our employees. Share-based compensation expense is included in SG&A expense in our combined statements of operations.

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 Liberty Global subsidiaries, represent the aggregate net effect of charges between entities comprising the Virgin Media Group and various Liberty Global subsidiaries that are outside of Virgin Media. These charges generally relate to management, finance, legal 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 management, marketing, finance and other operating and SG&A expenses of Liberty Global's subsidiaries, 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 subsidiaries, 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 subsidiaries, 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 subsidiaries, 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.

Liberty Global charges technology-based costs to our company. Prior to July 1, 2020, such charges were calculated using a royalty-based method (the **Royalty-based Method**). To the extent that our proportional share of the technology-based costs was more than the actual amounts charged under the Royalty-based Method, such excess amounts were reflected as deemed contributions of technology-related services in our combined statements of equity. Under the Royalty-based Method, any excess amounts we were charged that exceeded our proportional share of the technology-based costs were classified as management fees and were added back to arrive at Covenant EBITDA.

During the six months ended June 30, 2020 and the year ended December 31, 2019, our proportional share of the technology-based costs was £9.7 million and £5.5 million more than the actual amount charged under the Royalty-based Method, respectively. During the three months ended September 30, 2020, we recorded a £6.0 million adjustment to the excess amounts that were reflected as deemed contributions of technology-related services in our combined statement of equity for the first six months of 2020.

Effective July 1, 2020, the Royalty-based Method was terminated and replaced with a new method whereby the technology-based costs charged by Liberty Global to our company are now based on our estimated share of the underlying costs plus a mark-up (the **Cost Plus Method**). The portion of the charge representing the mark-up is recorded as an equity transaction and reflected as a capital charge for technology-related services in our combined statements of equity (£7.1 million for six months ended December 31, 2020). In addition, in connection with the July 1, 2020 change to the Cost Plus Method, we were charged a one-time transfer pricing transition fee of £143.6 million, which is recorded as an equity transaction in our combined statement of equity.

Interest expense. Amounts represent interest expense on long-term related-party debt, as further described below.

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

Realized and unrealized gains (losses) on derivative instruments, net. These amounts relate to related-party foreign currency forward contracts with Liberty Global Europe Financing BV (**LGE Financing**), a subsidiary of Liberty Global.

Property and equipment transfers, net. These amounts, which are generally cash settled, include the net carrying values of (i) construction in progress, including certain capitalized labor, transferred to or acquired from other Liberty Global subsidiaries, (ii) 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 (iii) used equipment transferred to or acquired from other Liberty Global subsidiaries outside of the Virgin Media Group.

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

	December 31,	
	2020	2019
	in millions	
Current receivables (a)	£ 694.5	£ 34.8
Long-term notes receivable (b)	4,807.8	4,963.6
Total related-party assets	£ 5,502.3	£ 4,998.4
Accounts payable	£ 10.1	£ 7.2
Current portion of related-party debt	27.6	—
Accrued capital expenditures (c)	2.6	7.6
Other current liabilities (d)	165.3	36.4
Long-term related-party debt	—	56.7
Other long-term liabilities	—	0.7
Total related-party liabilities	£ 205.6	£ 108.6

(a) Amounts represent (i) accrued interest on long-term notes receivable from LG Europe 2, including £1.4 million and £27.0 million, respectively, owed to Virgin Media Finco Limited (**Virgin Media Finco**), a subsidiary of Virgin Media, and (ii) certain receivables from other Liberty Global subsidiaries arising in the normal course of business. In addition, the amount at December 31, 2020 includes a note receivable owed from LG Europe 2 to Virgin Media Finco that was entered into during the fourth quarter of 2020. This note receivable had an outstanding principal balance of £685.8 million at December 31, 2020, matures on December 1, 2021 and bears an interest rate of 2.56%.

(b) Amounts primarily represent:

(i) a note receivable from LG Europe 2 that is owed to Virgin Media Finco. At December 31, 2020, 2019 and 2018, the principal amount outstanding under this note was £4,758.1 million, £3,425.0 million and £3,324.5 million, respectively. The increase during 2020 relates to (i) £5,453.0 million of cash advances, (ii) £3,780.7 million of cash repayments and (iii) £339.2 million of other non-cash settlements. The increase during 2019 relates to (a) £4,797.6 million of cash advances, (b) £4,426.6 million of cash repayments and (c) £270.5 million of other non-cash settlements. The increase during 2018 relates to (1) £4,953.2 million of cash advances, (2) £4,377.7 million of cash repayments and (3) £142.3 million of other non-cash settlements. Pursuant to the agreement, the maturity date is July 16, 2023, however Virgin Media Finco may agree to advance additional amounts to LG Europe 2 at any time and LG Europe 2 may, with agreement from Virgin Media Finco, repay all or part of the outstanding principal at any time prior to the maturity date. The interest rate on this note, which is subject to adjustment, was 4.741% as of December 31, 2020, and the accrued interest on this note receivable may be cash settled on the last day of each month and on the date of each full or partial repayment of the note receivable or, if mutually agreed, loan settled; and

(ii) a note receivable from LG Europe 2 that was owed to Virgin Media Finco. This note matures on April 15, 2023 and bears interest at a rate of 8.50%. At December 31, 2020, the principal amount outstanding under this note was nil. At each of December 31, 2019 and December 31, 2018, the principal amount outstanding under this note was £1,501.5 million. The decrease during 2020 relates to (i) £1,428.9 million of cash repayments and (ii) £72.6 million of non-cash settlements. The outstanding balance of this note receivable was cash settled during the second quarter of 2020.

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

(d) Amounts primarily represent (i) certain payables to other Liberty Global subsidiaries arising in the normal course of business and (ii) unpaid capital charges from Liberty Global, as described below, which are settled periodically. None of these payables are interest bearing. The December 31, 2020 amount also includes a one-time transfer pricing transition fee related to the change in Liberty Global's methodology for charging technology-based fees to our company, as described above.

During 2020, 2019 and 2018, we recorded capital charges of $17.6 million (£13.8 million at the applicable rate), $29.5 million (£23.0 million at the applicable rate) and $10.8 million (£8.1 million at the applicable rate), respectively, in our combined statements of equity in connection with the exercise of Liberty Global SARs and options and the vesting of Liberty Global RSUs and PSUs held by our employees. We and Liberty Global have agreed that these capital charges will be based on the fair value of the underlying Liberty Global ordinary 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 2020, tax losses with an aggregate tax effect of £44.0 million were surrendered to Liberty Global and its U.K. subsidiaries outside of the Virgin Media Group by our U.K. entities. During 2019 and 2018, tax losses with an aggregate tax effect of £38.9 million and £17.4 million, respectively, were surrendered by Liberty Global and its U.K. subsidiaries outside of the Virgin Media Group to Virgin Media's U.K. entities. For additional information, see note 10.

Virgin Media and certain other 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.

(14) Restructuring Liabilities

A summary of changes in our restructuring liabilities during 2020 is set forth in the table below:

	Employee severance and termination	Office closures	Total
		in millions	
Restructuring liability as of January 1, 2020	£ 3.0	£ 1.7	£ 4.7
Restructuring charges (a)	10.2	4.4	14.6
Cash paid	(11.3)	(3.7)	(15.0)
Restructuring liability as of December 31, 2020	£ 1.9	£ 2.4	£ 4.3
Current portion	£ 0.8	£ 2.0	£ 2.8
Noncurrent portion	1.1	0.4	1.5
Total	£ 1.9	£ 2.4	£ 4.3

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

A summary of changes in our restructuring liabilities during 2019 is set forth in the table below:

	Employee severance and termination	Office closures	Total
		in millions	
Restructuring liability as of January 1, 2019, before effect of accounting change	£ 3.8	£ 5.3	£ 9.1
Impact of ASU 2016-02	—	(1.9)	(1.9)
Restructuring liability as of January 1, 2019, as adjusted for accounting change	3.8	3.4	7.2
Restructuring charges (a)	31.8	0.3	32.1
Cash paid	(32.6)	(2.0)	(34.6)
Restructuring liability as of December 31, 2019	£ 3.0	£ 1.7	£ 4.7
Current portion	£ 1.9	£ 1.6	£ 3.5
Noncurrent portion	1.1	0.1	1.2
Total	£ 3.0	£ 1.7	£ 4.7

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

A summary of changes in our restructuring liabilities during 2018 is set forth in the table below:

	Employee severance and termination	Office closures	Total
		in millions	
Restructuring liability as of January 1, 2018	£ 2.2	£ 6.8	£ 9.0
Restructuring charges (a)	18.0	2.7	20.7
Cash paid	(16.4)	(4.2)	(20.6)
Restructuring liability as of December 31, 2018	£ 3.8	£ 5.3	£ 9.1
Current portion	£ 2.7	£ 2.9	£ 5.6
Noncurrent portion	1.1	2.4	3.5
Total	£ 3.8	£ 5.3	£ 9.1

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

(15) 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:

	December 31,		
	2020	2019	2018
		in millions	
Fair value of plan assets (a)	£ 760.0	£ 695.5	£ 645.0
Projected benefit obligation	£ 673.7	£ 617.0	£ 563.0
Net asset	£ 86.3	£ 78.5	£ 82.0

(a) The fair value of plan assets at December 31, 2020 includes £275.3 million, £287.7 million and £197.0 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.

Our net periodic pension benefit was £5.0 million, £5.3 million and £9.1 million during 2020, 2019 and 2018, respectively. There was no related service cost component in the periods presented. During 2020, contributions to our defined benefit plans aggregated £2.6 million. Based on December 31, 2020 exchange rates and information available as of that date, we expect this amount to be £2.5 million in 2021.

(16) Accumulated Other Comprehensive Earnings

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

	Foreign currency translation adjustments	Pension-related adjustments and other	Total accumulated other comprehensive earnings
		in millions	
Balance at January 1, 2018	£ 98.0	£ (31.5)	£ 66.5
Other comprehensive earnings	25.1	(2.4)	22.7
Balance at December 31, 2018	123.1	(33.9)	89.2
Other comprehensive loss	4.0	(10.0)	(6.0)
Balance at December 31, 2019	127.1	(43.9)	83.2
Other comprehensive loss	(19.6)	0.9	(18.7)
Balance at December 31, 2020	£ 107.5	£ (43.0)	£ 64.5

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

	Pre-tax amount	Tax benefit	Net-of-tax amount
		in millions	
Year ended December 31, 2020:			
Foreign currency translation adjustments	£ (19.6)	£ —	£ (19.6)
Pension-related adjustments	0.9	—	0.9
Other comprehensive loss	£ (18.7)	£ —	£ (18.7)
Year ended December 31, 2019:			
Foreign currency translation adjustments	£ 4.0	£ —	£ 4.0
Pension-related adjustments	(11.8)	1.8	(10.0)
Other comprehensive loss	£ (7.8)	£ 1.8	£ (6.0)
Year ended December 31, 2018:			
Foreign currency translation adjustments	£ 25.1	£ —	£ 25.1
Pension-related adjustments and other	(2.9)	0.5	(2.4)
Other comprehensive earnings	£ 22.2	£ 0.5	£ 22.7

(17) 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 and other items. The following table sets forth the pound sterling equivalents of such commitments as of December 31, 2020. The commitments included in this table do not reflect any liabilities that are included on our December 31, 2020 combined balance sheet.

	Payments due during:						
	2021	2022	2023	2024	2025	Thereafter	Total
	in millions						
Programming commitments	£ 636.6	£ 246.4	£ 11.5	£ 11.1	£ 11.0	£ 12.9	£ 929.5
Network and connectivity commitments	393.3	53.7	11.8	4.6	3.3	14.6	481.3
Purchase commitments	264.7	13.9	1.6	0.1	0.1	—	280.4
Other commitments	14.0	1.5	—	—	—	—	15.5
Total	£ 1,308.6	£ 315.5	£ 24.9	£ 15.8	£ 14.4	£ 27.5	£ 1,706.7

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. 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 this will continue to be the case in future periods. In this regard, our total programming and copyright costs aggregated £900.0 million, £917.5 million and £877.7 million during 2020, 2019 and 2018, respectively.

Programming costs primarily relate to agreements to distribute channels to our customers. Our channel distribution agreements are generally multi-year contracts for which we are charged either (i) variable rates based upon the number of subscribers or (ii) on a flat fee basis. Certain of our variable rate contracts require minimum guarantees. Programming costs under such arrangements are recorded in operating costs and expenses in our combined statement of operations when the programming is available for viewing.

Network and connectivity commitments include (i) service commitments associated with the network extension program in the U.K. and Ireland (the **Network Extension**) and (ii) commitments associated with our mobile virtual network operator (**MVNO**) agreements. The amounts reflected in the above table with respect to certain of our MVNO commitments represent fixed minimum amounts payable under these agreements and therefore, may be significantly less than the actual amounts we ultimately pay in these periods. In November 2019, we entered into a new five-year MVNO agreement that will replace our existing MVNO agreement in 2021.

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.

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 2020, 2019 and 2018, see note 5. For information regarding our defined benefit plans, see note 15.

Rental expense under non-cancellable operating lease arrangements amounted to £27.3 million during 2018. It is expected that in the normal course of business, operating leases that expire generally will be renewed or replaced by similar leases. For information regarding our operating lease arrangements for 2020 and 2019 following the adoption of ASU 2016-02, see note 9.

We have established defined contribution benefit plans for our employees. The aggregate expense for matching contributions under the defined contribution employee benefit plans was £27.9 million, £26.2 million and £23.5 million during 2020, 2019 and 2018, 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 (**HMRC**). HMRC claimed that amounts charged to certain customers for payment handling services are subject to VAT, while we took the position that such charges were exempt from VAT under existing law. At the time of HMRC's initial challenge in 2009, we remitted all related VAT amounts claimed by HMRC, and continued to make such VAT payments pending a ruling on our appeal to the First Tier Tribunal. As the likelihood of loss was not considered probable and we believed that the amounts paid would be recoverable, such amounts were recorded as a receivable on our combined balance sheet. In January 2020, the First Tier Tribunal rejected our appeal and ruled in favor of HMRC. Accordingly, during the fourth quarter of 2019, we recorded a net provision for litigation of £41.3 million. We have been granted permission to appeal the case to the Upper Tribunal, with the appeal being stayed pending the outcome of a related case. The timing of the final outcome of the litigation remains uncertain, although any further hearing on this matter is unlikely to occur before the third quarter of 2021.

In a separate matter, 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. HMRC 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 appealed this decision. As part of the appeal process, we were required to make aggregate payments of £67.0 million, comprising (i) the challenged amount of £63.7 million (which we paid during the fourth quarter of 2015) and (ii) related interest of £3.3 million (which we paid during the first quarter of 2016). No provision was recorded by our company at that time as the likelihood of loss was not considered to be probable. The aggregate amount paid does not include penalties, which could be significant in the event that penalties were to be assessed. In September 2018, the court rejected our appeal and ruled in favor of HMRC. Accordingly, during the third quarter of 2018, we recorded a provision for litigation of £63.7 million and related interest expense of £3.3 million in our combined statement of operations. The First Tier Tribunal gave permission to appeal to the Upper Tribunal and we submitted grounds for appeal on February 22, 2019. We subsequently lost the appeal at the Upper Tribunal and in October 2020 our request to further appeal the case was denied by the Court of Appeal.

Other Regulatory Matters. 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.

Effective April 1, 2017, the rateable value of our existing network and other assets in the U.K. increased significantly. This increase affects 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 change has significantly increased our network infrastructure charges and we expect further but declining increases to these charges through the first quarter of 2022. We continue to believe that these increases are excessive and retain the right of appeal should more favorable agreements be reached with other operators. The rateable value of our network and other assets in the U.K. remains subject to review by the U.K. government.

In 2019, the U.K. Office of Communications regulatory authority (**Ofcom**) issued new regulatory requirements originating from the European Electronic Communications Code, that, effective from February 2020, obligate providers to (i) alert customers who are approaching the end of a minimum contract term to the fact that their contract period is coming to an end and to set out the best new price that the provider can offer them and (ii) once a year, alert customers who are out of contract to that fact and again confirm the best new price the provider can offer them. In both cases, we must also set out the price available to new customers for an equivalent service offering. These new requirements adversely impacted our revenue and increased certain of our costs in the U.K. during 2020, and we expect additional and potentially more significant adverse impacts on our operating results in the U.K. in future periods. For additional information, *Business - Regulatory Matters,* included in Part I of this annual report, and *Management's Discussion and Analysis of Financial Condition and Results of Operations - Discussion and Analysis of our Results of Operations.*

In late February 2020, we became aware that one of our databases did not have adequate access security protection and was accessed without permission. We immediately took remedial actions, ceased access to the database and commenced an investigation. The information in the database did not include any individual's passwords or financial details, such as credit card information or bank account numbers. We have taken steps to inform those individuals impacted and relevant regulatory authorities. The database had information pertaining to approximately 900,000 individuals (including customers and non-customers), representing a number that would be less than 15% of our total customer base. During the fourth quarter of 2020, we were formally notified by the relevant regulatory authorities that they consider this matter to be closed without enforcement action.

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.

(18) Segment Reporting

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

Our revenue by major category is set forth below:

	Year ended December 31,		
	2020	2019	2018
		in millions	
Residential revenue:			
Residential cable revenue (a):			
Subscription revenue (b):			
Broadband internet	£ 1,710.2	£ 1,676.4	£ 1,600.4
Video	1,076.1	1,080.4	1,045.3
Fixed-line telephony	779.0	849.4	921.6
Total subscription revenue	3,565.3	3,606.2	3,567.3
Non-subscription revenue	63.3	59.5	71.1
Total residential cable revenue	3,628.6	3,665.7	3,638.4
Residential mobile revenue (c):			
Subscription revenue (b)	360.4	361.4	360.1
Non-subscription revenue	279.8	294.5	303.4
Total residential mobile revenue	640.2	655.9	663.5
Total residential revenue	4,268.8	4,321.6	4,301.9
B2B revenue (d):			
Subscription revenue	100.6	89.0	78.9
Non-subscription revenue	698.4	686.3	699.1
Total B2B revenue	799.0	775.3	778.0
Other revenue (e)	60.7	71.3	70.4
Total	£ 5,128.5	£ 5,168.2	£ 5,150.3

(a) Residential cable subscription revenue includes amounts received from subscribers for ongoing services and the recognition of deferred installation revenue over the associated contract period. Residential cable non-subscription revenue includes, among other items, channel carriage fees, late fees and revenue from the sale of equipment.

(b) Residential 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.

(c) Residential mobile subscription revenue includes amounts received from subscribers for ongoing services. Residential mobile non-subscription revenue includes, among other items, interconnect revenue and revenue from sales of mobile handsets and other devices.

(d) B2B subscription revenue represents revenue from services to certain small or home office (**SOHO**) subscribers. SOHO subscribers pay a premium price to receive expanded service levels along with broadband internet, video, fixed-line telephony or mobile services that are the same or similar to the mass marketed products offered to our residential subscribers. B2B non-subscription revenue includes (i) revenue from business broadband internet, video, fixed-line telephony, mobile and data services offered to medium to large enterprises and, on a wholesale basis, to other operators and (ii) revenue from long-term leases of portions of our network.

(e) Other revenue primarily includes broadcasting revenue in Ireland.

Geographic Segments

The revenue of our geographic segments is set forth below:

	Year ended December 31,		
	2020	**2019**	**2018**
		in millions	
U.K.	£ 4,730.3	£ 4,765.5	£ 4,757.6
Ireland	398.2	402.7	392.7
Total	£ 5,128.5	£ 5,168.2	£ 5,150.3

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

	December 31,	
	2020	**2019**
	in millions	
U.K.	£ 11,393.8	£ 11,628.1
Ireland	598.7	564.4
Total	£ 11,992.5	£ 12,192.5

(19) Condensed Combined Financial Information — Senior Notes

We present the following condensed combined financial information as of and for the year ended December 31, 2020, as required by the applicable underlying indentures. For the condensed combined financial information as of and for the years ended December 31, 2019 and 2018, see our 2019 and 2018 annual reports, respectively.

As of December 31, 2020, Virgin Media Finance is the issuer of the following senior notes:

- $925.0 million (£677.6 million) principal amount of 2030 VM Dollar Senior Notes; and
- €500.0 million (£447.8 million) principal amount of 2030 VM Euro 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 and Virgin Media Communications Limited (**Virgin Media Communications**). Each of Virgin Media Investment Holdings Limited (**VMIH**) and Virgin Media Investments Limited (**VMIL**) have guaranteed the senior notes on a senior subordinated basis.

Balance sheet	December 31, 2020 Virgin Media	Virgin Media Finance	Other guarantors	VMIH	VMIL	All other subsidiaries	Eliminations	Total
	in millions							
ASSETS								
Current assets:								
Cash and cash equivalents	£ —	£ 0.7	£ —	£ —	£ —	£ 21.3	£ —	£ 22.0
Related-party receivables	0.2	—	—	—	—	694.3	—	694.5
Other current assets:								
Third-party	1.0	—	—	66.7	—	699.2	—	766.9
Intercompany	—	7.7	—	39.7	—	14.3	(61.7)	—
Total current assets	1.2	8.4	—	106.4	—	1,429.1	(61.7)	1,483.4
Property and equipment, net	—	—	—	—	—	5,944.8	—	5,944.8
Goodwill	—	—	—	—	—	6,017.7	—	6,017.7
Investments in, and loans to, parent and subsidiary companies	6,143.0	8,050.4	6,107.4	16,498.6	15,195.3	(3,548.1)	(48,446.6)	—
Deferred income taxes	—	—	—	—	—	1,743.2	—	1,743.2
Related-party notes receivable	10.3	—	—	—	—	4,797.5	—	4,807.8
Other assets, net:								
Third-party	—	—	—	302.0	—	421.3	—	723.3
Intercompany	—	33.3	—	174.0	—	116.9	(324.2)	—
Total assets	£6,154.5	£8,092.1	£ 6,107.4	£17,081.0	£15,195.3	£ 16,922.4	£ (48,832.5)	£ 20,720.2
LIABILITIES AND COMBINED EQUITY								
Current liabilities:								
Intercompany payables	£ —	£ 279.6	£ —	£ 219.6	£ —	£ 466.5	£ (965.7)	£ —
Other current liabilities:								
Third-party	0.6	27.2	—	2,158.3	—	1,547.5	—	3,733.6
Intercompany and related-party	5.4	35.0	—	22.0	—	177.3	(61.7)	178.0
Total current liabilities	6.0	341.8	—	2,399.9	—	2,191.3	(1,027.4)	3,911.6
Long-term debt and finance lease obligations:								
Third-party	—	1,119.5	—	97.3	—	8,670.8	—	9,887.6
Related-party	—	—	—	—	—	—	—	—
Other long-term liabilities:								
Third-party	35.4	—	—	605.6	—	177.2	—	818.2
Intercompany and related-party	—	91.2	—	150.2	—	82.8	(324.2)	—
Total liabilities	41.4	1,552.5	—	3,253.0	—	11,122.1	(1,351.6)	14,617.4
Total combined equity attributable to parent entities	6,113.1	6,539.6	6,107.4	13,828.0	15,195.3	5,810.6	(47,480.9)	6,113.1
Noncontrolling interest	—	—	—	—	—	(10.3)	—	(10.3)
Total combined equity	6,113.1	6,539.6	6,107.4	13,828.0	15,195.3	5,800.3	(47,480.9)	6,102.8
Total liabilities and combined equity	£6,154.5	£8,092.1	£ 6,107.4	£17,081.0	£15,195.3	£ 16,922.4	£ (48,832.5)	£ 20,720.2

Statement of operations	Virgin Media	Virgin Media Finance	Other guarantors	VMIH	VMIL	All other subsidiaries	Eliminations	Total
	Year ended December 31, 2020							
	in millions							
Revenue	£ —	£ —	£ —	£ —	£ —	£ 5,128.5	£ —	£ 5,128.5
Operating costs and expenses (exclusive of depreciation and amortization, shown separately below):								
Programming and other direct costs of services	—	—	—	—	—	1,597.9	—	1,597.9
Other operating	—	—	—	—	—	786.5	—	786.5
SG&A	1.2	—	—	—	—	715.1	—	716.3
Related-party fees and allocations, net	—	—	—	—	—	325.7	—	325.7
Depreciation and amortization	—	—	—	—	—	1,344.1	—	1,344.1
Impairment, restructuring and other operating items, net	—	—	—	—	—	24.1	—	24.1
	1.2	—	—	—	—	4,793.4	—	4,794.6
Operating income (loss)	(1.2)	—	—	—	—	335.1	—	333.9
Non-operating income (expense):								
Interest expense:								
Third-party	—	(59.4)	—	(105.9)	—	(389.1)	—	(554.4)
Intercompany and related-party	—	(363.2)	—	(234.7)	—	(578.9)	1,174.8	(2.0)
Interest income – related-party and intercompany	0.9	89.9	—	193.2	0.1	1,143.3	(1,174.8)	252.6
Realized and unrealized gains (losses) on derivative instruments, net:								
Third-party	—	—	—	(262.0)	—	(2.3)	—	(264.3)
Intercompany	—	(202.4)	—	267.8	—	(65.4)	—	—
Foreign currency transaction gains, net	4.6	59.3	—	22.5	—	88.3	—	174.7
Realized and unrealized gains due to changes in fair values of certain debt, net	—	—	—	7.5	—	—	—	7.5
Losses on debt extinguishment, net	—	(46.1)	—	(35.5)	—	(56.6)	—	(138.2)
Other expense, net	—	(0.1)	—	(0.9)	—	(0.2)	—	(1.2)
	5.5	(522.0)	—	(148.0)	0.1	139.1	—	(525.3)
Earnings (loss) before income taxes	4.3	(522.0)	—	(148.0)	0.1	474.2	—	(191.4)
Income tax benefit (expense)	(14.5)	—	—	—	—	245.2	—	230.7
Earnings (loss) after income taxes	(10.2)	(522.0)	—	(148.0)	0.1	719.4	—	39.3
Equity in net earnings of subsidiaries	42.4	578.7	56.7	726.7	698.1	—	(2,102.6)	—
Net earnings	32.2	56.7	56.7	578.7	698.2	719.4	(2,102.6)	39.3
Net earnings attributable to noncontrolling interest	—	—	—	—	—	(7.1)	—	(7.1)
Net earnings attributable to parent entities	£ 32.2	£ 56.7	£ 56.7	£ 578.7	£ 698.2	£ 712.3	£ (2,102.6)	£ 32.2
Total comprehensive earnings	£ 13.5	£ 45.5	£ 45.5	£ 567.6	£ 687.1	£ 708.4	£ (2,047.0)	£ 20.6
Comprehensive earnings attributable to noncontrolling interest	—	—	—	—	—	(7.1)	—	(7.1)
Comprehensive earnings attributable to parent entities	£ 13.5	£ 45.5	£ 45.5	£ 567.6	£ 687.1	£ 701.3	£ (2,047.0)	£ 13.5

	Year ended December 31, 2020						
Statement 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	£ (15.2)	£ (411.4)	£ —	£ (240.3)	£ 0.1	£ 2,827.4	£ 2,160.6
Cash flows from investing activities:							
Advances to related parties, net	—	—	—	—	—	(888.5)	(888.5)
Capital expenditures, net	—	—	—	—	—	(433.9)	(433.9)
Other investing activities, net	—	—	—	—	—	(0.3)	(0.3)
Net cash used by investing activities	—	—	—	—	—	(1,322.7)	(1,322.7)
Cash flows from financing activities:							
Repayments and repurchases of third-party debt and finance lease obligations	—	(1,271.4)	—	(3,594.7)	—	(1,719.0)	(6,585.1)
Borrowings of third-party debt	—	1,188.9	—	2,937.8	—	1,687.0	5,813.7
Payment of financing costs and debt premiums	—	(49.8)	—	(39.9)	—	(63.3)	(153.0)
Net cash received related to derivative instruments	—	—	—	139.0	—	—	139.0
Net repayments of related-party debt	—	—	—	—	—	(29.9)	(29.9)
Contributions (distributions)	13.3	543.0	—	798.1	(0.1)	(1,354.3)	—
Other financing activities, net	—	—	—	—	—	(21.3)	(21.3)
Net cash provided (used) by financing activities	13.3	410.7	—	240.3	(0.1)	(1,500.8)	(836.6)
Effect of exchange rate changes on cash and cash equivalents and restricted cash	1.9	—	—	—	—	—	1.9
Net increase (decrease) in cash and cash equivalents and restricted cash	—	(0.7)	—	—	—	3.9	3.2
Cash and cash equivalents and restricted cash:							
Beginning of period	—	1.4	—	—	—	57.3	58.7
End of period	£ —	£ 0.7	£ —	£ —	£ —	£ 61.2	£ 61.9
Details of end of period cash and cash equivalents and restricted cash:							
Cash and cash equivalents	£ —	£ 0.7	£ —	£ —	£ —	£ 21.3	£ 22.0
Restricted cash included in other current assets and other assets, net	—	—	—	—	—	39.9	39.9
Total cash and cash equivalents and restricted cash	£ —	£ 0.7	£ —	£ —	£ —	£ 61.2	£ 61.9

(20) Condensed Combined Financial Information — Senior Secured Notes

We present the following condensed combined financial information as of and for the year ended December 31, 2020, as required by the applicable underlying indentures. For the condensed combined financial information as of and for the years ended December 31, 2019 and 2018, see our 2019 and 2018 annual reports, respectively.

As of December 31, 2020, Virgin Media Secured Finance is the issuer of the following senior secured notes:

- $750.0 million (£549.4 million) principal amount of 2026 VM Dollar Senior Secured Notes;
- £675.0 million principal amount of 2027 VM Sterling Senior Secured Notes;
- $1,425.0 million (£1,043.9 million) principal amount of 2029 VM Dollar Senior Secured Notes;
- £340.0 million principal amount of 2029 VM Sterling Senior Secured Notes;
- $915.0 million (£670.3 million) principal amount of 2030 VM Dollar Senior Secured Notes;
- £480.0 million principal amount of 2030 VM 4.125% Sterling Senior Secured Notes; and
- £635.0 million principal amount of 2030 VM 4.25% Sterling Senior Secured Notes.

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

Balance sheet	December 31, 2020 Virgin Media	Virgin Media Secured Finance	Guarantors	Non-Guarantors	Eliminations	Total
	in millions					
ASSETS						
Current assets:						
Cash and cash equivalents	£ —	£ 0.4	£ 9.4	£ 12.2	£ —	£ 22.0
Related-party receivables	0.2	—	7.0	687.3	—	694.5
Other current assets:						
Third-party	1.0	—	681.9	84.0	—	766.9
Intercompany	—	14.3	47.4	—	(61.7)	—
Total current assets	1.2	14.7	745.7	783.5	(61.7)	1,483.4
Property and equipment, net	—	—	5,746.2	198.6	—	5,944.8
Goodwill	—	—	5,964.0	53.7	—	6,017.7
Investments in, and loans to, parent and subsidiary companies	6,143.0	4,406.7	(2,093.4)	3,285.8	(11,742.1)	—
Deferred income taxes	—	—	1,743.2	—	—	1,743.2
Related-party notes receivable	10.3	—	—	4,797.5	—	4,807.8
Other assets, net:						
Third-party	—	—	658.6	64.7	—	723.3
Intercompany	—	116.9	207.3	—	(324.2)	—
Total assets	£ 6,154.5	£ 4,538.3	£ 12,971.6	£ 9,183.8	£ (12,128.0)	£ 20,720.2
LIABILITIES AND COMBINED EQUITY						
Current liabilities:						
Intercompany payables	£ —	£ —	£ 531.0	£ 434.7	£ (965.7)	£ —
Other current liabilities:						
Third-party	0.6	58.9	3,652.0	22.1	—	3,733.6
Intercompany and related-party	5.4	4.0	202.3	28.0	(61.7)	178.0
Total current liabilities	6.0	62.9	4,385.3	484.8	(1,027.4)	3,911.6
Long-term debt and finance lease obligations:						
Third-party	—	4,381.4	5,228.4	277.8	—	9,887.6
Related-party	—	—	—	—	—	—
Other long-term liabilities:						
Third-party	35.4	—	775.4	7.4	—	818.2
Intercompany and related-party	—	82.8	241.4	—	(324.2)	—
Total liabilities	41.4	4,527.1	10,630.5	770.0	(1,351.6)	14,617.4
Total combined equity attributable to parent entities	6,113.1	11.2	2,341.1	8,424.1	(10,776.4)	6,113.1
Noncontrolling interest	—	—	—	(10.3)	—	(10.3)
Total combined equity	6,113.1	11.2	2,341.1	8,413.8	(10,776.4)	6,102.8
Total liabilities and combined equity	£ 6,154.5	£ 4,538.3	£ 12,971.6	£ 9,183.8	£ (12,128.0)	£ 20,720.2

	Year ended December 31, 2020					
Statement of operations	**Virgin Media**	**Virgin Media Secured Finance**	**Guarantors**	**Non-Guarantors**	**Eliminations**	**Total**
	in millions					
Revenue	£ —	£ —	£ 4,934.6	£ 193.9	£ —	£ 5,128.5
Operating costs and expenses (exclusive of depreciation and amortization, shown separately below):						
Programming and other direct costs of services	—	—	1,515.4	82.5	—	1,597.9
Other operating	—	—	769.8	16.7	—	786.5
SG&A	1.2	—	679.2	35.9	—	716.3
Related-party fees and allocations, net	—	—	317.1	8.6	—	325.7
Depreciation and amortization	—	—	1,303.7	40.4	—	1,344.1
Impairment, restructuring and other operating items, net	—	—	22.1	2.0	—	24.1
	1.2	—	4,607.3	186.1	—	4,794.6
Operating income (loss)	(1.2)	—	327.3	7.8	—	333.9
Non-operating income (expense):						
Interest expense:						
Third-party	—	(239.9)	(306.6)	(7.9)	—	(554.4)
Intercompany and related-party	—	—	(720.5)	(456.3)	1,174.8	(2.0)
Interest income – related-party and intercompany	0.9	238.7	681.7	506.1	(1,174.8)	252.6
Realized and unrealized gains (losses) on derivative instruments, net:						
Third-party	—	—	(261.9)	(2.4)	—	(264.3)
Intercompany	—	(63.8)	65.8	(2.0)	—	—
Foreign currency transaction gains, net	4.6	87.2	50.8	32.1	—	174.7
Realized and unrealized gains due to changes in fair values of certain debt, net	—	—	7.5	—	—	7.5
Losses on debt extinguishment, net	—	(56.5)	(81.6)	(0.1)	—	(138.2)
Other income (expense), net	—	(0.1)	3.7	(4.8)	—	(1.2)
	5.5	(34.4)	(561.1)	64.7	—	(525.3)
Earnings (loss) before income taxes	4.3	(34.4)	(233.8)	72.5	—	(191.4)
Income tax benefit (expense)	(14.5)	—	245.2	—	—	230.7
Earnings (loss) after income taxes	(10.2)	(34.4)	11.4	72.5	—	39.3
Equity in net earnings (loss) of subsidiaries	42.4	—	45.3	(8.7)	(79.0)	—
Net earnings (loss)	32.2	(34.4)	56.7	63.8	(79.0)	39.3
Net earnings attributable to noncontrolling interest	—	—	—	(7.1)	—	(7.1)
Net earnings (loss) attributable to parent entities	£ 32.2	£ (34.4)	£ 56.7	£ 56.7	£ (79.0)	£ 32.2
Total comprehensive earnings (loss)	£ 13.5	£ (34.4)	£ 45.0	£ 52.4	£ (55.9)	£ 20.6
Comprehensive earnings attributable to noncontrolling interest	—	—	—	(7.1)	—	(7.1)
Comprehensive earnings (loss) attributable to parent entities	£ 13.5	£ (34.4)	£ 45.0	£ 45.3	£ (55.9)	£ 13.5

	Year ended December 31, 2020				
Statement of cash flows	**Virgin Media**	**Virgin Media Secured Finance**	**Guarantors**	**Non-Guarantors**	**Total**
			in millions		
Cash flows from operating activities:					
Net cash provided (used) by operating activities	£ (15.2)	£ (114.6)	£ 1,913.4	£ 377.0	£ 2,160.6
Cash flows from investing activities:					
Advances to related parties, net	—	—	—	(888.5)	(888.5)
Capital expenditures, net	—	—	(404.3)	(29.6)	(433.9)
Other investing activities, net	—	—	(0.3)	—	(0.3)
Net cash used by investing activities	—	—	(404.6)	(918.1)	(1,322.7)
Cash flows from financing activities:					
Repayments and repurchases of third-party debt and finance lease obligations	—	(1,428.6)	(4,927.7)	(228.8)	(6,585.1)
Borrowings of third-party debt	—	1,444.1	4,135.7	233.9	5,813.7
Payment of financing costs and debt premiums	—	(61.7)	(90.9)	(0.4)	(153.0)
Net cash received related to derivative instruments	—	—	139.0	—	139.0
Net repayments of related-party notes	—	—	—	(29.9)	(29.9)
Contributions (distributions)	13.3	161.2	(765.4)	590.9	—
Other financing activities, net	—	—	(3.1)	(18.2)	(21.3)
Net cash provided (used) by financing activities	13.3	115.0	(1,512.4)	547.5	(836.6)
Effect of exchange rate changes on cash and cash equivalents and restricted cash	1.9	—	—	—	1.9
Net increase (decrease) in cash and cash equivalents and restricted cash	—	0.4	(3.6)	6.4	3.2
Cash and cash equivalents and restricted cash:					
Beginning of period	—	—	52.9	5.8	58.7
End of period	£ —	£ 0.4	£ 49.3	£ 12.2	£ 61.9
Details of end of period cash and cash equivalents and restricted cash:					
Cash and cash equivalents	£ —	£ 0.4	£ 9.4	£ 12.2	£ 22.0
Restricted cash included in other current assets and other assets, net	—	—	39.9	—	39.9
Total cash and cash equivalents and restricted cash	£ —	£ 0.4	£ 49.3	£ 12.2	£ 61.9

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 combined 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, 2020 and 2019.
- *Liquidity and Capital Resources.* This section provides an analysis of our corporate and subsidiary liquidity, combined 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 combined financial statements. In the following text, the terms "we," "our," "our company" and "us" refer to the Virgin Media Group.

Unless otherwise indicated, convenience translations into pound sterling are calculated, and operational data is presented, as of December 31, 2020.

Included below is an analysis of our results of operations and cash flows for 2020, as compared to 2019. An analysis of our results of operations and cash flows for 2019, as compared to 2018, can be found under *Management's Discussion and Analysis of Financial Condition and Results of Operations* included in Part II of our annual report for the year ended December 31, 2019.

Overview

General

Our company comprises certain subsidiaries of Liberty Global that provide broadband internet, video, fixed-line telephony, mobile and broadcasting services in the U.K. and Ireland, and we are one of the largest providers of residential communications services in those markets 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 internet services than other digital subscriber line market participants. As a result, we provide our customers with a leading next generation broadband internet service and one of the most advanced interactive television services available in the U.K. and Irish markets.

Operations

At December 31, 2020, our network passed 16,257,300 homes and served 14,373,800 fixed-line customers, consisting of 5,803,100 broadband internet subscribers, 3,807,500 video subscribers and 4,763,200 fixed-line telephony subscribers. In addition, at December 31, 2020, we served 3,477,900 mobile subscribers.

Broadband internet services. Our residential broadband internet subscribers access the internet at various download speeds up to 1.1 Gbps, making the Virgin Media Group the largest gigabit speed provider in the U.K. and Ireland with our Gig1 services available in 46% of our U.K. footprint, representing 7.1 million premises, and in 98% of our Irish footprint. 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.

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, ultra high definition (**UHD**), high definition and access to over-the-top content.

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 arrangements. In addition, we generate revenue from the sale of mobile handsets.

B2B services. We provide B2B services, including broadband internet, fixed-line and mobile telephony and other connectivity services.

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

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 and dispositions. 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 broadband internet, video, fixed-line telephony and mobile services with existing customers through product bundling and upselling.

During 2020, pursuant to the Network Extension, we connected approximately 426,000 additional residential and commercial premises (excluding upgrades) to our networks in the U.K. and Ireland. 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 decline in 2021 as compared to 2020, but still represent a large portion of our capital costs. Our assessment of the impacts of the Network Extension is subject to competitive, economic, regulatory and other factors outside of our control.

Impact of COVID-19

In March 2020, the World Health Organization declared the outbreak of a novel strain of the coronavirus (**COVID-19**) to be a global pandemic. In response, emergency measures were imposed by governments worldwide, including travel restrictions, restrictions on social activity and the shutdown of non-essential businesses. These measures have adversely impacted the global economy, disrupted global supply chains and created significant volatility and disruption of financial markets. While it is not currently possible to estimate the duration and severity of the COVID-19 pandemic or the adverse economic impact resulting from the preventative measures taken to contain or mitigate its outbreak, an extended period of global economic disruption could have a material adverse impact on our business, financial condition and results of operations in future periods, including with respect to, among other items, (i) our ability to access capital necessary to fund property and equipment additions, debt service requirements, acquisitions and other investment opportunities or other liquidity needs, (ii) the ability of our customers to pay for our products and services, (iii) our ability to maintain or increase our residential and business subscriber levels, (iv) our ability to offer attractive programming, particularly in consideration of the recent cancellation of numerous worldwide sporting events, and (v) the ability of our suppliers and vendors to provide products and services to us. We may also be adversely impacted by any government mandated regulations on our business that could be implemented in response to the COVID-19 pandemic. In addition, the countries in which we operate may seek new or increased revenue sources due to fiscal deficits that result from measures taken to mitigate the adverse economic impacts of COVID-19, such as by imposing new taxes on the products and services we provide. We estimate that the total overall adverse impact of the COVID-19 pandemic on our Segment Adjusted EBITDA (as defined below) during 2020 was relatively minimal. For additional information regarding the impact of COVID-19 on our results of operations for the year ended December 31, 2020, see *Discussion and Analysis of our Results of Operations* below.

Competition and Other External Factors

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

In addition to competition, our operations are subject to macroeconomic, political and other risks that are outside of our control. For example, on June 23, 2016, the U.K. held a referendum in which U.K. citizens approved, on an advisory basis, an exit from the E.U. commonly referred to as "**Brexit**." The U.K. formally exited the E.U. on January 31, 2020, and in December 2020, the U.K. and the E.U. announced a deal for "Trade and Cooperation" agreement. For additional information regarding certain risks to our company associated with Brexit, see *Risk Factors* included in Part I of this annual report.

For information regarding certain other regulatory developments that could adversely impact our results of operations in future periods, see *Legal and Regulatory Proceedings and Other Contingencies - Other Regulatory Matters* in note 17 to our combined financial statements.

Discussion and Analysis of our Results of Operations

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 expenses and corresponding declines in our Segment Adjusted EBITDA and Segment Adjusted EBITDA margin (Segment Adjusted EBITDA divided by revenue) to the extent of any such tax increases. As we use the term, "**Segment Adjusted EBITDA**" is defined as earnings (loss) before net income tax benefit (expense), other non-operating income or expenses, net gains (losses) on extinguishment of debt, net realized and unrealized gains (losses) due to changes in fair value of certain debt, net foreign currency gains (losses), net realized and unrealized gains (losses) on derivative instruments, net interest expense, net interest income, depreciation and amortization, share-based compensation, 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. Segment Adjusted EBITDA is a non-GAAP measure, which we believe is a meaningful measure because it represents a transparent view of our recurring operating performance that is unaffected by our capital structure and allows management to (a) readily view operating trends and (b) identify strategies to improve operating performance in the U.K. and Ireland. Investors should view Segment Adjusted EBITDA as a supplement to, and not a substitute for, GAAP measures of performance included in our combined statements of operations.

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 and, in very limited cases, we could experience retroactive changes in our interconnect revenue and/or costs. The ultimate impact of any such changes in termination rates on our Segment Adjusted EBITDA would be dependent on the call or text messaging patterns that are subject to the changed termination rates.

We are subject to inflationary pressures with respect to certain costs and foreign currency exchange risk with respect to costs and expenses that are denominated in currencies other than British pound sterling. 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. For additional information regarding our foreign currency exchange risks see *Quantitative and Qualitative Disclosures about Market Risk — Foreign Currency Risk* below.

Revenue

General. We derive our revenue primarily from residential and B2B communications services, including broadband internet, video, fixed-line telephony and mobile services.

Variances in the subscription revenue that we receive from our customers are a function of (i) changes in the number of our fixed line customers 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.

2020 compared to 2019

Revenue

Our revenue by major category is set forth below:

	Year ended December 31,		Increase (decrease)		Organic increase (decrease)
	2020	2019	£	%	%
	in millions, except percentages				
Residential revenue:					
Residential cable revenue (a):					
Subscription revenue (b):					
Broadband internet	£ 1,710.2	£ 1,676.4	£ 33.8	2.0	1.9
Video	1,076.1	1,080.4	(4.3)	(0.4)	(0.5)
Fixed-line telephony	779.0	849.4	(70.4)	(8.3)	(8.4)
Total subscription revenue	3,565.3	3,606.2	(40.9)	(1.1)	(1.2)
Non-subscription revenue	63.3	59.5	3.8	6.4	6.3
Total residential cable revenue	3,628.6	3,665.7	(37.1)	(1.0)	(1.1)
Residential mobile revenue (c):					
Subscription revenue (b)	360.4	361.4	(1.0)	(0.3)	(0.4)
Non-subscription revenue	279.8	294.5	(14.7)	(5.0)	(5.1)
Total residential mobile revenue	640.2	655.9	(15.7)	(2.4)	(2.5)
Total residential revenue	4,268.8	4,321.6	(52.8)	(1.2)	(1.3)
B2B revenue (d):					
Subscription revenue	100.6	89.0	11.6	13.0	13.2
Non-subscription revenue	698.4	686.3	12.1	1.8	1.6
Total B2B revenue	799.0	775.3	23.7	3.1	2.9
Other revenue (e)	60.7	71.3	(10.6)	(14.9)	(16.0)
Total	£ 5,128.5	£ 5,168.2	£ (39.7)	(0.8)	(0.9)

(a) Residential cable subscription revenue includes amounts received from subscribers for ongoing services and the recognition of deferred installation revenue over the associated contract period. Residential cable non-subscription revenue includes, among other items, channel carriage fees, late fees and revenue from the sale of equipment.

(b) Residential 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.

(c) Residential mobile subscription revenue includes amounts received from subscribers for ongoing services. Residential mobile non-subscription revenue includes, among other items, interconnect revenue and revenue from sales of mobile handsets and other devices. Residential mobile interconnect revenue was £60.1 million and £61.8 million during 2020 and 2019, respectively.

(d) B2B subscription revenue represents revenue from SOHO subscribers. SOHO subscribers pay a premium price to receive expanded service levels along with broadband internet, video, fixed-line telephony or mobile services that are the same or similar to the mass marketed products offered to our residential subscribers. A portion of the increase in our B2B subscription revenue is attributable to the conversion of certain residential subscribers to SOHO subscribers. B2B non-subscription revenue includes (i) revenue from business broadband internet, video, fixed-line telephony, mobile and data services offered to medium to large enterprises and on a wholesale basis, to other operators and (ii) revenue from long-term leases of portions of our network.

(e) Other revenue primarily includes broadcasting revenue in Ireland.

The details of the decrease in our revenue during 2020, as compared to 2019, are set forth below:

	Subscription revenue	Non-subscription revenue	Total
		in millions	
Increase (decrease) in residential cable subscription revenue due to change in:			
Average number of customers	£ 5.5	£ —	£ 5.5
ARPU (a)	(50.1)	—	(50.1)
Increase in residential cable non-subscription revenue	—	3.9	3.9
Total increase (decrease) in residential cable revenue	(44.6)	3.9	(40.7)
Decrease in residential mobile revenue (b)	(1.4)	(14.8)	(16.2)
Increase in B2B revenue (c)	11.4	11.6	23.0
Decrease in other revenue (d)	—	(11.4)	(11.4)
Total organic decrease	(34.6)	(10.7)	(45.3)
Impact of FX	4.3	1.3	5.6
Total	£ (30.3)	£ (9.4)	£ (39.7)

(a) The decrease in cable subscription revenue related to a change in ARPU was adversely impacted by (i) the COVID-19 pandemic, most notably with respect to video services, including lower revenue of approximately £22 million associated with the loss of exclusive programming content, primarily during the second and third quarters of 2020, comprising (a) credits that were given to certain customers and (b) the estimated impact of certain customers canceling their premium sports subscriptions, and (ii) lower revenue related to regulated contract notifications. For additional information regarding the contract notification requirements, see *Legal and Regulatory Proceedings and Other Contingencies - Other Regulatory Matters* in note 17 to our combined financial statements.

(b) The decrease in residential mobile non-subscription revenue is primarily attributable a decrease in revenue from mobile handset sales, including (i) £16.5 million recognized during 2020 in connection with the completion of the VM Receivables Financing Sale, (ii) the adverse impact of retail store closures during the COVID-19 pandemic and (iii) the unfavorable impact of £5.8 million of revenue recognized during 2019 in connection with the sale of rights to future commission payments on customer handset insurance arrangements in the U.K.

(c) The increase in B2B subscription revenue is primarily due to an increase in the average number of SOHO customers in the U.K. The increase in B2B non-subscription revenue is primarily attributable to our operations in the U.K., including the net effect of (i) an increase in revenue associated with long-term leases of a portion of our network and (ii) a decrease in lower margin revenue related to business network services.

(d) The decrease in other revenue is attributable to lower broadcasting revenue in Ireland, largely due to the impact of the COVID-19 pandemic.

Programming and other direct costs of services

Programming and other direct costs of services include programming and copyright costs, interconnect and access costs, costs of mobile handsets and other devices and other direct costs related to our operations. Programming and copyright costs represent a significant portion of our operating costs and are subject to rise in future periods due to various factors, including (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.

Our programming and other direct costs of services decreased £13.9 million or 0.9% during 2020, as compared to 2019. On an organic basis, programming and other direct costs of services decreased £15.4 million or 1.0%. This decrease includes the following factors:

- A decrease in programming and copyright costs of £17.5 million or 1.9%, primarily due to lower costs for certain premium and/or basic content, including aggregate credits or rebates of £41.1 million received in connection with the loss of exclusive programming content due to the COVID-19 pandemic, which generally offset the aforementioned adverse revenue impacts resulting from the COVID-19 pandemic;

- A decrease in mobile handset and other device costs of £14.0 million or 7.5%, primarily due to lower sales volumes, largely due to certain retail store closures as a result of the COVID-19 pandemic; and

- An increase in interconnect and access costs of £10.4 million or 2.6%, primarily due to (i) higher MVNO costs and (ii) an increase in interconnect and roaming costs. Interconnect and mobile roaming costs have been impacted by changes in usage per mobile subscriber associated with factors such as lower travel and the use of WiFi alternatives during stay-at-home mandates or recommendations as a result of the COVID-19 pandemic.

Other operating expenses

Other operating expenses include network operations, customer operations, customer care and other costs related to our operations.

Our other operating expenses increased £78.4 million or 11.1% during 2020, as compared to 2019. On an organic basis, other operating expenses increased £77.5 million or 10.9%. This increase includes the following factors:

- An increase in personnel costs of £31.0 million or 15.1%, primarily due to the net effect of (i) higher staffing levels, (ii) lower average costs per employee and (iii) lower costs due to higher capitalizable activities. The increase in personnel costs also includes the impact of higher costs associated with regulated contract notifications, as further described in note 17 to our combined financial statements;

- An increase in other operating expenses due to £15.8 million recognized during the third quarter of 2020 associated with the completion of the VM Receivables Financing Sale, representing the difference between the carrying amount of the associated receivables and the amount received pursuant to the sale;

- An increase in network infrastructure charges of £15.6 million following an increase in the rateable value of certain of our assets. For additional information, see "*Other Regulatory Issues*" in note 17 to our combined financial statements;

- Higher costs associated with a £12.9 million charge recorded during the third quarter of 2020 in connection with the reassessment of certain items related to prior years; and

- A decrease in customer service costs of £4.0 million or 3.4%, primarily due to lower external call center costs, including the impact of the lockdowns during the second and, to a lesser extent, third quarter of 2020 associated with the COVID-19 pandemic, which prevented certain outsourced contract services from being performed.

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 is separately discussed further below.

Our SG&A expenses (exclusive of share-based compensation) increased £6.6 million or 1.0% during 2020, as compared to 2019. On an organic basis, and excluding share-based compensation, our SG&A expenses increased £5.9 million or 0.9%. This increase includes the following factors:

- An increase in business service costs of £6.6 million or 11.7%, primarily due to the net effect of (i) higher consulting costs and (ii) a decrease in travel and entertainment expenses;

- A decrease in property costs of £6.5 million or 15.8%, primarily due to lower rent expense resulting from retail store closures;

- A decrease in customer service costs of £3.5 million or 14.9%, primarily due to lower external call center costs;

- An increase in personnel costs of £3.4 million or 1.2%, primarily due to the net effect of (i) lower staffing levels, (ii) higher average costs per employee, (iii) a decrease in temporary personnel costs and (iv) higher incentive compensation costs. The higher average cost per employee includes the impact of lower severance costs of £4.9 million associated with revisions to our operating model and decreases in senior management personnel during the second quarter of 2019; and

- An increase in external sales and marketing costs of £2.4 million or 1.3%, primarily due to higher costs associated with advertising campaigns, which include higher costs associated with regulated contract notifications, as further described in note 17 to our combined financial statements.

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

	Year ended December 31, 2020	Year ended December 31, 2019
	in millions	
Performance-based incentive awards (a)	£ 5.0	£ 8.6
Non-performance based incentive awards (b)	41.8	34.4
Other (c)	6.9	5.3
Total	£ 53.7	£ 48.3

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

(b) In 2019, Liberty Global changed its policy to provide that all new equity grants would have ten-year contractual terms in order to more closely align with common market practice. Accordingly, the Black-Scholes fair values of the outstanding awards increased, resulting in the recognition of an aggregate incremental share-based compensation expense allocated to our company of £1.0 million during 2020.

(c) Represents annual incentive compensation and defined contribution plan liabilities that have been or are expected to be settled with Liberty Global ordinary shares. In the case of the annual incentive compensation, shares have been or will be issued to senior management and key employees pursuant to a shareholding incentive program. The shareholding incentive program allows these employees to elect to receive up to 100% of their annual incentive compensation in ordinary shares of Liberty Global in lieu of cash.

For additional information regarding our share-based compensation, see note 12 to our combined financial statements.

Related-party fees and allocations, net

We recorded related-party fees and allocations, net, related to our estimated share of the applicable costs incurred by Liberty Global's subsidiaries of £325.7 million and £225.4 million during 2020 and 2019, respectively. These charges generally relate to management, finance, legal and other corporate and administrative services provided to or by our company. For additional information, see note 13 to our combined financial statements.

Depreciation and amortization expense

Our depreciation and amortization expense decreased £394.1 million or 22.7% during 2020, as compared to 2019. Excluding the effects of FX, depreciation and amortization expense decreased £393.9 million or 22.7%, primarily due to the net effect of (i) a decrease associated with certain assets becoming fully depreciated, (ii) a decrease due to certain assets becoming fully amortized and (iii) 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 £24.1 million and £93.7 million during 2020 and 2019, respectively. The 2020 amount primarily includes restructuring charges of £14.6 million, primarily due to certain reorganization activities that resulted in employee severance and termination costs. The 2019 amount primarily includes (i) a provision for litigation of £41.3 million related to a VAT matter in the U.K. recorded during the fourth quarter of 2019, (ii) restructuring charges of £32.1 million, primarily due to certain reorganization activities that resulted in employee severance and termination costs, and (iii) impairment charges of £21.4 million, primarily related to the write-off of certain network assets.

If, among other factors, (i) our equity values were to decline 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.

For additional information regarding our restructuring charges, see note 14 to our combined financial statements. For additional information regarding the aforementioned VAT matter in the U.K., see note 17 to our combined financial statements. For additional information regarding our impairments, see *Critical Accounting Policies, Judgments and Estimates — Impairment of Property and Equipment and Intangible Assets* below.

Interest expense – third-party

Our third-party interest expense decreased £84.1 million or 13.2% during 2020, as compared to 2019, primarily attributable to the net effect of (i) a lower weighted average interest rate and (ii) a slightly higher average outstanding third-party debt balance. For additional information regarding our outstanding third-party indebtedness, see note 8 to our combined 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 combined 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 remained relatively unchanged during 2020, as compared to 2019. For additional information regarding our related-party indebtedness, see note 13 to our combined financial statements.

Interest income – related-party

Our related-party interest income decreased £32.0 million or 11.2% during 2020, as compared to 2019, primarily attributable to lower average interest rates on the intercompany notes receivable due from LG Europe 2. For additional information, see note 13 to our combined financial statements.

Realized and unrealized gains (losses) 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 losses on derivative instruments, net, for the indicated periods are as follows:

	Year ended December 31,	
	2020	2019
	in millions	
Cross-currency and interest rate derivative contracts (a)	£ (262.6)	£ (160.0)
Foreign currency forward contracts:		
Third-party	(1.7)	0.5
Related-party	—	(0.9)
Total	£ (264.3)	£ (160.4)

(a) The loss during 2020 is attributable to net losses associated with (i) changes in the relative value of certain currencies and (ii) changes in certain market interest rates. In addition, the loss during 2020 includes a net gain of £77.3 million resulting from changes in our credit risk valuation adjustments. The loss during 2019 is attributable to net losses associated with (a) changes in the relative value of certain currencies and (b) changes in certain market interest rates. In addition, the loss during 2019 includes a net gain of £45.3 million resulting from changes in our credit risk valuation adjustments.

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

Foreign currency transaction gains (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 gains, net, for the indicated periods are as follows:

	Year ended December 31,	
	2020	2019
	in millions	
Intercompany payables and receivables denominated in a currency other than the entity's functional currency (a)	£ 119.0	£ 67.1
U.S. dollar denominated debt issued by our company	110.9	104.9
Euro-denominated debt issued by our company	(57.1)	38.2
Other	1.9	(8.0)
Total	£ 174.7	£ 202.2

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

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 gains (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 gains (losses) due to changes in fair values of certain debt, net, of £7.5 million and (£20.8 million) during 2020 and 2019, respectively. For additional information regarding our fair value measurements, see note 6 to our combined financial statements.

Losses on debt extinguishment, net

We recognized net losses on debt extinguishment of £138.2 million and £115.5 million during 2020 and 2019, respectively. The loss during 2020 is attributable to (i) the payment of £130.0 million of redemption premiums and (ii) the write-off of £8.2 million of net unamortized deferred financing costs, discounts and premiums. The loss during 2019 is attributable to (a) the payment of £96.4 million of redemption premiums and (b) the write-off of £19.1 million of net unamortized deferred financing costs, discounts and premiums.

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

Income tax benefit

We recognized income tax benefit of £230.7 million and £21.0 million during 2020 and 2019, respectively.

The income tax benefit during 2020 differs from the expected income tax benefit of £40.2 million (based on the U.S. federal income tax rate of 21.0%), primarily due to the positive impact of (i) an increase in deferred tax assets in the U.K. due to enacted tax rate changes and (ii) certain permanent differences between the financial and tax accounting treatment of interest and other items, including £25.9 million related to a one-time technology-related transfer pricing transition fee, as described in note 13 to our combined financial statements. The net positive impact of these items was partially offset by the negative impact of certain permanent differences between the financial and tax accounting treatment of items associated with investments in subsidiaries.

The income tax benefit during 2019 differs from the expected income tax benefit of £75.2 million (based on the U.S. federal income tax rate of 21.0%), primarily due to the negative impact of (i) certain permanent differences between the financial and tax accounting treatment of items associated with investments in subsidiaries, (ii) statutory tax rates in certain jurisdictions in which we operate that are lower than the U.S. federal income tax rate and (iii) a decrease in deferred tax assets in the U.K. due to enacted tax rate changes.

For additional information concerning our income taxes, see note 10 to our combined financial statements.

Net earnings (loss)

During 2020 and 2019, we reported net earnings (loss) of £39.3 million and (£337.3 million), respectively, including (i) operating income of £333.9 million and £86.7 million, respectively, (ii) net non-operating expense of £525.3 million and £445.0 million, respectively, and (iii) income tax benefit of £230.7 million and £21.0 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 operating income to a level that more than offsets the aggregate amount of our (a) interest expense, (b) other non-operating expenses and (c) income tax expenses.

Subject to the limitations included in our various debt instruments and the pending formation of the U.K. JV, 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 concerning 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 concerning the reasons for changes in specific line items in our combined statements of operations, see the above discussion.

2019 compared to 2018

For information regarding the discussion and analysis of our results of operations during 2019, as compared to 2018, see *Management's Discussion and Analysis of Financial Condition and Results of Operations* included in our 2019 annual report.

Liquidity and Capital Resources

Sources and Uses of Cash

Cash and cash equivalents

At December 31, 2020, we had cash and cash equivalents of £22.0 million, substantially all of which was held by our operating entities. The terms of the instruments governing the indebtedness of certain of these entities may restrict our parent entities' ability to access the liquidity of these entities. In addition, our parent entities' ability to access the liquidity of our operating entities may be limited by tax and legal considerations and other factors.

Liquidity of the Virgin Media Group

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 operating entities. For information regarding limitations imposed by our debt instruments, see note 8 to our combined financial statements.

The ongoing cash needs of the Virgin Media Group include corporate general and administrative expenses. From time to time, the Virgin Media Group may also require cash in connection with (i) the repayment of outstanding debt and related-party obligations (including the repurchase or exchange of outstanding debt securities in the open market or privately-negotiated transactions), (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.

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 operating entities

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

The liquidity of our operating entities generally is used to fund (i) property and equipment additions, (ii) debt service requirements and (iii) other liquidity requirements that may arise from time to time, as well as to settle certain obligations that are not included on our December 31, 2020 combined balance sheet. In this regard, we have significant commitments related to (a) programming studio output and sports rights contracts, (b) certain operating costs associated with our networks and (c) purchase obligations associated with customer premises equipment and certain service-related commitments. These obligations are expected to represent a significant liquidity requirement of our company, the majority of which is due over the next 12 to 24 months. For additional information regarding our commitments, see note 17 to our combined financial statements.

For additional information regarding our combined cash flows, see the discussion under C*ombined Statements of Cash Flows* below. Our operating entities 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 other entities within the Virgin Media Group, Liberty Global or other Liberty Global subsidiaries. No assurance can be given that any external funding would be available to our operating entities on favorable terms, or at all.

Capitalization

At December 31, 2020, the outstanding principal amount of our combined third-party debt, together with our finance lease obligations, aggregated £11,944.4 million, including £2,012.7 million that is classified as current on our combined balance sheet and £9,547.8 million that is not due until 2026 or thereafter. For additional information regarding our debt and finance lease maturities, see notes 8 and 9, respectively, to our combined financial statements.

As further discussed under *Quantitative and Qualitative Disclosures about Market Risk* below and in note 5 to our combined 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 incurrence-based leverage covenants contained in our various debt instruments. In this regard, if our Covenant EBITDA were to decline, our ability to obtain additional debt could be limited. We do not anticipate any instances of non-compliance with respect to any of our 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, 2020, we believe that we have sufficient resources to repay or refinance the current portion of our debt and finance 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 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 (including with respect to the COVID-19 pandemic), sovereign debt concerns or any adverse regulatory developments could impact the credit markets we access and, accordingly, our future liquidity and financial position. Our ability to access debt financing on favorable terms, or at all, could be adversely impacted by (i) the financial failure of any of our counterparties, which 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. 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 combined third-party debt and finance lease obligations at December 31, 2020 have been borrowed or incurred by entities within the Virgin Media Group. For additional information concerning our debt and finance lease obligations, see notes 8 and 9, respectively, to our combined financial statements. For additional information regarding the potential impact of the COVID-19 pandemic on our company's liquidity, see the discussion included above in *Overview*.

Combined Statements of Cash Flows

Combined Statements of Cash Flows — 2020 compared to 2019

Summary. Our combined statements of cash flows for 2020 and 2019 are summarized as follows:

	Year ended December 31,		
	2020	**2019**	**Change**
		in millions	
Net cash provided by operating activities	£ 2,160.6	£ 2,031.5	£ 129.1
Net cash used by investing activities	(1,322.7)	(796.9)	(525.8)
Net cash used by financing activities	(836.6)	(1,191.0)	354.4
Effect of exchange rate changes on cash and cash equivalents and restricted cash	1.9	(9.3)	11.2
Net increase in cash and cash equivalents and restricted cash	£ 3.2	£ 34.3	£ (31.1)

Operating Activities. The increase in net cash provided by our operating activities is primarily attributable to the net effect of (i) an increase in cash provided by our Segment Adjusted EBITDA and related working capital items, which includes an increase in cash of £210.0 million in connection with the VM Receivables Financing Sale, (ii) a decrease in cash provided due to higher cash payments related to derivative instruments and (iii) an increase in cash provided due to lower payments of interest. Segment Adjusted EBITDA is a non-GAAP measure, which investors should view as a supplement to, and not a substitute for, GAAP measures of performance included in our combined statements of operations.

Investing Activities. The increase in net cash used by our investing activities is primarily attributable to an increase in cash used of £517.5 million related to higher net advances to related parties.

The capital expenditures we report in our combined statements of cash flows do not include amounts that are financed under capital-related vendor financing or finance 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 combined statements of cash flows, which exclude amounts financed under capital-related vendor financing or finance 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 finance lease arrangements.

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

	Year ended December 31,	
	2020	**2019**
	in millions	
Property and equipment additions	£ 1,114.8	£ 1,234.5
Assets acquired under capital-related vendor financing arrangements	(713.7)	(838.6)
Assets acquired under finance leases	—	(5.5)
Changes in current liabilities related to capital expenditures, net (including related-party amounts)	32.8	37.7
Capital expenditures, net	£ 433.9	£ 428.1

The decrease in our property and equipment additions is primarily due to decreases in (i) expenditures for the purchase and installation of customer premises equipment and (ii) expenditures for new build and upgrade projects, including the Network Extension. During 2020 and 2019, our property and equipment additions represented 21.7% and 23.9% of our revenue, respectively. For additional information regarding the Network Extension, see *Overview* above.

Financing Activities. The decrease in net cash used by our financing activities is primarily attributable to a decrease in cash used of £354.3 million related to lower net repayments of third-party debt and finance lease obligations.

Combined Statements of Cash Flows — 2019 compared to 2018

For information regarding the combined statements of cash flows for 2019, as compared to 2018, see *Management's Discussion and Analysis of Financial Condition and Results of Operations* included in our annual report for the year ended December 31, 2019.

Critical Accounting Policies, Judgments and Estimates

In connection with the preparation of our combined 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 combined 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;

- 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 concerning our significant accounting policies, see note 3 to our combined 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 57.9% of our total assets at December 31, 2020.

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 the 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. Any excess of the carrying amount over the fair value would be charged to operations as an impairment loss. 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.

When required, considerable management judgment is necessary to estimate the fair value of reporting units and 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 Adjusted EBITDA 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 2020 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 the three years ended December 31, 2020, we did not record any significant impairment charges with respect to our property and equipment and intangible assets (including goodwill). For additional information regarding our long-lived assets, see note 7 to our combined financial statements.

If, among other factors, (i) our enterprise value or Liberty Global's equity values were to decline 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.

Fair Value Measurements

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 Black Scholes 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 combined financial statements. See also note 5 to our combined financial statements for information concerning 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 2020, 2019 and 2018, we recognized net gains (losses) of (£256.8 million), (£181.2 million) and £472.1 million, respectively, attributable to changes in the fair values of these items.

As further described in note 6 to our combined 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, 2020.

For information concerning 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 combined 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 that it is 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, 2020, the aggregate valuation allowance provided against deferred tax assets was £2,407.6 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, 2020 combined 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 combined 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 combined financial statements is different than the amount taken or expected to be taken in our tax returns. As of December 31, 2020, the amount of unrecognized tax benefits for financial reporting purposes, but taken or expected to be taken in our tax returns, was £93.2 million, all of which 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.

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, 2020, £12.8 million or 58.2%, £6.4 million or 29.1% and £2.8 million or 12.7% of our combined cash balances were denominated in euros, pounds sterling and U.S. dollars, respectively.

Foreign Currency Risk

We are exposed to foreign currency exchange rate risk with respect to our combined debt in situations where our debt is denominated in U.S. dollars and euros. Although we generally match the denomination of our 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, 2020, substantially all of our debt was either directly or synthetically matched to our functional currency. For additional information concerning the terms of our derivative instruments, see note 5 to our combined 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 on our combined 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 revenue, costs and expenses are denominated in currencies other than our functional currency, we will experience fluctuations in our revenue, costs and expenses solely as a result of changes in foreign currency exchange rates. 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 foreign currency forward and option contracts to hedge certain of these risks. For additional information concerning our foreign currency forward and option contracts, see note 5 to our combined 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,	
	2020	**2019**
Spot rates:		
Euro	1.1166	1.1811
U.S. dollar	1.3651	1.3263

	Year ended December 31,		
	2020	**2019**	**2018**
Average rates:			
Euro	1.1255	1.1406	1.1301
U.S. dollar	1.2837	1.2770	1.3353

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. Our primary exposure to variable-rate debt is through our LIBOR-indexed and EURIBOR-indexed VM Credit Facilities.

In general, we 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 manage 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 also use interest rate cap agreements and swaptions to lock in a maximum interest rate if variable rates rise, but also allow our company to benefit from declines in market rates. Under our current guidelines, we use various interest rate derivative instruments to mitigate interest rate risk, generally for five years, with the later years covered primarily by swaptions. As such, 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 composition and 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 concerning the impacts of these interest rate derivative instruments, see note 5 to our combined financial statements.

In July 2017, the U.K. Financial Conduct Authority (the authority that regulates LIBOR) announced that it intends to stop compelling banks to submit rates for the calculation of LIBOR after 2021. Additionally, the European Money Markets Institute (the authority that administers EURIBOR) has announced that measures will need to be undertaken by the end of 2021 to reform EURIBOR to ensure compliance with E.U. Benchmarks Regulation. In November 2020, ICE Benchmark administration (the entity that administers LIBOR) announced its intention to continue publishing USD LIBOR rates until June 30, 2023, with the exception of the one-week and two-month rates which, along with all GBP LIBOR rates, it intends to cease publishing after December 31, 2021. While this extension allows additional runway on existing contracts using USD LIBOR rates, companies are still encouraged to transition away from using USD LIBOR as soon as practicable and should not enter into new contracts that use USD LIBOR after 2021. The methodology for EURIBOR has been reformed and EURIBOR has been granted regulatory approval to continue to be used. Currently, it is not possible to predict the exact transitional arrangements for calculating applicable reference rates that may be made in the U.K., the U.S., the eurozone or elsewhere given that a number of outcomes are possible, including the cessation of the publication of one or more reference rates.

In October 2020, the International Swaps and Derivatives Association (the ISDA) launched a new supplement (the Fallback Supplement), which effective January 25, 2021, will amend the standard definitions for interest rate derivatives to incorporate fallbacks for derivatives linked to certain key interbank offered rates (IBORs). The ISDA also launched a new protocol (the Fallback Protocol), also effective January 25, 2021, that will enable market participants to incorporate these revisions into their legacy non-cleared derivatives with other counterparties that choose to adhere to the protocol. The fallbacks for a particular currency will apply following a permanent cessation of the IBOR in that currency and will be adjusted versions of the risk-free rates identified in each currency. Our loan documents contain provisions that contemplate alternative calculations of the base rate applicable to our LIBOR-indexed and EURIBOR-indexed debt to the extent LIBOR or EURIBOR (as applicable) are not available, which alternative calculations we do not anticipate will be materially different from what would have been calculated under LIBOR or EURIBOR (as applicable). Additionally, no mandatory prepayment or redemption provisions would be triggered under our loan documents in the event that either the LIBOR rate or the EURIBOR rate is not available. It is possible, however, that any new reference rate that applies to our LIBOR-indexed or EURIBOR-indexed debt could be different than any new reference rate that applies to our LIBOR-indexed or EURIBOR-indexed derivative instruments. We anticipate managing this difference and any resulting increased variable-rate exposure through modifications to our debt and/or derivative instruments, however future market conditions may not allow immediate implementation of desired modifications and the company may incur significant associated costs.

Weighted Average Variable Interest Rate. At December 31, 2020, 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 3.0%, 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 combined 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, 2020, our exposure to counterparty credit risk included (i) derivative assets with an aggregate fair value of £4.2 million, (ii) cash and cash equivalent and restricted cash balances of £61.9 million and (iii) aggregate undrawn debt facilities of £1,000.0 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 are limited to the derivative instruments, and derivative-related debt 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, 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 concerning 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 combined financial statements.

Cross-currency and Interest Rate Derivative Contracts

Holding all other factors constant, at December 31, 2020, 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 our cross-currency and interest rate derivative contracts by approximately £725.2 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 rate projections and exchange rates as of December 31, 2020. These amounts are presented for illustrative purposes only and will likely differ from the actual cash payments or receipts required in future periods. For additional information regarding our derivative instruments see note 5 to our combined financial statements. For information concerning the counterparty credit risk associated with our derivative instruments, see the discussion under *Counterparty Credit Risk* above.

	Payments (receipts) due during:						
	2021	**2022**	**2023**	**2024**	**2025**	**Thereafter**	**Total**
				in millions			
Projected derivative cash payments (receipts), net:							
Interest-related (a)	£ 79.2	£ 69.9	£ 66.2	£ 49.7	£ 77.9	£ 50.7	£ 393.6
Principal-related (b)	3.9	—	0.8	(22.4)	(367.2)	392.8	7.9
Other (c)	—	—	1.6	—	—	—	1.6
Total	£ 83.1	£ 69.9	£ 68.6	£ 27.3	£ (289.3)	£ 443.5	£ 403.1

(a) Includes (i) the cash flows of our interest rate cap, floor, swaption and swap contracts and (ii) 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.

(c) Includes amounts related to our foreign currency forward contracts.