UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

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

For the quarterly period ended June 30, 2020

OR

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

For the transition period from to

Commission file number 001-35961

Liberty Global plc

(Exact name of Registrant as specified in its charter)

England and Wales	**98-1112770**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

Griffin House

161 Hammersmith Rd

London

United Kingdom	**W6 8BS**
(Address of principal executive offices)	*(Zip Code)*

Registrant's telephone number, including area code:
+44.208.483.6449 or 303.220.6600

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A ordinary shares	LBTYA	Nasdaq Global Select Market
Class B ordinary shares	LBTYB	Nasdaq Global Select Market
Class C ordinary shares	LBTYK	Nasdaq Global Select Market

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

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

Large Accelerated Filer ☑ Accelerated Filer ☐ Non-Accelerated Filer ☐

Smaller Reporting Company ☐ Emerging Growth Company ☐

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

Indicate by check mark whether the registrant is a shell company as defined in Rule 12b-2 of the Exchange Act. Yes ☐ No ☑

The number of outstanding ordinary shares of Liberty Global plc as of July 24, 2020 was: 182,271,789 class A ordinary shares, 12,561,772 class B ordinary shares and 398,811,237 class C ordinary shares.

LIBERTY GLOBAL PLC

TABLE OF CONTENTS

		Page Number
	PART I — FINANCIAL INFORMATION	
ITEM 1.	FINANCIAL STATEMENTS	
	Condensed Consolidated Balance Sheets as of June 30, 2020 and December 31, 2019 (unaudited)	1
	Condensed Consolidated Statements of Operations for the Three and Six Months Ended June 30, 2020 and 2019 (unaudited)	3
	Condensed Consolidated Statements of Comprehensive Earnings (Loss) for the Three and Six Months Ended June 30, 2020 and 2019 (unaudited)	4
	Condensed Consolidated Statements of Equity for the Three and Six Months Ended June 30, 2020 and 2019 (unaudited)	5
	Condensed Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2020 and 2019 (unaudited)	7
	Notes to Condensed Consolidated Financial Statements (unaudited)	9
ITEM 2.	MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	49
ITEM 3.	QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK	82
ITEM 4.	CONTROLS AND PROCEDURES	85
	PART II — OTHER INFORMATION	
ITEM 1A.	RISK FACTORS	86
ITEM 2.	UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS	86
ITEM 6.	EXHIBITS	87

LIBERTY GLOBAL PLC
CONDENSED CONSOLIDATED BALANCE SHEETS
(unaudited)

	June 30, 2020	December 31, 2019
	in millions	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 4,360.6	$ 8,142.4
Trade receivables, net	498.4	1,404.8
Short-term investments (measured at fair value on a recurring basis) (note 5)	2,650.8	—
Derivative instruments (note 6)	576.0	331.1
Other current assets (notes 3, 4 and 5)	554.0	695.0
Total current assets	8,639.8	10,573.3
Investments and related notes receivable (including $1,269.9 million and $1,289.2 million, respectively, measured at fair value on a recurring basis) (note 5)	4,731.4	4,782.0
Property and equipment, net (notes 8 and 10)	6,172.6	13,843.4
Goodwill (note 8)	6,379.2	14,052.1
Deferred tax assets (note 11)	333.6	2,457.4
Assets held for sale (note 4)	19,030.5	—
Other assets, net (notes 3, 4, 6, 8 and 10)	2,053.1	3,338.1
Total assets	$ 47,340.2	$ 49,046.3

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

LIBERTY GLOBAL PLC
CONDENSED CONSOLIDATED BALANCE SHEETS — (Continued)
(unaudited)

	June 30, 2020	December 31, 2019
	in millions	
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 410.0	$ 963.9
Deferred revenue (note 3)	336.2	834.9
Current portion of debt and finance lease obligations (notes 9 and 10)	1,867.7	3,877.2
Accrued capital expenditures	199.0	405.2
Other accrued and current liabilities (notes 6, 10 and 14)	1,536.8	2,570.5
Total current liabilities	4,349.7	8,651.7
Long-term debt and finance lease obligations (notes 9 and 10)	10,375.9	24,305.3
Liabilities associated with assets held for sale (note 4)	18,133.3	—
Other long-term liabilities (notes 3, 6, 10, 11 and 14)	1,930.8	2,890.7
Total liabilities	34,789.7	35,847.7
Commitments and contingencies (notes 6, 9, 11 and 16)		
Equity (note 12):		
Liberty Global shareholders:		
Class A ordinary shares, $0.01 nominal value. Issued and outstanding 182,268,745 shares and 181,560,735 shares, respectively	1.8	1.8
Class B ordinary shares, $0.01 nominal value. Issued and outstanding 12,561,851 shares and 12,151,526 shares, respectively	0.1	0.1
Class C ordinary shares, $0.01 nominal value. Issued and outstanding 401,480,741 shares and 438,867,447 shares, respectively	4.0	4.4
Additional paid-in capital	5,505.7	6,136.9
Accumulated earnings	6,745.7	6,350.4
Accumulated other comprehensive earnings, net of taxes	676.8	1,112.7
Treasury shares, at cost	(0.1)	(0.1)
Total Liberty Global shareholders	12,934.0	13,606.2
Noncontrolling interests	(383.5)	(407.6)
Total equity	12,550.5	13,198.6
Total liabilities and equity	$ 47,340.2	$ 49,046.3

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

LIBERTY GLOBAL PLC
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2020	**2019**	**2020**	**2019**
	in millions, except per share amounts			
Revenue (notes 3, 4, 5 and 17)	$ 2,722.9	$ 2,850.4	$ 5,598.7	$ 5,718.4
Operating costs and expenses (exclusive of depreciation and amortization, shown separately below):				
Programming and other direct costs of services	715.0	786.3	1,570.1	1,586.7
Other operating (note 13)	401.1	417.8	821.2	837.2
Selling, general and administrative (**SG&A**) (note 13)	502.1	542.6	1,007.6	1,074.8
Depreciation and amortization	545.7	921.8	1,329.2	1,861.4
Impairment, restructuring and other operating items, net (note 14)	32.2	33.2	63.2	104.1
	2,196.1	2,701.7	4,791.3	5,464.2
Operating income	526.8	148.7	807.4	254.2
Non-operating income (expense):				
Interest expense	(281.7)	(363.6)	(595.0)	(730.9)
Realized and unrealized gains (losses) on derivative instruments, net (note 6)	(319.7)	152.9	917.6	70.1
Foreign currency transaction gains (losses), net	(478.0)	(27.0)	(86.3)	111.6
Realized and unrealized gains (losses) due to changes in fair values of certain investments and debt, net (notes 5, 7 and 9)	152.3	(138.7)	(377.5)	(146.9)
Losses on debt extinguishment, net (note 9)	(165.6)	(48.3)	(220.1)	(48.8)
Share of results of affiliates, net (note 5)	(105.4)	(69.3)	(72.0)	(140.2)
Other income, net	9.5	32.5	61.9	39.0
	(1,188.6)	(461.5)	(371.4)	(846.1)
Earnings (loss) from continuing operations before income taxes	(661.8)	(312.8)	436.0	(591.9)
Income tax benefit (expense) (note 11)	158.0	(26.8)	77.9	(54.6)
Earnings (loss) from continuing operations	(503.8)	(339.6)	513.9	(646.5)
Discontinued operations (note 4):				
Earnings from discontinued operations, net of taxes	—	315.5	—	638.1
Gain on disposal of discontinued operations, net of taxes	—	106.6	—	106.6
	—	422.1	—	744.7
Net earnings (loss)	(503.8)	82.5	513.9	98.2
Net earnings attributable to noncontrolling interests	(20.4)	(29.5)	(88.3)	(38.2)
Net earnings (loss) attributable to Liberty Global shareholders	$ (524.2)	$ 53.0	$ 425.6	$ 60.0
Basic earnings (loss) from continuing operations attributable to Liberty Global shareholders per share (note 15)	$ (0.86)	$ (0.50)	$ 0.69	$ (0.93)
Diluted earnings (loss) from continuing operations attributable to Liberty Global shareholders per share (note 15)	$ (0.86)	$ (0.50)	$ 0.68	$ (0.93)

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

LIBERTY GLOBAL PLC
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE EARNINGS (LOSS)
(unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2020	**2019**	**2020**	**2019**
	in millions			
Net earnings (loss)	$ (503.8)	$ 82.5	$ 513.9	$ 98.2
Other comprehensive earnings (loss), net of taxes:				
Continuing operations:				
Foreign currency translation adjustments	646.6	(25.5)	(424.3)	(141.5)
Pension-related adjustments and other	(16.0)	(0.4)	(18.3)	(0.8)
Other comprehensive earnings (loss) from continuing operations	630.6	(25.9)	(442.6)	(142.3)
Other comprehensive earnings from discontinued operations (note 4)	—	19.6	—	1.0
Other comprehensive earnings (loss)	630.6	(6.3)	(442.6)	(141.3)
Comprehensive earnings (loss)	126.8	76.2	71.3	(43.1)
Comprehensive earnings attributable to noncontrolling interests	(14.4)	(29.7)	(81.6)	(38.6)
Comprehensive earnings (loss) attributable to Liberty Global shareholders	$ 112.4	$ 46.5	$ (10.3)	$ (81.7)

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

LIBERTY GLOBAL PLC
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY
(unaudited)

	Liberty Global shareholders									
	Ordinary shares									
	Class A	Class B	Class C	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive earnings, net of taxes	Treasury shares, at cost	Total Liberty Global shareholders	Non-controlling interests	Total equity
	in millions									
Balance at January 1, 2019, before effect of accounting change	$ 2.0	$ 0.1	$ 5.3	$ 9,214.5	$ (5,172.2)	$ 631.8	$ (0.1)	$ 4,681.4	$ (533.1)	$ 4,148.3
Impact of ASU No. 2016-02, *Leases*	—	—	—	—	1.2	—	—	1.2	—	1.2
Balance at January 1, 2019, as adjusted for accounting change	2.0	0.1	5.3	9,214.5	(5,171.0)	631.8	(0.1)	4,682.6	(533.1)	4,149.5
Net earnings	—	—	—	—	7.0	—	—	7.0	8.7	15.7
Other comprehensive loss, net of taxes	—	—	—	—	—	(135.2)	—	(135.2)	0.2	(135.0)
Repurchases and cancellations of Liberty Global ordinary shares	—	—	(0.1)	(214.0)	—	—	—	(214.1)	—	(214.1)
Repurchases by Telenet of its outstanding shares	—	—	—	(68.2)	—	—	—	(68.2)	11.3	(56.9)
Share-based compensation (note 13)	—	—	—	55.6	—	—	—	55.6	—	55.6
Adjustments due to changes in subsidiaries' equity and other, net	—	—	—	32.4	—	—	—	32.4	2.4	34.8
Balance at March 31, 2019	2.0	0.1	5.2	9,020.3	(5,164.0)	496.6	(0.1)	4,360.1	(510.5)	3,849.6
Net earnings	—	—	—	—	53.0	—	—	53.0	29.5	82.5
Other comprehensive loss, net of taxes	—	—	—	—	—	(6.5)	—	(6.5)	0.2	(6.3)
Repurchases and cancellations of Liberty Global ordinary shares	—	—	(0.1)	(288.3)	—	—	—	(288.4)	—	(288.4)
Share-based compensation (note 13)	—	—	—	70.0	—	—	—	70.0	—	70.0
Repurchases by Telenet of its outstanding shares	—	—	—	(66.3)	—	—	—	(66.3)	9.1	(57.2)
Adjustments due to changes in subsidiaries' equity and other, net	—	—	—	11.6	—	—	—	11.6	8.9	20.5
Balance at June 30, 2019	$ 2.0	$ 0.1	$ 5.1	$ 8,747.3	$ (5,111.0)	$ 490.1	$ (0.1)	$ 4,133.5	$ (462.8)	$ 3,670.7

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

LIBERTY GLOBAL PLC
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY — (Continued)
(unaudited)

	Liberty Global shareholders									
	Ordinary shares									
	Class A	Class B	Class C	Additional paid-in capital	Accumulated earnings	Accumulated other comprehensive earnings, net of taxes	Treasury shares, at cost	Total Liberty Global shareholders	Non-controlling interests	Total equity
	in millions									
Balance at January 1, 2020, before effect of accounting change	$ 1.8	$ 0.1	$ 4.4	$ 6,136.9	$ 6,350.4	$ 1,112.7	$ (0.1)	$ 13,606.2	$ (407.6)	$ 13,198.6
Impact of ASU No. 2016-13 (note 2)	—	—	—	—	(30.3)	—	—	(30.3)	0.2	(30.1)
Balance at January 1, 2020, as adjusted for accounting change	1.8	0.1	4.4	6,136.9	6,320.1	1,112.7	(0.1)	13,575.9	(407.4)	13,168.5
Net earnings	—	—	—	—	949.8	—	—	949.8	67.9	1,017.7
Other comprehensive loss, net of taxes	—	—	—	—	—	(1,072.5)	—	(1,072.5)	(0.7)	(1,073.2)
Repurchases and cancellations of Liberty Global ordinary shares (note 12)	—	—	(0.1)	(224.3)	—	—	—	(224.4)	—	(224.4)
Share-based compensation (note 13)	—	—	—	46.1	—	—	—	46.1	—	46.1
Repurchases by Telenet of its outstanding shares	—	—	—	(45.3)	—	—	—	(45.3)	7.2	(38.1)
Adjustments due to changes in subsidiaries' equity and other, net	—	—	—	14.5	—	—	—	14.5	1.1	15.6
Balance at March 31, 2020	1.8	0.1	4.3	5,927.9	7,269.9	40.2	(0.1)	13,244.1	(331.9)	12,912.2
Net loss	—	—	—	—	(524.2)	—	—	(524.2)	20.4	(503.8)
Other comprehensive earnings, net of taxes	—	—	—	—	—	636.6	—	636.6	(6.0)	630.6
Repurchases and cancellations of Liberty Global ordinary shares (note 12)	—	—	(0.3)	(475.5)	—	—	—	(475.8)	—	(475.8)
Share-based compensation (note 13)	—	—	—	69.5	—	—	—	69.5	—	69.5
Adjustments due to changes in subsidiaries' equity and other, net	—	—	—	(16.2)	—	—	—	(16.2)	(66.0)	(82.2)
Balance at June 30, 2020	$ 1.8	$ 0.1	$ 4.0	$ 5,505.7	$ 6,745.7	$ 676.8	$ (0.1)	$ 12,934.0	$ (383.5)	$ 12,550.5

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

LIBERTY GLOBAL PLC
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	Six months ended June 30,	
	2020	2019
	in millions	
Cash flows from operating activities:		
Net earnings	$ 513.9	$ 98.2
Earnings from discontinued operations	—	744.7
Earnings (loss) from continuing operations	513.9	(646.5)
Adjustments to reconcile earnings (loss) from continuing operations to net cash provided by operating activities of continuing operations:		
Share-based compensation expense	139.0	154.3
Depreciation and amortization	1,329.2	1,861.4
Impairment, restructuring and other operating items, net	63.2	104.1
Amortization of deferred financing costs and non-cash interest	24.1	27.0
Realized and unrealized gains on derivative instruments, net	(917.6)	(70.1)
Foreign currency transaction losses (gains), net	86.3	(111.6)
Realized and unrealized losses due to changes in fair values of certain investments and debt, net	377.5	146.9
Losses on debt extinguishment, net	220.1	48.8
Share of results of affiliates, net	72.0	140.2
Deferred income tax expense (benefit)	95.0	(99.5)
Changes in operating assets and liabilities, net of the effects of acquisitions and dispositions	(410.8)	73.5
Net cash provided by operating activities of continuing operations	1,591.9	1,628.5
Net cash provided by operating activities of discontinued operations	—	829.2
Net cash provided by operating activities	1,591.9	2,457.7
Cash flows from investing activities:		
Cash paid for investments	(5,501.5)	(189.2)
Cash received from sale of investments	2,526.2	8.9
Capital expenditures, net	(649.6)	(632.9)
Proceeds received upon disposition of discontinued operations, net	—	145.8
Other investing activities, net	(9.5)	(15.3)
Net cash used by investing activities of continuing operations	(3,634.4)	(682.7)
Net cash used by investing activities of discontinued operations	—	(210.7)
Net cash used by investing activities	$ (3,634.4)	$ (893.4)

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

LIBERTY GLOBAL PLC
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS — (Continued)
(unaudited)

	Six months ended June 30,	
	2020	2019
	in millions	
Cash flows from financing activities:		
Repayments and repurchases of debt and finance lease obligations	$ (7,647.9)	$ (3,838.8)
Borrowings of debt	6,893.1	2,800.7
Repurchases of Liberty Global ordinary shares	(692.0)	(502.5)
Payment of financing costs and debt premiums	(226.4)	(51.0)
Net cash received related to derivative instruments	75.0	93.5
Repurchases by Telenet of its outstanding shares	(38.1)	(114.1)
Other financing activities, net	(85.0)	16.8
Net cash used by financing activities of continuing operations	(1,721.3)	(1,595.4)
Net cash used by financing activities of discontinued operations	—	(168.4)
Net cash used by financing activities	(1,721.3)	(1,763.8)
Effect of exchange rate changes on cash and cash equivalents and restricted cash	(10.4)	(5.0)
Net decrease in cash and cash equivalents and restricted cash:		
Continuing operations	(3,774.2)	(654.6)
Discontinued operations	—	450.1
Total	$ (3,774.2)	$ (204.5)
Cash and cash equivalents and restricted cash:		
Beginning of period	$ 8,180.9	$ 1,498.3
Net decrease	(3,774.2)	(204.5)
End of period	$ 4,406.7	$ 1,293.8
Cash paid for interest:		
Continuing operations	$ 662.5	$ 738.9
Discontinued operations	—	225.4
Total	$ 662.5	$ 964.3
Net cash paid for taxes:		
Continuing operations	$ 57.2	$ 260.6
Discontinued operations	—	131.0
Total	$ 57.2	$ 391.6
Details of end of period cash and cash equivalents and restricted cash:		
Cash and cash equivalents	$ 4,360.6	$ 1,269.0
Restricted cash included in assets held for sale	39.3	—
Restricted cash included in other current assets and other assets, net	6.8	22.9
Restricted cash included in current and long-term assets of discontinued operations	—	1.9
Total cash and cash equivalents and restricted cash	$ 4,406.7	$ 1,293.8

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

(1) Basis of Presentation

Liberty Global plc (**Liberty Global**) is a public limited company organized under the laws of England and Wales. In these notes, the terms "we," "our," "our company" and "us" may refer, as the context requires, to Liberty Global or collectively to Liberty Global and its subsidiaries. We are an international provider of broadband internet, video, fixed-line telephony and mobile communications services to residential customers and businesses in Europe.

Our continuing operations comprise businesses that provide residential and business-to-business (**B2B**) communications services in (i) the United Kingdom (**U.K.**) and Ireland through Virgin Media Inc. (**Virgin Media**), a wholly-owned subsidiary of Liberty Global, (ii) Belgium through Telenet Group Holding N.V. (**Telenet**), a 60.8%-owned subsidiary of Liberty Global, and (iii) Switzerland, Poland and Slovakia through various wholly-owned subsidiaries that we collectively refer to as "**UPC Holding**." In addition, we own a 50% noncontrolling interest in a 50:50 joint venture between Vodafone Group plc (**Vodafone**) and Liberty Global (the **VodafoneZiggo JV**), which provides residential and B2B communication services in the Netherlands.

Effective May 7, 2020, in connection with the pending formation of the U.K. JV (as defined in note 4), we began accounting for the U.K. JV Entities (as defined in note 4) as held for sale. Accordingly, the assets and liabilities of the U.K. JV Entities are included in assets held for sale and liabilities associated with assets held for sale, respectively, on our June 30, 2020 condensed consolidated balance sheet. Consistent with the applicable guidance, we have not reflected similar reclassifications in our condensed consolidated statements of operations or cash flows. For additional information, see note 4.

Through July 31, 2019, we provided residential and B2B communication services in (i) Germany through Unitymedia GmbH (**Unitymedia)** and (ii) Hungary, the Czech Republic and Romania through UPC Holding B.V. In addition, through May 2, 2019, we provided direct-to-home satellite (**DTH**) services to residential customers in Hungary, the Czech Republic, Romania and Slovakia through a Luxembourg-based subsidiary of UPC Holding B.V. that we refer to as "**UPC DTH**." Accordingly, in the accompanying condensed consolidated statements of operations and cash flows, our operations in Germany, Romania, Hungary and the Czech Republic and the operations of UPC DTH are presented as discontinued operations for the three and six months ended June 30, 2019. For additional information regarding these dispositions, see note 4.

Unless otherwise indicated, the amounts presented in these notes relate only to our continuing operations.

Our unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (**GAAP**) and with the instructions to Form 10-Q and Article 10 of Regulation S-X for interim financial information. Accordingly, these financial statements do not include all of the information required by GAAP or Securities and Exchange Commission rules and regulations for complete financial statements. In the opinion of management, these financial statements reflect all adjustments (consisting of normal recurring adjustments) necessary for a fair presentation of the results of operations for the interim periods presented. The results of operations for any interim period are not necessarily indicative of results for the full year. These unaudited condensed consolidated financial statements should be read in conjunction with our 2019 consolidated financial statements and notes thereto included in our 2019 Annual Report on Form 10-K, as amended (our **10-K**).

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, lease terms, useful lives of long-lived assets, share-based compensation and actuarial liabilities associated with certain benefit plans. Actual results could differ from those estimates.

Unless otherwise indicated, ownership percentages and convenience translations into United States (**U.S.**) dollars are calculated as of June 30, 2020.

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

(2) <u>Accounting Changes and Recent Accounting Pronouncements</u>

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 consolidated financial statements.

ASU 2019-02

In March 2019, the FASB issued ASU No. 2019-02, *Improvements to Accounting for Costs of Films and License Agreements for Program Materials* (**ASU 2019-02**), which aligns the accounting for production costs of an episodic television series with the accounting for production costs of films. ASU 2019-02 removes the existing constraint that restricts capitalization of production costs to contracted revenue for episodic television series. The amended guidance also permits entities to test a film or license agreement for impairment at the film group level, addresses cash flow classification and provides new disclosure requirements. We adopted ASU 2019-02 on January 1, 2020 on a prospective basis. The adoption of ASU 2019-02 did not have a significant impact on our consolidated 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 $30.3 million to our accumulated earnings related to increases to our allowances for certain trade and notes receivable.

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, 2020, including interim periods within those fiscal years, with early adoption permitted. We are currently evaluating the effect that ASU 2019-12 will have on our consolidated financial statements.

(3) Revenue Recognition and Related Costs

Contract Balances

The timing of our recognition of revenue may differ from the timing of invoicing our customers. We record a trade receivable when we have transferred goods or services to a customer but have not yet received payment. Our trade receivables are reported net of an allowance for doubtful accounts. Such allowance aggregated $21.4 million and $42.8 million at June 30, 2020 and December 31, 2019, respectively.

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 $13.7 million and $30.6 million as of June 30, 2020 and December 31, 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 condensed consolidated 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 $332.8 million and $867.1 million as of June 30, 2020 and December 31, 2019, respectively. The decrease in deferred revenue for the six months ended June 30, 2020 is primarily due to the net effect of (a) the recognition of $587.0 million of revenue that was included in our deferred revenue balance at December 31, 2019, (b) $459.6 million of deferred revenue related to the U.K. JV Entities that was reclassified to liabilities associated with assets held for sale and (c) advanced billings in certain markets. The long-term portions of our deferred revenue balances are included within other long-term liabilities on our condensed consolidated balance sheets.

Contract Costs

Our aggregate assets associated with incremental costs to obtain and fulfill our contracts were $22.3 million and $92.6 million at June 30, 2020 and December 31, 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 condensed consolidated balance sheets. We amortized $31.9 million and $69.6 million during the three and six months ended June 30, 2020, respectively, and $24.3 million and $48.7 million during the three and six months ended June 30, 2019, respectively, to operating costs and expenses related to these assets.

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.

(4) Acquisitions and Dispositions

Pending Joint Venture Transaction

On May 7, 2020, we 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's operations in the U.K. (the **U.K. JV Entities**) with Telefonica's mobile business in the U.K. to create a nationwide integrated communications provider. In our segment presentation, the U.K. JV Entities are included in our U.K./Ireland segment.

In connection with the transaction, we expect to complete certain recapitalization financings prior to closing. The outstanding third-party debt associated with the U.K. JV Entities will be contributed in full to the U.K. JV, and Telefonica's business in the U.K. will be contributed on a debt-free basis. The transaction will not trigger a change of control under Virgin Media's debt agreements.

Effectively all of Liberty Global's U.K. tax capital allowances and tax loss carryforwards, which primarily resulted from prior infrastructure investments, reside in the U.K. JV Entities and, therefore, will be available for use solely within the U.K. JV upon the closing of the transaction.

At closing, we expect to pay Telefonica an equalization payment estimated to be approximately £2.5 billion ($3.1 billion), as adjusted for debt and debt-like items and certain working capital and other adjustments. After taking into account the recapitalizations and the equalization payment, Liberty Global is expected to receive an estimated £1.4 billion ($1.7 billion) in total, including approximately £800 million ($1.0 billion) from the recapitalization of Virgin Media's retained and 100.0% owned Ireland business.

Pursuant to the framework agreement that we expect to enter into in connection with the closing of the U.K. JV, our company and Telefonica will provide certain services to the U.K. JV. The annual charges to the U.K. JV will ultimately depend on the actual level of services required by the U.K. JV.

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). Our company will retain the cash generated by the operations of the U.K. JV Entities through the closing date and is required to fund any deficit in the associated defined pension plans that arise from the next triennial actuarial valuation.

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. Following completion of the transaction, we expect to account for our 50% interest in the U.K. JV as an equity method investment.

Effective with the signing of the Contribution Agreement, we began accounting for the U.K. JV Entities as held for sale. Accordingly, we ceased to depreciate or amortize the long-lived assets of the U.K. JV Entities. We have not presented the U.K. JV Entities as a discontinued operation as this transaction does not represent a strategic shift that will have a major effect on our financial results or operations. The carrying amounts of the major classes of assets and liabilities that are classified as held for sale at June 30, 2020 are summarized below (in millions):

Assets:		
Current assets (a)	$	1,194.3
Property and equipment, net		7,143.3
Goodwill		7,180.9
Other assets, net		3,512.0
Total assets	$	19,030.5
Liabilities:		
Current portion of debt and finance lease obligations	$	2,318.6
Other accrued and current liabilities		1,775.5
Long-term debt and finance lease obligations		13,108.6
Other long-term liabilities		930.6
Total liabilities	$	18,133.3

____

(a) Amount does not include the cash and cash equivalents of the U.K. JV Entities, as such cash and cash equivalents will be retained by Liberty Global upon the formation of the U.K. JV and are therefore not classified as held for sale.

Acquisition

De Vijver Media. Prior to June 3, 2019, Telenet owned a 50.0% equity method investment in De Vijver Media NV (**De Vijver Media**), which provides content production, broadcasting and advertising services in Belgium. On June 3, 2019, Telenet acquired the remaining 50.0% ownership interest in De Vijver Media (the **De Vijver Media Acquisition**) for cash consideration of €52.5 million ($58.9 million at the transaction date) after post-closing adjustments.

Dispositions

Vodafone Disposal Group. On July 31, 2019, we completed the sale of our operations in Germany, Romania, Hungary and the Czech Republic to Vodafone. The operations of Germany, Romania, Hungary and the Czech Republic are collectively referred to herein as the "**Vodafone Disposal Group**." After considering debt and working capital adjustments (including cash disposed) and €183.7 million ($205.8 million at the transaction date) of cash paid by our company to settle centrally-held vendor financing obligations associated with the Vodafone Disposal Group, we received net cash proceeds of €10.0 billion ($11.1 billion at the applicable rates). Pursuant to the agreement underlying the sale of the Vodafone Disposal Group, we transferred cash to fund certain third-party escrow accounts (the **Vodafone Escrow Accounts**) pending the fulfillment by our company of certain terms of the agreement. The current and long-term portions of the receivables associated with the Vodafone Escrow Accounts are included in "other current assets" and "other assets, net", respectively, on our condensed consolidated balance sheets. At June 30, 2020 and December 31, 2019, the aggregate balance of the Vodafone Escrow Accounts was $295.2 million.

In connection with the sale of the Vodafone Disposal Group, we have agreed to provide certain transitional services to Vodafone for a period of up to four years. These services principally comprise network and information technology-related functions. During the six months ended June 30, 2020, we recorded revenue of $76.8 million associated with these transitional services.

For information regarding certain tax indemnities we provided in connection with the sale of the Vodafone Disposal Group, see note 16.

UPC DTH. On May 2, 2019, we completed the sale of UPC DTH to M7 Group (**M7**). After considering debt and working capital adjustments (including cash disposed), we received net cash proceeds of €128.9 million ($144.1 million at the applicable dates).

In connection with the sale of UPC DTH, we have agreed to provide certain transitional services to M7 for a period of up to two years. These services principally comprise network and information technology-related functions. During the six months ended June 30, 2020 and 2019, we recorded revenue of $1.0 million and $0.4 million, respectively, associated with these transitional services.

Presentation of Discontinued Operations

The operations of the Vodafone Disposal Group and UPC DTH are presented as discontinued operations in our condensed consolidated statements of operations and cash flows for the three and six months ended June 30, 2019 and are summarized in the following table. These amounts exclude intercompany revenue and expenses that are eliminated within our condensed consolidated statement of operations. For information regarding our basic and diluted weighted average ordinary shares outstanding, see note 15.

	Vodafone Disposal Group	UPC DTH (a)	Total
	in millions, except per share amounts		
Three months ended June 30, 2019			
Revenue	$ 868.9	$ 9.0	$ 877.9
Operating income	$ 514.0	$ 2.1	$ 516.1
Earnings before income taxes	$ 435.2	$ 2.2	$ 437.4
Income tax expense	(121.9)	—	(121.9)
Net earnings attributable to Liberty Global shareholders	$ 313.3	$ 2.2	$ 315.5
Basic and diluted earnings from discontinued operations attributable to Liberty Global shareholders per share			$ 0.43
Six months ended June 30, 2019			
Revenue	$ 1,727.6	$ 36.7	$ 1,764.3
Operating income	$ 1,009.5	$ 10.7	$ 1,020.2
Earnings before income taxes	$ 867.3	$ 9.5	$ 876.8
Income tax expense	(238.7)	—	(238.7)
Net earnings attributable to Liberty Global shareholders	$ 628.6	$ 9.5	$ 638.1
Basic and diluted earnings from discontinued operations attributable to Liberty Global shareholders per share			$ 0.86

____

(a) Includes the operating results of UPC DTH through May 2, 2019, the date UPC DTH was sold.

(5) Investments

The details of our investments are set forth below:

Accounting Method	June 30, 2020	December 31, 2019
	in millions	
Equity (a):		
Long-term:		
VodafoneZiggo JV (b)	$ 3,109.6	$ 3,174.1
All3Media Group (**All3Media**)	121.7	172.8
Formula E Holdings Ltd (**Formula E**)	106.3	105.2
Other	123.9	40.7
Total — equity	3,461.5	3,492.8
Fair value:		
Short-term:		
Separately-managed accounts (**SMAs**) (c)	2,650.8	—
Long-term:		
ITV plc (**ITV**) — subject to re-use rights (d)	368.4	798.1
SMAs (c)	335.7	—
ITI Neovision S.A. **(ITI Neovision)**	115.5	122.4
Lions Gate Entertainment Corp (**Lionsgate**) (e)	47.1	68.0
Other	403.2	300.7
Total — fair value	3,920.7	1,289.2
Total investments (f)	$ 7,382.2	$ 4,782.0
Short-term investments	$ 2,650.8	$ —
Long-term investments	$ 4,731.4	$ 4,782.0

____

(a) Our equity method investments are originally recorded at cost and are adjusted to recognize our share of net earnings or losses of the affiliates as they occur rather than as dividends or other distributions are received, with our recognition of losses generally limited to the extent of our investment in, and advances and commitments to, the investee. At June 30, 2020 and December 31, 2019, the aggregate carrying amounts of our equity method investments exceeded our proportionate share of the respective investee's net assets by $968.2 million and $1,041.0 million, respectively, which include amounts associated with the VodafoneZiggo JV Receivable, as defined below, and amounts we are owed under a long-term note receivable from All3Media.

(b) Amounts include a euro-denominated note receivable (the **VodafoneZiggo JV Receivable**) with a principal amount of $787.0 million and $786.1 million, respectively, due from a subsidiary of the VodafoneZiggo JV to a subsidiary of Liberty Global. The VodafoneZiggo JV Receivable bears interest at 5.55% and was amended in June 2020 to extend the final maturity date from January 16, 2028 to December 31, 2030. During the six months ended June 30, 2020, interest accrued on the VodafoneZiggo JV Receivable was $21.6 million, all of which has been cash settled.

(c) Represents investments held under SMAs, which are maintained by investment managers acting as agents on our behalf. We classify, measure and report these investments, the composition of which may change from time to time, based on the underlying nature and characteristics of each security held under the SMAs. As of June 30, 2020, all of our investments held under SMAs were classified as available-for-sale debt securities, as further described under *Fair Value Investments — Debt Securities* below.

(d) The aggregate purchase price paid to acquire our investment in ITV was financed through borrowings under secured borrowing agreements (the **ITV Collar Loan**). All of the ITV shares we hold are subject to the ITV Collar (as defined in note 6) and pledged as collateral under the ITV Collar Loan. As of June 30, 2020, the fair value of the ITV Collar was a net asset of $969.9 million and principal borrowings outstanding under the ITV Collar Loan were $1,339.9 million.

(e) In connection with our investment in Lionsgate, we have entered into (i) the Lionsgate Forward (as defined in note 6) and (ii) a related borrowing agreement (the **Lionsgate Loan**). As of June 30, 2020, the fair value of the Lionsgate Forward was a net asset of $43.7 million and principal borrowings outstanding under the Lionsgate Loan were $55.3 million.

(f) The purchase and sale of investments are presented on a gross basis in our statement of cash flows, including those made by investment managers acting as agents on our behalf.

Fair Value Investments

The following table sets forth the details of our realized and unrealized gains (losses) due to changes in fair values of certain investments, net:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
ITV	$ 42.2	$ (111.8)	$ (429.7)	$ (87.8)
Lionsgate	8.5	(17.2)	(20.9)	(17.8)
SMAs	16.6	—	5.9	—
ITI Neovision	6.1	5.3	(1.9)	0.5
Other	68.2	(4.6)	60.2	(19.1)
Total	$ 141.6	$ (128.3)	$ (386.4)	$ (124.2)

Debt Securities

We determine the appropriate classification of our investments in debt securities at the time of purchase, and reevaluate such determinations at each balance sheet date. All of our debt securities are classified as available for sale and are reported at fair value, and any changes in fair value are reported in realized and unrealized gains or losses due to changes in fair value of certain investments and debt, net, in our consolidated statement of operations. In addition, any interest received on our debt securities is reported as interest income in our consolidated statement of operations. All costs directly associated with the acquisition of debt securities are expensed as incurred. We classify our government bonds within Level 1 of the fair value hierarchy and our corporate debt securities, commercial paper and certificates of deposit within Level 2 of the fair value hierarchy. For further information regarding our fair value measurements, see note 7.

The following table sets forth the details of our debt securities as of and for the six months ended June 30, 2020:

	Amortized cost basis	Unrealized gains	Fair value
		in millions	
Commercial paper	$ 986.8	$ 1.2	$ 988.0
Government bonds	900.0	0.3	900.3
Corporate debt securities	730.5	3.6	734.1
Certificates of deposit	332.9	0.1	333.0
Other debt securities	31.1	—	31.1
Total debt securities	$ 2,981.3	$ 5.2	$ 2,986.5

During the second quarter of 2020, we received proceeds from the sale of debt securities of $2.5 billion, the majority of which were reinvested in new debt securities held under SMAs. The sale of debt securities during the second quarter of 2020 resulted in a realized net gain of $0.7 million.

The fair value of our debt securities as of June 30, 2020 by contractual maturity are shown below (in millions):

Due in one year or less	$	2,650.8
Due in one to five years		328.0
Due in five to ten years		7.7
Total (a)	$	2,986.5

____

(a) The weighted average life of our total debt securities was 0.6 years as of June 30, 2020.

Equity Method Investments

The following table sets forth the details of our share of results of affiliates, net:

	Three months ended June 30,		Six months ended June 30,	
	2020	**2019**	**2020**	**2019**
	in millions			
All3Media	$ (14.9)	$ (19.0)	$ (39.8)	$ (22.7)
VodafoneZiggo JV (a)	(89.2)	(40.0)	(28.1)	(102.3)
Formula E	1.9	(9.5)	0.7	(9.9)
Other	(3.2)	(0.8)	(4.8)	(5.3)
Total	$ (105.4)	$ (69.3)	$ (72.0)	$ (140.2)

____

(a) Amounts include the net effect of (i) 100% of the interest income earned on the VodafoneZiggo JV Receivable and (ii) our 50% share of the results of operations of the VodafoneZiggo JV.

VodafoneZiggo JV. Pursuant to an agreement (the **Framework Agreement**), Liberty Global provides certain services to the VodafoneZiggo JV (collectively, the **JV Services**). The JV Services provided by Liberty Global consist primarily of (i) technology and other services and (ii) capital-related expenditures for assets that will be used by, or will otherwise benefit, the VodafoneZiggo JV. Liberty Global charges both fixed and usage-based fees to the VodafoneZiggo JV for the JV Services provided during the term of the Framework Agreement. We recorded revenue from the VodafoneZiggo JV of $41.4 million and $45.7 million during the three months ended June 30, 2020 and 2019, respectively, and $88.1 million and $90.0 million during the six months ended June 30, 2020 and 2019, respectively, primarily related to (a) the JV Services and (b) sales of customer premises equipment at a mark-up. In addition, during the six months ended June 30, 2019, we purchased certain assets on the VodafoneZiggo JV's behalf with an aggregate cost of $9.2 million. At June 30, 2020 and December 31, 2019, $50.3 million and $19.3 million, respectively, were due from the VodafoneZiggo JV related to the aforementioned transactions. The amounts due from the VodafoneZiggo JV, which are periodically cash settled, are included in other current assets on our condensed consolidated balance sheets.

The summarized results of operations of the VodafoneZiggo JV are set forth below:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Revenue	$ 1,081.6	$ 1,084.5	$ 2,178.7	$ 2,178.4
Loss before income taxes	$ (151.8)	$ (134.5)	$ (26.9)	$ (323.3)
Net loss	$ (185.4)	$ (104.0)	$ (85.7)	$ (254.3)

(6) Derivative Instruments

In general, we enter into derivative instruments to protect against (i) increases in the interest rates on our variable-rate debt, (ii) foreign currency movements, particularly with respect to borrowings that are denominated in a currency other than the functional currency of the borrowing entity, and (iii) decreases in the market prices of certain publicly traded securities that we own. In this regard, through our subsidiaries, we have entered into various derivative instruments to manage interest rate exposure and foreign currency exposure primarily with respect to the U.S. dollar (**$**), the euro (**€**), the British pound sterling (**£**), the Swiss franc (**CHF**) and the Polish zloty (**PLN**). 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 condensed consolidated statements of operations.

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

	June 30, 2020			December 31, 2019		
	Current	Long-term	Total	Current	Long-term	Total
	in millions					
Assets (a):						
Cross-currency and interest rate derivative contracts (b)	$ 127.8	$ 428.9	$ 556.7	$ 270.8	$ 886.4	$ 1,157.2
Equity-related derivative instruments (c)	446.2	594.8	1,041.0	55.2	608.2	663.4
Foreign currency forward and option contracts	1.7	0.6	2.3	4.6	1.4	6.0
Other	0.3	0.2	0.5	0.5	0.4	0.9
Total	$ 576.0	$ 1,024.5	$ 1,600.5	$ 331.1	$ 1,496.4	$ 1,827.5
Liabilities (a):						
Cross-currency and interest rate derivative contracts (b)	$ 161.5	$ 709.2	$ 870.7	$ 389.2	$ 1,192.3	$ 1,581.5
Foreign currency forward and option contracts	2.5	—	2.5	1.2	—	1.2
Other	0.1	—	0.1	—	—	—
Total	$ 164.1	$ 709.2	$ 873.3	$ 390.4	$ 1,192.3	$ 1,582.7

____

(a) Our current derivative liabilities, long-term derivative assets and long-term derivative liabilities are included in other current and accrued liabilities, other assets, net, and other long-term liabilities, respectively, on our condensed consolidated 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 within each of our subsidiary borrowing groups (as defined and described in note 9). The changes in the credit risk valuation adjustments associated with our cross-currency and interest rate derivative contracts resulted in a net gain (loss) of $5.4 million and ($12.6 million)

during the three months ended June 30, 2020 and 2019, respectively, and a net gain (loss) of $71.7 million and ($70.7 million) during the six months ended June 30, 2020 and 2019, respectively. These amounts are included in realized and unrealized gains (losses) on derivative instruments, net, in our condensed consolidated statements of operations. For further information regarding our fair value measurements, see note 7.

(c) Our equity-related derivative instruments primarily include the fair value of (i) the share collar (the **ITV Collar**) with respect to ITV shares held by our company and (ii) the variable prepaid forward transaction (the **Lionsgate Forward**) with respect to 833,333 of our voting and 833,334 of our non-voting Lionsgate shares. The fair values of the ITV Collar and the Lionsgate Forward do not include credit risk valuation adjustments as we assume that any losses incurred by our company in the event of nonperformance by the respective counterparty would be, subject to relevant insolvency laws, fully offset against amounts we owe to such counterparty pursuant to the related secured borrowing arrangements.

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

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Cross-currency and interest rate derivative contracts	$ (309.4)	$ 69.1	$ 532.9	$ (18.2)
Equity-related derivative instruments:				
ITV Collar	(33.1)	86.0	350.3	99.8
Lionsgate Forward	(1.8)	8.8	6.5	9.6
Other	22.1	0.2	20.8	0.4
Total equity-related derivative instruments	(12.8)	95.0	377.6	109.8
Foreign currency forward and option contracts	1.7	(11.6)	7.4	(22.2)
Other	0.8	0.4	(0.3)	0.7
Total	$ (319.7)	$ 152.9	$ 917.6	$ 70.1

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

	Six months ended June 30,	
	2020	2019
	in millions	
Operating activities	$ 23.1	$ 165.1
Financing activities	75.0	93.5
Total	$ 98.1	$ 258.6

Counterparty Credit Risk

We are exposed to the risk that the counterparties to the derivative instruments of our subsidiary borrowing groups 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. With the exception of a limited number of instances where we have required a counterparty to post collateral, neither party has posted collateral under the derivative instruments of our subsidiary borrowing groups. At June 30, 2020, our exposure to counterparty credit risk included derivative assets with an aggregate fair value of $103.3 million.

Details of our Derivative Instruments

The details of our derivative contracts are presented below for the named entity and its subsidiaries, unless otherwise noted.

Cross-currency Derivative Contracts

We generally match the denomination of our subsidiaries' 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 June 30, 2020, substantially all of our debt was either directly or synthetically matched to the applicable functional currencies of the underlying operations. The following table sets forth the total notional amounts and the related weighted average remaining contractual lives of our cross-currency swap contracts at June 30, 2020:

	Notional amount due from counterparty		Notional amount due to counterparty			Weighted average remaining life
	in millions					in years
UPC Holding	$	360.0	€	267.9		5.3
	$	1,600.0	CHF	1,476.1	(a)	5.9
	€	2,618.3	CHF	2,941.4	(a)	4.2
	€	707.0	PLN	2,999.5		3.9
	CHF	740.0	€	701.1		2.5
Telenet	$	3,940.0	€	3,489.6	(a)	6.6
	€	45.2	$	50.0	(b)	4.6

____

(a) Includes certain derivative instruments that are "forward-starting," such that the initial exchange occurs at a date subsequent to June 30, 2020. These instruments are typically entered into in order to extend existing hedges without the need to amend existing contracts.

(b) Includes certain derivative instruments that 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. At June 30, 2020, the total U.S. dollar equivalent of the notional amount of these derivative instruments was $50.8 million.

Interest Rate Swap Contracts

The following table sets forth the total U.S. dollar equivalents of the notional amounts and the related weighted average remaining contractual lives of our interest rate swap contracts at June 30, 2020:

	Pays fixed rate		Receives fixed rate	
	Notional amount	Weighted average remaining life	Notional amount	Weighted average remaining life
	in millions	in years	in millions	in years
UPC Holding	$ 10,323.0 (a)	4.0	$ 4,617.6	5.4
Telenet	$ 3,243.4 (a)	4.7	$ 1,604.5	3.2
Other	$ 94.7	3.5	$ —	—

____

(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 June 30, 2020, the option expiration period on each of our swaptions had expired.

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. The following table sets forth the total U.S. dollar equivalents of the notional amounts and related weighted average remaining contractual lives of our basis swap contracts at June 30, 2020:

	Notional amount due from counterparty	Weighted average remaining life
	in millions	in years
UPC Holding	$ 700.0	0.5
Telenet	$ 2,295.0	0.5
Other	$ 94.7	0.5

Interest Rate Caps, Floors and Collars

From time to time, we enter into interest rate cap, floor and collar agreements. Purchased interest rate caps and collars lock in a maximum interest rate if variable rates rise, but also allow our company to benefit, to a limited extent in the case of collars, from declines in market rates. 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 June 30, 2020, we had no interest rate collar agreements, and the total U.S. dollar equivalents of the notional amounts of our purchased interest rate caps and floors were $449.8 million and $1,248.1 million, respectively.

Impact of Derivative Instruments on Borrowing Costs

The impact of the derivative instruments that mitigate our foreign currency and interest rate risk, as described above, on our borrowing costs is as follows:

	Increase to borrowing costs at June 30, 2020 (a)
UPC Holding	0.25%
Telenet	0.26%
Total increase to borrowing costs	0.23%

____

(a) Represents the effect of derivative instruments in effect at June 30, 2020 and does not include forward-starting derivative instruments or swaptions.

Foreign Currency Forwards and Options

Certain of our subsidiaries enter into foreign currency forward and option contracts with respect to non-functional currency exposure. As of June 30, 2020, the total U.S. dollar equivalent of the notional amounts of our foreign currency forward and option contracts was $336.0 million.

(7) Fair Value Measurements

We use the fair value method to account for (i) certain of our investments, (ii) our derivative instruments and (iii) certain instruments that we classify as debt. The reported fair values of these investments and instruments as of June 30, 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.

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. Our credit risk valuation adjustments with respect to our cross-currency and interest rate swaps are quantified and further explained in note 6.

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. During the six months ended June 30, 2020, we did not perform any significant nonrecurring

fair value measurements. We performed a nonrecurring fair value measurement in connection with the De Vijver Media Acquisition during the six months ended June 30, 2019.

For additional information concerning our fair value measurements, see note 9 to the consolidated financial statements included in our 10-K.

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

		Fair value measurements at June 30, 2020 using:		
Description	**June 30, 2020**	**Quoted prices in active markets for identical assets (Level 1)**	**Significant other observable inputs (Level 2)**	**Significant unobservable inputs (Level 3)**
		in millions		
Assets:				
Derivative instruments:				
Cross-currency and interest rate derivative contracts	$ 556.7	$ —	$ 556.7	$ —
Equity-related derivative instruments	1,041.0	—	—	1,041.0
Foreign currency forward and option contracts	2.3	—	2.3	—
Other	0.5	—	0.5	—
Total derivative instruments	1,600.5	—	559.5	1,041.0
Investments:				
SMAs	2,986.5	878.0	2,108.5	—
Other investments	934.2	415.5	—	518.7
Total investments	3,920.7	1,293.5	2,108.5	518.7
Total assets	$ 5,521.2	$ 1,293.5	$ 2,668.0	$ 1,559.7
Liabilities:				
Derivative instruments:				
Cross-currency and interest rate derivative contracts	$ 870.7	$ —	$ 870.7	$ —
Foreign currency forward and option contracts	2.5	—	2.5	—
Other	0.1	—	0.1	—
Total liabilities	$ 873.3	$ —	$ 873.3	$ —

Description	December 31, 2019	Fair value measurements at December 31, 2019 using: Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
		in millions		
Assets:				
Derivative instruments:				
Cross-currency and interest rate derivative contracts	$ 1,157.2	$ —	$ 1,157.2	$ —
Equity-related derivative instruments	663.4	—	—	663.4
Foreign currency forward and option contracts	6.0	—	6.0	—
Other	0.9	—	0.9	—
Total derivative instruments	1,827.5	—	1,164.1	663.4
Investments	1,289.2	869.2	—	420.0
Total assets	$ 3,116.7	$ 869.2	$ 1,164.1	$ 1,083.4
Liabilities:				
Derivative instruments:				
Cross-currency and interest rate derivative contracts	$ 1,581.5	$ —	$ 1,561.6	$ 19.9
Foreign currency forward and option contracts	1.2	—	1.2	—
Total derivative instruments	1,582.7	—	1,562.8	19.9
Debt	45.6	—	45.6	—
Total liabilities	$ 1,628.3	$ —	$ 1,608.4	$ 19.9

A reconciliation of the beginning and ending balances of our assets and liabilities measured at fair value on a recurring basis using significant unobservable, or Level 3, inputs is as follows:

	Investments	Cross-currency, interest rate and foreign currency derivative contracts	Equity-related derivative instruments	Total
		in millions		
Balance of net assets (liabilities) at January 1, 2020	$ 420.0	$ (19.9)	$ 663.4	$ 1,063.5
Gains included in loss from continuing operations (a):				
Realized and unrealized gains (losses) on derivative instruments, net	—	(1.9)	377.6	375.7
Realized and unrealized gains due to changes in fair values of certain investments and debt, net	58.2	—	—	58.2
Additions	39.9	—	—	39.9
Reclassification of liability to held for sale (b)	—	11.5	—	11.5
Transfers out of Level 3	—	8.8	—	8.8
Foreign currency translation adjustments and other, net	0.6	1.5	—	2.1
Balance of net assets at June 30, 2020	$ 518.7	$ —	$ 1,041.0	$ 1,559.7

____

(a) Most of these net gains relate to assets and liabilities that we continue to carry on our condensed consolidated balance sheet as of June 30, 2020.

(b) Represents the reclassification of the derivative liabilities associated with the U.K. JV Entities as of June 30, 2020 to liabilities associated with assets held for sale. For information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4.

(8) Long-lived Assets

Property and Equipment, Net

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

	June 30, 2020	December 31, 2019
	in millions	
Distribution systems	$ 8,439.4	$ 19,007.2
Customer premises equipment	1,618.1	4,294.7
Support equipment, buildings and land	3,464.6	5,344.3
Total property and equipment, gross	13,522.1	28,646.2
Accumulated depreciation	(7,349.5)	(14,802.8)
Total property and equipment, net	$ 6,172.6	$ 13,843.4

During the six months ended June 30, 2020 and 2019, we recorded non-cash increases to our property and equipment related to vendor financing arrangements (including amounts related to the U.K. JV Entities) of $702.9 million and $926.3 million, respectively, which exclude related value-added taxes (**VAT**) of $118.7 million and $148.7 million, respectively, that were also financed under these arrangements.

Goodwill

Changes in the carrying amount of our goodwill during the six months ended June 30, 2020 are set forth below:

	January 1, 2020	Acquisitions and related adjustments	Reclassification to assets held for sale (a)	Foreign currency translation adjustments and other	June 30, 2020
			in millions		
U.K./Ireland	$ 7,965.4	$ —	$ (7,180.9)	$ (512.0)	$ 272.5
Switzerland	2,953.2	2.8	—	60.3	3,016.3
Belgium	2,576.1	(0.6)	—	(22.1)	2,553.4
Central and Eastern Europe	557.4	—	—	(20.4)	537.0
Total	$ 14,052.1	$ 2.2	$ (7,180.9)	$ (494.2)	$ 6,379.2

____

(a) Represents goodwill of the U.K. JV Entities. For additional information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4.

If, among other factors, (i) our equity values were to decline or (ii) the adverse impacts of economic, competitive, regulatory or other factors (including with respect to the recent outbreak of a novel strain of the coronavirus (**COVID-19**)) were to cause our

results of operations or cash flows to be worse than anticipated, we could conclude in future periods that impairment charges are required in order to reduce the carrying values of our goodwill and, to a lesser extent, other long-lived assets. Any such impairment charges could be significant.

Intangible Assets Subject to Amortization, Net

The details of our intangible assets subject to amortization, which are included in other assets, net, on our condensed consolidated balance sheets, are set forth below:

	June 30, 2020			December 31, 2019		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
	in millions					
Customer relationships	$ 280.9	$ (165.6)	$ 115.3	$ 3,653.9	$ (3,363.6)	$ 290.3
Other	568.7	(302.6)	266.1	563.7	(281.9)	281.8
Total	$ 849.6	$ (468.2)	$ 381.4	$ 4,217.6	$ (3,645.5)	$ 572.1

(9) Debt

The U.S. dollar equivalents of the components of our debt are as follows:

	June 30, 2020			Principal amount	
	Weighted average interest rate (a)	Unused borrowing capacity (b)			
		Borrowing currency	U.S. $ equivalent	June 30, 2020	December 31, 2019
	in millions				
Telenet Credit Facility (c)	2.21%	€ 555.0	$ 624.0	$ 3,543.0	$ 3,541.4
Telenet Senior Secured Notes	4.74%	—	—	1,607.1	1,673.7
UPCB SPE Notes	3.80%	—	—	1,281.8	2,420.1
UPC Holding Bank Facility (d)	2.46%	€ 500.0	562.2	1,149.7	—
UPC Holding Senior Notes	4.60%	—	—	1,203.1	1,202.3
Vendor financing (e)(f)	2.54%	—	—	1,358.7	1,374.3
ITV Collar Loan	0.90%	—	—	1,339.9	1,435.5
Virgin Media debt	—	(f)	(f)	(f)	15,693.5
Other (f)(g)	5.59%	—	—	294.2	307.3
Total debt before deferred financing costs, discounts and premiums (h)	2.97%		$ 1,186.2	$ 11,777.5	$ 27,648.1

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

	June 30, 2020	December 31, 2019
	in millions	
Total debt before deferred financing costs, discounts and premiums	$ 11,777.5	$ 27,648.1
Deferred financing costs, discounts and premiums, net	(48.3)	(82.7)
Total carrying amount of debt	11,729.2	27,565.4
Finance lease obligations (f) (note 10)	514.4	617.1
Total debt and finance lease obligations	12,243.6	28,182.5
Current maturities of debt and finance lease obligations	(1,867.7)	(3,877.2)
Long-term debt and finance lease obligations	$ 10,375.9	$ 24,305.3

____

(a) Represents the weighted average interest rate in effect at June 30, 2020 for all borrowings outstanding (excluding those of the U.K. JV Entities) 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, our weighted average interest rate on our aggregate variable- and fixed-rate indebtedness was 3.31% at June 30, 2020. For information regarding our derivative instruments, see note 6.

(b) Unused borrowing capacity represents the maximum availability under the applicable facility at June 30, 2020 without regard to covenant compliance calculations or other conditions precedent to borrowing. At June 30, 2020, based on the most restrictive applicable leverage covenants, the full amount of unused borrowing capacity was available to be borrowed under each of the respective subsidiary facilities, and based on the most restrictive applicable leverage-based restricted payment tests, there were no restrictions on the respective subsidiary's ability to make loans or distributions from this availability to Liberty Global or its subsidiaries or other equity holders. Upon completion of the relevant June 30, 2020 compliance reporting requirements, we expect the full amount of unused borrowing capacity will continue to be available under each of the respective subsidiary facilities, 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 June 30, 2020, or the impact of additional amounts that may be available to borrow, loan or distribute under certain defined baskets within each respective facility.

(c) Unused borrowing capacity under the Telenet Credit Facility comprises (i) €510.0 million ($573.4 million) under the Telenet Revolving Facility I (as defined below), (ii) €25.0 million ($28.1 million) under the Telenet Overdraft Facility and (iii) €20.0 million ($22.5 million) under the Telenet Revolving Facility, each of which were undrawn at June 30, 2020. During 2020, Telenet Facility AG and Telenet Facility AP were cancelled in full and replaced with a single revolving facility, which bears interest at a rate of EURIBOR + 2.25%, is subject to a EURIBOR floor of 0.0% and has a final maturity date of May 31, 2026 (the **Telenet Revolving Facility I**).

(d) Unused borrowing capacity under the UPC Holding Bank Facility relates to €500.0 million ($562.2 million) of borrowing capacity under the UPC Revolving Facility (as defined below), which was undrawn at June 30, 2020. During 2020, as a result of the sale of certain entities within the UPC Holding borrowing group in prior years, and an associated reduction in the outstanding debt and Covenant EBITDA (as defined and described in the related debt agreement) of the remaining UPC Holding borrowing group, UPC Facility AM was cancelled in full and replaced with a new revolving facility, which bears interest at a rate of EURIBOR + 2.50% and has a final maturity date of May 31, 2026 (the **UPC Revolving Facility**).

(e) Represents amounts owed pursuant to interest-bearing vendor financing arrangements that are used to finance certain of our property and equipment additions and operating expenses. 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 debt and finance lease obligations in our condensed consolidated statements of cash flows.

(f) In connection with the pending formation of the U.K. JV, the outstanding third-party debt of the U.K. JV Entities has been classified as liabilities associated with assets held for sale on our June 30, 2020 condensed consolidated balance sheet. For information regarding the pending formation of the U.K. JV and the held-for-sale presentation of the U.K. JV Entities, see note 4.

(g) As of June 30, 2020 and December 31, 2019, amounts include principal borrowings outstanding under the Lionsgate Loan of $55.3 million in each of the respective periods.

(h) As of June 30, 2020 and December 31, 2019, our debt had an estimated fair value of $11.6 billion (excluding the U.K. JV Entities) and $28.4 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 of the applicable entity, to the extent available, and other relevant factors. For additional information regarding fair value hierarchies, see note 7.

Financing Transactions - General Information

At June 30, 2020, most of our outstanding debt had been incurred by one of our three subsidiary "borrowing groups." References to these borrowing groups, which comprise UPC Holding, Telenet and Virgin Media, include their respective restricted parent and subsidiary entities. Below we provide summary descriptions of certain financing transactions completed during the first six months of 2020. A portion of our financing transactions may include non-cash borrowings and repayments. During the six months ended June 30, 2020 and 2019, non-cash borrowings and repayments aggregated $3.5 billion and nil, respectively. Unless otherwise noted, the terms and conditions of any new notes and/or credit facilities are largely consistent with those of existing notes and credit facilities of the corresponding borrowing group with regard to covenants, events of default and change of control provisions, among other items. For information regarding the general terms and conditions of our debt and capitalized terms not defined herein, see note 11 to the consolidated financial statements included in our 10-K.

Telenet Financing Transactions

In January 2020, Telenet entered into (i) a $2,295.0 million term loan facility (**Telenet Facility AR**) and (ii) a €1,110.0 million ($1,248.0 million) term loan facility (**Telenet Facility AQ**). Telenet Facility AR was issued at 99.75% of par, matures on April 30, 2028 and bears interest at a rate of LIBOR + 2.0%, subject to a LIBOR floor of 0.0%. Telenet Facility AQ was issued at par, matures on April 30, 2029 and bears interest at a rate of EURIBOR + 2.25%, subject to a EURIBOR floor of 0.0%. The net proceeds from Telenet Facility AR and Telenet Facility AQ, together with existing cash, were used to prepay in full (a) the $2,295.0 million outstanding principal amount under Telenet Facility AN and (b) the €1,110.0 million outstanding principal amount under Telenet Facility AO. In connection with these transactions, Telenet recognized a net loss on debt extinguishment of $18.9 million related to the write-off of unamortized deferred financing costs, discounts and premiums.

UPC Holding Financing Transactions

In January 2020, UPC Holding entered into (i) a $700.0 million term loan facility (**UPC Facility AT**) and (ii) a €400.0 million ($449.7 million) term loan facility (**UPC Facility AU**). UPC Facility AT was issued at 99.75% of par, matures on April 30, 2028 and bears interest at a rate of LIBOR + 2.25%, subject to a LIBOR floor of 0.0%. UPC Facility AU was issued at 99.875% of par, matures on April 30, 2029 and bears interest at a rate of EURIBOR + 2.50%, subject to a EURIBOR floor of 0.0%. The net proceeds from UPC Facility AT and UPC Facility AU were used to prepay in full the $1,140.0 million outstanding principal amount under UPC Facility AL, together with accrued and unpaid interest and the related prepayment premiums, which was owed to UPCB Finance IV and, in turn, UPCB Finance IV used such proceeds to redeem in full the $1,140.0 million outstanding principal amount of UPCB Finance IV Dollar Notes. In connection with this transaction, UPC Holding recognized a loss on debt extinguishment of $35.6 million related to (a) the payment of $30.7 million of redemption premiums and (b) the write-off of $4.9 million of unamortized deferred financing costs and discounts.

Virgin Media Financing Transactions

In connection with the pending formation of the U.K. JV, the outstanding third-party debt of Virgin Media and certain of its subsidiaries has been classified as liabilities associated with assets held for sale on our June 30, 2020 condensed consolidated balance sheet. For information regarding the pending formation of the U.K. JV and the held-for-sale presentation of the U.K. JV Entities, see note 4.

In May 2020, Virgin Media Trade Receivables Financing plc, a third-party special purpose financing entity, was created for the purpose of facilitating the offering of certain notes. These notes are collateralized by certain trade receivables of Virgin Media, creating a variable interest in which Virgin Media is the primary beneficiary and, accordingly, Virgin Media, and ultimately Liberty Global, are required to consolidate Virgin Media Trade Receivables Financing plc. The offering of these notes resulted in net proceeds of £214.4 million ($265.4 million) (the **May 2020 Proceeds**).

In June 2020, Virgin Media completed various financing transactions, as further described below.

Senior Notes Transactions. Virgin Media issued $675.0 million principal amount of U.S. dollar-denominated senior notes (the **2030 VM Dollar Senior Notes**). The 2030 VM Dollar Senior Notes were issued at par, mature on July 15, 2030 and bear interest at a rate of 5.0%. 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 ($517.2 million) outstanding principal amount of 2025 VM Euro Senior Notes and (ii) $388.7 million outstanding principal amount of 2025 VM Dollar Senior Notes. Virgin Media then issued (a) an additional $250.0 million principal amount of 2030 VM Dollar Senior Notes at 101% of par and (b) €500.0 million ($562.2 million) principal amount of euro-denominated senior notes (the **2030 VM Euro Senior Notes**). The 2030 VM Euro Senior Notes were issued at par, mature on July 15, 2030 and bear interest at a rate of 3.75%. The net proceeds from the issuance of these notes were used (1) to redeem in full (A) $497.0 million outstanding principal amount of 2024 VM Dollar Senior Notes, (B) $71.6 million outstanding principal amount of 2022 VM 4.875% Dollar Senior Notes, (C) $51.5 million outstanding principal amount of 2022 VM 5.25% Dollar Senior Notes and (D) £44.1 million ($54.6 million) outstanding principal amount of 2022 VM Sterling Senior Notes and (2) for general corporate purposes. In connection with these transactions, Virgin Media recognized a net loss on debt extinguishment of $57.5 million related to (I) the payment of $50.8 million of redemption premiums and (II) the write-off of $6.7 million of unamortized deferred financing costs, discounts and premiums.

Senior Secured Notes Transactions. Virgin Media issued (i) $650.0 million principal amount of U.S. dollar-denominated senior secured notes (the **2030 VM Dollar Senior Secured Notes**) and (ii) £450.0 million ($557.1 million) principal amount of sterling-denominated senior secured notes (the **2030 VM 4.125% Sterling Senior Secured Notes**). The 2030 VM Dollar Senior Secured Notes and 2030 VM 4.125% Sterling Senior Secured Notes were each issued at par, mature on August 15, 2030 and bear interest at a rate of 4.5% and 4.125%, respectively. The net proceeds from the issuance of these notes, together with existing cash, were used to (a) redeem in full £525.0 million ($649.9 million) outstanding principal amount of 2027 VM 4.875% Sterling Senior Secured Notes, (b) redeem in full £360.0 million ($445.7 million) outstanding principal amount of 2029 VM 6.25% Sterling Senior Secured Notes and (c) redeem £80.0 million ($99.0 million) of the £521.3 million ($645.3 million) outstanding principal amount of 2025 VM Sterling Senior Secured Notes. In connection with these transactions, Virgin Media recognized a net loss on debt extinguishment of $65.7 million related to (1) the payment of $64.7 million of redemption premiums and (2) the write-off of $1.0 million of unamortized deferred financing costs, discounts and premiums.

Vendor Financing Notes Transactions. 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 not consolidated by Virgin Media or Liberty Global.

Virgin Media Financing III Company issued (i) £500.0 million ($619.0 million) principal amount of 4.875% vendor financing notes at par and (ii) £400.0 million ($495.2 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 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 Virgin Media and its subsidiaries from previously-existing third-party special purpose financing entities (the **Original VM Financing**

Companies) and various other third parties. As a result, Virgin Media paid $42.0 million of redemption premiums, which are included in losses on debt extinguishment, net, in our condensed consolidated statements of operations. 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 credit facilities of Virgin Media. As additional vendor financed receivables become available for purchase, the 2020 VM Financing Companies can request that Virgin Media repay any amounts available under these excess cash facilities.

Maturities of Debt

Maturities of our debt as of June 30, 2020 are presented below for the named entity and its subsidiaries, unless otherwise noted, and represent U.S. dollar equivalents based on June 30, 2020 exchange rates. As a result of the held-for-sale presentation of the U.K. JV Entities on our June 30, 2020 condensed consolidated balance sheet, the amounts presented below do not include maturities of the debt obligations of these entities. For information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4.

	UPC Holding (a)	Telenet	Other (b)	Total
	in millions			
Year ending December 31:				
2020 (remainder of year)	$ 387.4	$ 254.4	$ 260.3	$ 902.1
2021	221.4	174.8	1,015.9	1,412.1
2022	—	12.4	380.5	392.9
2023	—	12.1	152.4	164.5
2024	—	12.1	14.7	26.8
2025	—	12.3	0.6	12.9
Thereafter	3,634.6	5,231.6	—	8,866.2
Total debt maturities (c)	4,243.4	5,709.7	1,824.4	11,777.5
Deferred financing costs, discounts and premiums, net	(21.0)	(17.7)	(9.6)	(48.3)
Total debt	$ 4,222.4	$ 5,692.0	$ 1,814.8	$ 11,729.2
Current portion	$ 608.8	$ 427.9	$ 769.2	$ 1,805.9
Noncurrent portion	$ 3,613.6	$ 5,264.1	$ 1,045.6	$ 9,923.3

____

(a) Amounts include certain senior secured notes issued by special purpose financing entities that are consolidated by UPC Holding and Liberty Global.

(b) Amounts include $1,339.9 million related to the ITV Collar Loan. The ITV Collar Loan has maturity dates ranging from 2020 to 2022 consistent with the ITV Collar (see notes 5 and 6). We may elect to use cash or the collective value of the related shares and equity-related derivative instrument to settle the ITV Collar Loan.

(c) Amounts include vendor financing obligations of $1,358.7 million, as set forth below:

	UPC Holding	Telenet	Other	Total
	in millions			
Year ending December 31:				
2020 (remainder of year)	$ 387.4	$ 253.4	$ 75.7	$ 716.5
2021	221.4	162.0	105.2	488.6
2022	—	—	80.7	80.7
2023	—	—	57.6	57.6
2024	—	—	14.7	14.7
2025	—	—	0.6	0.6
Total vendor financing maturities	$ 608.8	$ 415.4	$ 334.5	$ 1,358.7
Current portion	$ 608.8	$ 415.4	$ 136.0	$ 1,160.2
Noncurrent portion	$ —	$ —	$ 198.5	$ 198.5

(10) Leases

General

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

Lease Balances

A summary of our right-of-use (**ROU**) assets and lease liabilities is set forth below:

	June 30, 2020	December 31, 2019
	in millions	
ROU assets:		
Finance leases (a)	$ 441.8	$ 531.0
Operating leases (b)	337.8	512.7
Total ROU assets	$ 779.6	$ 1,043.7
Lease liabilities:		
Finance leases (c)	$ 514.4	$ 617.1
Operating leases (d)	352.5	545.1
Total lease liabilities	$ 866.9	$ 1,162.2

____

(a) Our finance lease ROU assets are included in property and equipment, net, on our condensed consolidated balance sheets. At June 30, 2020, the weighted average remaining lease term for finance leases was 23.1 years and the weighted average discount rate was 6.0%. During the six months ended June 30, 2020 and 2019, we recorded non-cash additions to our finance lease ROU assets (including amounts related to the U.K. JV Entities) of $17.2 million and $32.6 million, respectively.

(b) Our operating lease ROU assets are included in other assets, net, on our condensed consolidated balance sheets. At June 30, 2020, the weighted average remaining lease term for operating leases was 7.6 years and the weighted average discount rate was 3.6%. During the six months ended June 30, 2020 and 2019, we recorded non-cash additions to our operating lease ROU assets (including amounts related to the U.K. JV Entities) of $53.2 million and $30.6 million, respectively.

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

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

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

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Finance lease expense:				
Depreciation and amortization	$ 14.4	$ 22.6	$ 36.1	$ 45.3
Interest expense	8.1	8.9	16.2	17.0
Total finance lease expense	22.5	31.5	52.3	62.3
Operating lease expense (a)	29.8	34.1	65.6	67.3
Short-term lease expense (a)	1.5	2.1	3.3	4.0
Variable lease expense (b)	1.1	1.2	2.4	2.3
Total lease expense	$ 54.9	$ 68.9	$ 123.6	$ 135.9

____

(a) Our operating lease expense and short-term lease expense are included in other operating expenses, SG&A expenses and impairment, restructuring and other operating items in our condensed consolidated statements of operations.

(b) Variable lease expense represents payments made to a lessor during the lease term that vary because of a change in circumstance that occurred after the lease commencement date. Variable lease payments are expensed as incurred and are included in other operating expenses in our condensed consolidated statements of operations.

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

	Six months ended June 30,	
	2020	2019
	in millions	
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflows from operating leases	$ 60.0	$ 67.4
Operating cash outflows from finance leases	16.2	17.0
Financing cash outflows from finance leases	56.9	36.6
Total cash outflows from operating and finance leases	$ 133.1	$ 121.0

Maturities of our operating and finance lease liabilities as of June 30, 2020 are presented below. As a result of the held-for-sale presentation of the U.K. JV Entities on our June 30, 2020 condensed consolidated balance sheet, the amounts presented below do not include maturities of operating and finance lease liabilities of these entities. For information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4. Amounts represent U.S. dollar equivalents based on June 30, 2020 exchange rates:

	Operating leases	Finance leases
	in millions	
Year ending December 31:		
2020 (remainder of year)	$ 41.6	$ 48.8
2021	67.6	91.1
2022	55.9	89.0
2023	47.9	91.5
2024	40.3	54.1
2025	34.0	49.5
Thereafter	117.4	243.0
Total payments	404.7	667.0
Less: present value discount	(52.2)	(152.6)
Present value of lease payments	$ 352.5	$ 514.4
Current portion	$ 73.3	$ 61.8
Noncurrent portion	$ 279.2	$ 452.6

(11) Income Taxes

Income tax benefit (expense) attributable to our earnings (loss) from continuing operations before income taxes differs from the amounts computed using the applicable income tax rate as a result of the following factors:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Computed "expected" tax benefit (expense) (a)	$ 115.8	$ 59.5	$ (76.3)	$ 112.5
Recognition of previously unrecognized tax benefits	188.8	4.4	188.8	4.4
Change in valuation allowances	(10.9)	79.0	(99.6)	66.4
Non-deductible or non-taxable foreign currency exchange results	(95.8)	16.4	57.8	49.4
Tax benefit associated with technology innovation (b)	4.7	—	49.5	—
Non-deductible or non-taxable interest and other items	(25.9)	(107.1)	(46.3)	(129.9)
Enacted tax law and rate changes	(4.4)	(0.4)	31.7	(9.8)
Basis and other differences in the treatment of items associated with investments in subsidiaries and affiliates (c)	(20.8)	(87.3)	(17.7)	(166.4)
International rate differences (d)	5.8	3.3	(10.3)	15.5
Other, net	0.7	5.4	0.3	3.3
Total income tax benefit (expense)	$ 158.0	$ (26.8)	$ 77.9	$ (54.6)

____

(a) The statutory or "expected" tax rates are the U.K. rates of 17.5% for the 2020 periods and 19.0% for the 2019 periods. The statutory rate for the 2020 periods represents the blended rate in effect for the year ended December 31, 2020 based on the 19.0% statutory rate that was in effect for the first quarter of 2020 and the 17.0% statutory rate that was expected to be in

effect for the remainder of 2020. In March 2020, it was announced that the U.K. corporate tax rate will remain at 19.0% and not reduce to 17.0% from April 1, 2020. The U.K. rate change was enacted on July 22, 2020; therefore, the impact on our deferred tax balances will be recorded during the third quarter of 2020.

(b) Amount reflects the recognition of the innovation income tax deduction in Belgium, including the one-time effect of deductions related to prior periods.

(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 adjustments (either a benefit or expense) to the "expected" tax benefit (expense) for statutory rates in jurisdictions in which we operate outside of the U.K.

As of June 30, 2020, our unrecognized tax benefits of $319.1 million included $123.9 million of unrecognized 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 and other factors.

During the next 12 months, it is reasonably possible that the resolution of ongoing examinations by tax authorities, as well as the expiration of statutes of limitation and other items, could result in reductions to our unrecognized tax benefits related to tax positions taken as of June 30, 2020. The amount of any such reductions could range up to $65.0 million, of which approximately $5.0 million would have a positive impact on our effective tax rate. Other than the potential impacts of these ongoing examinations and the expected expiration of certain statutes of limitation, we do not expect any material changes to our unrecognized tax benefits during the next 12 months. No assurance can be given as to the nature or impact of any changes in our unrecognized tax positions during the next 12 months.

Certain of our subsidiaries are currently involved in income tax examinations in various jurisdictions in which we operate, including the Netherlands, Poland, the U.K. and the U.S. While we do not expect adjustments from the foregoing examinations to have a material impact on our consolidated financial position, results of operations or cash flows, no assurance can be given that this will be the case given the amounts involved and the complex nature of the related issues.

(12) Equity

Share Repurchases. During the six months ended June 30, 2020, we repurchased (i) 9,000 shares of our class A ordinary shares at an average price per share of $16.33 and (ii) 38,823,100 shares of our class C ordinary shares at an average price per share of $18.03, for an aggregate purchase price of $700.2 million, including direct acquisition costs. In February 2020, our board of directors authorized an additional $1.0 billion for share repurchases. At June 30, 2020, the remaining amount authorized for share repurchases was $370.0 million.

(13) Share-based Compensation

Our share-based compensation expense primarily relates to the share-based incentive awards issued by Liberty Global to its employees and employees of its subsidiaries. A summary of our aggregate share-based compensation expense is set forth below:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Liberty Global:				
Performance-based incentive awards (a)	$ 21.6	$ 38.0	$ 49.3	$ 67.9
Non-performance based incentive awards (b)	47.8	29.0	66.1	51.0
Other (c)	6.0	12.6	12.2	22.5
Total Liberty Global	75.4	79.6	127.6	141.4
Other	8.4	7.4	11.4	12.9
Total	$ 83.8	$ 87.0	$ 139.0	$ 154.3
Included in:				
Other operating expense	$ 1.6	$ 1.0	$ 2.3	$ 1.9
SG&A expense	82.2	86.0	136.7	152.4
Total	$ 83.8	$ 87.0	$ 139.0	$ 154.3

____

(a) Includes share-based compensation expense related to (i) performance-based restricted share units (**PSUs**), (ii) a challenge performance award plan for certain executive officers and key employees (the **2019 Challenge Performance Awards**), which included performance-based share appreciation rights (**PSARs**) and PSUs granted in March 2019, and (iii) the performance-based portion of a performance award granted to our Chief Executive Officer in May 2019 (the **2019 CEO Performance Award**).

(b) In 2019, we changed our policy to provide that all new equity grants would have ten-year contractual terms in order to more closely align with common market practice. In April 2020, the compensation committee of our board of directors approved the extension of the expiration dates of outstanding share appreciation rights (**SARs**) and director options granted in 2013 from a seven-year term to a ten-year term in order to align with this new policy. Accordingly, the Black-Scholes fair values of the outstanding awards increased, resulting in the recognition of an aggregate incremental share-based compensation expense of $18.9 million during the second quarter of 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.

The following table provides the aggregate number of options, SARs and PSARs with respect to awards issued by Liberty Global that were (i) outstanding and (ii) exercisable as of June 30, 2020:

	Class A		Class C	
	Number of shares underlying awards	**Weighted Average exercise or base price**	**Number of shares underlying awards**	**Weighted Average exercise or base price**
Held by Liberty Global employees:				
Outstanding	24,236,156	$ 27.34	53,198,176	$ 26.20
Exercisable	11,641,307	$ 32.54	27,367,784	$ 30.51
Held by former Liberty Global employees:				
Outstanding	1,162,767	$ 35.57	2,342,852	$ 34.29
Exercisable	1,129,898	$ 35.57	2,277,127	$ 34.27

The following table provides the aggregate number of restricted share units (**RSUs**) and PSUs that were outstanding as of June 30, 2020:

	Class A	Class B	Class C
Held by Liberty Global employees:			
RSUs	2,523,790	—	5,040,305
PSUs	2,748,202	660,000	5,497,202
Held by former Liberty Global employees:			
RSUs	1,158	—	2,302
PSUs	24,521	—	49,034

(14) Restructuring Liability

A summary of changes in our restructuring liabilities during the six months ended June 30, 2020 is set forth in the table below:

	Employee severance and termination	Office closures	Contract termination	Total
	in millions			
Restructuring liability as of January 1, 2020	$ 19.1	$ 2.2	$ 10.6	$ 31.9
Restructuring charges	28.3	3.5	4.8	36.6
Cash paid	(31.5)	(0.7)	(7.1)	(39.3)
Reclassification to held for sale (a)	(4.6)	(4.8)	—	(9.4)
Foreign currency translation adjustments and other	(0.3)	(0.2)	(0.2)	(0.7)
Restructuring liability as of June 30, 2020	$ 11.0	$ —	$ 8.1	$ 19.1
Current portion	$ 11.0	$ —	$ 2.9	$ 13.9
Noncurrent portion	—	—	5.2	5.2
Total	$ 11.0	$ —	$ 8.1	$ 19.1

____

(a) Represents the reclassification of the restructuring liabilities associated with the U.K. JV Entities as of June 30, 2020 to liabilities associated with assets held for sale. For information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4.

Our restructuring charges during the six months ended June 30, 2020 included employee severance and termination costs related to certain reorganization activities of $12.7 million in Switzerland, $9.1 million in U.K./Ireland and $5.6 million in Central and Corporate.

(15) Earnings or Loss per Share

Basic earnings or loss per share (**EPS**) is computed by dividing net earnings or loss by the weighted average number of shares outstanding for the period. Diluted EPS presents the dilutive effect, if any, on a per share basis of potential shares (e.g., options, SARs, RSUs, restricted stock awards (**RSAs**), PSARs and PSUs) as if they had been exercised, vested or converted at the beginning of the periods presented.

The details of the calculations of our basic and diluted EPS are set forth below:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Numerator:				
Earnings (loss) from continuing operations	$ (503.8)	$ (339.6)	$ 513.9	$ (646.5)
Net earnings from continuing operations attributable to noncontrolling interests	(20.4)	(29.5)	(88.3)	(38.2)
Net earnings (loss) from continuing operations attributable to Liberty Global shareholders (basic and diluted EPS computation)	$ (524.2)	$ (369.1)	$ 425.6	$ (684.7)
Denominator:				
Weighted average ordinary shares outstanding (basic EPS computation)	612,681,648	735,442,543	617,828,982	738,748,452
Incremental shares attributable to the assumed exercise of outstanding options and SARs and the release of RSUs and PSUs upon vesting (treasury stock method)	—	—	7,322,907	—
Weighted average ordinary shares outstanding (diluted EPS computation)	612,681,648	735,442,543	625,151,889	738,748,452

A total of 58.1 million options, SARs and RSUs and 15.2 million PSARs and PSUs were excluded from the calculation of diluted earnings per share during the six months ended June 30, 2020 because their effect would have been anti-dilutive or, in the case of the PSARs and PSUs, because such awards had not yet met the applicable performance criteria.

We reported losses from continuing operations attributable to Liberty Global shareholders for the three months ended June 30, 2020 and the three and six months ended June 30, 2019. Therefore, the potentially dilutive effect at June 30, 2020 and 2019 of the following items was not included in the computation of diluted loss from continuing operations attributable to Liberty Global shareholders per share for such periods because their inclusion would have been anti-dilutive to the computation or, in the case of certain PSARs and PSUs, because such awards had not yet met the applicable performance criteria: (i) the aggregate number of shares issuable pursuant to outstanding options, SARs, RSUs and RSAs of 77.2 million and 65.7 million, respectively, and (ii) the aggregate number of shares issuable pursuant to PSARs and PSUs of 20.3 million and 27.8 million, respectively.

(16) Commitments and Contingencies

Commitments

In the normal course of business, we have entered into agreements that commit our company to make cash payments in future periods with respect to programming contracts, network and connectivity commitments, purchases of customer premises and other equipment and services and other items. The following table sets forth the U.S. dollar equivalents of such commitments as of June 30, 2020. Due to the held-for-sale presentation of the U.K. JV Entities at June 30, 2020, the amounts presented below do not include the contractual commitments of these entities. For information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4. The commitments included in this table do not reflect any liabilities that are included on our June 30, 2020 condensed consolidated balance sheet.

	Payments due during:							
	Remainder of 2020	2021	2022	2023	2024	2025	Thereafter	Total
	in millions							
Network and connectivity commitments	$ 78.9	$ 86.2	$ 64.9	$ 41.5	$ 35.8	$ 34.4	$ 681.2	$ 1,022.9
Programming commitments	152.1	171.2	84.1	22.0	14.2	13.9	16.1	473.6
Purchase commitments	250.6	170.1	43.5	30.7	17.3	14.5	10.7	537.4
Other commitments	4.1	3.1	3.0	1.9	1.5	0.4	1.2	15.2
Total	$ 485.7	$ 430.6	$ 195.5	$ 96.1	$ 68.8	$ 63.2	$ 709.2	$ 2,049.1

Network and connectivity commitments include Telenet's commitments for certain operating costs associated with its leased network. Telenet's commitments for certain operating costs are subject to adjustment based on changes in the network operating costs incurred by Telenet with respect to its own networks. These potential adjustments are not subject to reasonable estimation and, therefore, are not included in the above table. The amounts reflected in the above table with respect to certain of our mobile virtual network operator (**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.

Programming commitments consist of obligations associated with certain of our programming, studio output and sports rights 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, (ii) whether we terminate service to a portion of our subscribers or dispose of a portion of our distribution systems or (iii) whether we discontinue our premium sports services. 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 (including amounts related to the U.K. JV Entities) aggregated $832.6 million and $847.0 million during the six months ended June 30, 2020 and 2019, respectively.

Programming costs include (i) agreements to distribute channels to our customers, (ii) exhibition rights of programming content and (iii) sports rights.

Channel Distribution Agreements. 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 condensed consolidated statement of operations when the programming is available for viewing.

Exhibition Rights. Our agreements for exhibition rights are generally multi-year license agreements for which we are typically charged either (i) a percentage of the revenue earned per program or (ii) a flat fee per program. The current and long-term portions of our exhibition rights acquired under licenses are recorded as other current assets and other assets, net, respectively, on our

condensed consolidated balance sheet when the license period begins and the program is available for its first showing. Capitalized exhibition rights are amortized based on the projected future showings of the content using a straight-line or accelerated method of amortization, as appropriate. Exhibition rights are regularly reviewed for impairment and held at the lower of unamortized cost or estimated net realizable value.

Sports Rights. Our sports rights agreements are generally multi-year contracts for which we are typically charged a flat fee per season. We typically pay for sports rights in advance of the respective season. The current and long-term portions of any payments made in advance of the respective season are recorded as other current assets and other assets, net, respectively, on our condensed consolidated balance sheet and are amortized on a straight-line basis over the respective sporting season. Sports rights are regularly reviewed for impairment and held at the lower of unamortized cost or estimated net realizable value.

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 the six months ended June 30, 2020 and 2019, see note 6.

We also have commitments pursuant to agreements with, and obligations imposed by, franchise authorities and municipalities, which may include obligations in certain markets to move aerial cable to underground ducts or to upgrade, rebuild or extend portions of our broadband communication systems. Such amounts are not included in the above table because they are not fixed or determinable.

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 and (ii) performance and/or financial guarantees to local municipalities, our customers and vendors. 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

Interkabel Acquisition. On November 26, 2007, Telenet and four associations of municipalities in Belgium, which we refer to as the pure intercommunales or the "**PICs**," announced a non-binding agreement-in-principle to transfer the analog and digital television activities of the PICs, including all existing subscribers, to Telenet. Subsequently, Telenet and the PICs entered into a binding agreement (the **2008 PICs Agreement**), which closed effective October 1, 2008. Beginning in December 2007, Proximus NV/SA (**Proximus**), the incumbent telecommunications operator in Belgium, instituted several proceedings seeking to block implementation of these agreements. Proximus lodged summary proceedings with the President of the Court of First Instance of Antwerp to obtain a provisional injunction preventing the PICs from effecting the agreement-in-principle and initiated a civil procedure on the merits claiming the annulment of the agreement-in-principle. In March 2008, the President of the Court of First Instance of Antwerp ruled in favor of Proximus in the summary proceedings, which ruling was overturned by the Court of Appeal of Antwerp in June 2008. Proximus brought this appeal judgment before the Cour de Cassation (the **Belgian Supreme Court**), which confirmed the appeal judgment in September 2010. On April 6, 2009, the Court of First Instance of Antwerp ruled in favor of the PICs and Telenet in the civil procedure on the merits, dismissing Proximus's request for the rescission of the agreement-in-principle and the 2008 PICs Agreement. On June 12, 2009, Proximus appealed this judgment with the Court of Appeal of Antwerp. In this appeal, Proximus is now also seeking compensation for damages. While these proceedings were suspended indefinitely, other proceedings were initiated, which resulted in a ruling by the Belgian Council of State in May 2014 annulling (i) the decision of the PICs not to organize a public market consultation and (ii) the decision from the PICs' board of directors to approve the 2008 PICs Agreement. In December 2015, Proximus resumed the civil proceedings pending with the Court of Appeal of Antwerp seeking to have the 2008 PICs Agreement annulled and claiming damages of €1.4 billion ($1.6 billion).

In December 2017, the Court of Appeals of Antwerp issued a judgment rejecting Proximus' claims. In June 2019, Proximus filed an appeal of the Court of Appeals of Antwerp's judgment with the Belgian Supreme Court. No assurance can be given as to

the outcome of these or other proceedings. However, an unfavorable outcome of existing or future proceedings could potentially lead to the annulment of the 2008 PICs Agreement and/or to an obligation of Telenet to pay compensation for damages, subject to the relevant provisions of the 2008 PICs Agreement, which stipulate that Telenet is responsible for damages in excess of €20.0 million ($22.5 million). We do not expect the ultimate resolution of this matter to have a material impact on our results of operations, cash flows or financial position. No amounts have been accrued by us with respect to this matter as the likelihood of loss is not considered to be probable.

Telekom Deutschland Litigation. On December 28, 2012, Unitymedia filed a lawsuit against Telekom Deutschland GmbH (**Telekom Deutschland**) in which Unitymedia asserts that it pays excessive prices for the co-use of Telekom Deutschland's cable ducts in Unitymedia's footprint. The Federal Network Agency approved rates for the co-use of certain ducts of Telekom Deutschland in March 2011. Based in part on these approved rates, Unitymedia sought a reduction of the annual lease fees by approximately five-sixths. In addition, Unitymedia is seeking the return of similarly calculated overpayments from 2009 through the ultimate settlement date, plus accrued interest. In October 2016, the first instance court dismissed this action, and in March 2018, the court of appeal dismissed Unitymedia's appeal of the first instance court's decision and did not grant permission to appeal further to the Federal Court of Justice. Unitymedia has filed a motion with the Federal Court of Justice to grant permission to appeal. The resolution of this matter may take several years and no assurance can be given that Unitymedia's claims will be successful. In connection with our sale of the Vodafone Disposal Group, we will only share in 50% of any amounts recovered, plus 50% of the net present value of certain cost savings in future periods that are attributable to the favorable resolution of this matter, less 50% of associated legal or other third-party fees paid post-completion of the sale of the Vodafone Disposal Group. Any amount we may recover related to this matter will not be reflected in our consolidated financial statements until such time as the final disposition of this matter has been reached.

Belgium Regulatory Developments. In June 2018, the Belgisch Instituut voor Post en Telecommunicatie and the regional regulators for the media sectors (together, the **Belgium Regulatory Authorities**) adopted a new decision finding that Telenet has significant market power in the wholesale broadband market (the **2018 Decision**). The 2018 Decision imposes on Telenet the obligations to (i) provide third-party operators with access to the digital television platform (including basic digital video and analog video) and (ii) make available to third-party operators a bitstream offer of broadband internet access (including fixed-line telephony as an option). Unlike prior decisions, the 2018 Decision no longer applies "retail minus" pricing on Telenet; however, as of August 1, 2018, this decision imposed a 17% interim price reduction in monthly wholesale cable access prices. On May 26, 2020, the Belgium Regulatory Authorities adopted a final decision regarding the "reasonable access tariffs" to replace the interim prices, which represents an estimated decrease of 11.5%, as compared to the initial August 1, 2018 interim rates, and is applicable as of July 1, 2020. These rates are expected to evolve over time due to, among other reasons, broadband capacity usage.

The 2018 Decision aims to, and in its application, may strengthen Telenet's competitors by granting them resale access to Telenet's network to offer competing products and services notwithstanding Telenet's substantial historical financial outlays in developing the infrastructure. In addition, any resale access granted to competitors could (i) limit the bandwidth available to Telenet to provide new or expanded products and services to the customers served by its network and (ii) adversely impact Telenet's ability to maintain or increase its revenue and cash flows. The extent of any such adverse impacts ultimately will be dependent on the extent that competitors take advantage of the resale access afforded to Telenet's network, the rates that Telenet receives for such access and other competitive factors or market developments. Telenet considers the 2018 Decision to be inconsistent with the principle of technology-neutral regulation and the European Single Market Strategy to stimulate further investments in broadband networks. Telenet challenged the 2018 Decision in the Brussels Court of Appeal. In September 2019, the Brussels Court of Appeal upheld the 2018 Decision, and consequently, the above-mentioned obligations stemming from the 2018 Decision remain in place. Telenet is currently considering whether to appeal the decision further.

Virgin Media VAT Matters. Virgin Media's 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 Virgin Media customers for payment handling services are subject to VAT, while Virgin Media took the position that such charges were exempt from VAT under existing law. At the time of HMRC's initial challenge in 2009, Virgin Media remitted all related VAT amounts claimed by HMRC, and continued to make such VAT payments pending a ruling on Virgin Media's appeal to the First Tier Tribunal. As the likelihood of loss was not considered probable and Virgin Media believed that the amounts paid would be recoverable, such amounts were recorded as a receivable on our consolidated 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 ($54.0 million at the applicable rate). Virgin Media is seeking permission to appeal the case to the Upper Tribunal and the timing of the final outcome of the litigation matter remains uncertain.

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 ($99.1 million at the respective transaction dates), 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 ($83.1 million at the average rate for the period) and related interest expense of £3.3 million ($4.4 million at the average rate for the period) in our condensed consolidated 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. In April 2020, the Upper Tribunal rejected our appeal, ruling in favor of HMRC. Virgin Media is currently seeking permission to appeal to the Court of Appeal; however, no assurance can be given as to the ultimate outcome of this matter.

UPC Austria Matter. On July 31 2018, we completed the sale of our Austrian operations, "**UPC Austria**," to Deutsche Telekom AG (**Deutsche Telekom**). In October of 2019, we received notification under the terms of the relevant acquisition agreements from Deutsche Telekom and its subsidiary T-Mobile Austria Holding GmbH (together, the **UPC Austria Sale Counterparties**), asserting claims of approximately €70.5 million ($79.3 million) together with an invitation to engage in amicable discussions to resolve the matter in a time and cost effective manner. We since received further asserted claims of approximately €20.6 million ($23.2 million). Discussions regarding the claims are preliminary and no amounts have been accrued by our company with respect to this matter as the likelihood of loss is not considered to be probable at this stage. We are unable to provide any meaningful estimate of a possible range of loss because, among other reasons, (i) we believe the assertions are unsupported and/or exaggerated, (ii) there are significant factual matters to be resolved and (iii) the matter is in a preliminary stage and we have yet to engage in detail with the UPC Austria Sale Counterparties. The acquisition agreement provides for arbitration of disputes in the event the parties are unable to resolve any differences. We intend to vigorously defend this matter.

Other Contingency Matters. In connection with the dispositions of certain of our operations, we provided tax indemnities to the counterparties for certain tax liabilities that could arise from the period we owned the respective operations, subject to certain thresholds. While we have not received notification from the counterparties for indemnification, it is reasonably possible that we could, and the amounts involved could be significant. No amounts have been accrued by our company as the likelihood of any loss is not considered to be probable.

Other Regulatory Matters. Video distribution, broadband internet, fixed-line telephony, mobile and content businesses are regulated in each of the countries in which we or our affiliates operate. The scope of regulation varies from country to country, although in some significant respects regulation in European markets is harmonized under the regulatory structure of the European Union (**E.U.**) 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 and will continue to significantly increase our network infrastructure charges. As compared to 2019, we expect the aggregate amount of this increase will be approximately £16 million ($20 million) in 2020. Beyond 2020, 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.

The U.K. Office of Communications (**Ofcom**) is the key regulatory authority for the communications sector in which we operate in the U.K. Ofcom has recently issued new regulatory requirements that, effective in February 2020, obligate us 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 we 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 we can offer them. In both cases, we must also set out the price available to new customers for an equivalent service offering. These requirements could have a material adverse impact on our operating results in 2020 and future periods.

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. We do not expect this incident to have a material adverse impact on our results of operations, cash flows or financial condition for any fiscal period and given the preliminary nature of the matter we are unable to provide a meaningful estimate of a possible range of loss, if any.

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

(17) Segment Reporting

We generally identify our reportable segments as (i) those consolidated subsidiaries that represent 10% or more of our revenue, Adjusted EBITDA (as defined below and as previously referred to as "Adjusted OIBDA") or total assets or (ii) those equity method affiliates where our investment or share of revenue or Adjusted EBITDA represents 10% or more of our total assets, revenue or Adjusted EBITDA, respectively. In certain cases, we may elect to include an operating segment in our segment disclosure that does not meet the above-described criteria for a reportable segment. We evaluate performance and make decisions about allocating resources to our operating segments based on financial measures such as revenue and Adjusted EBITDA. In addition, we review non-financial measures such as customer growth, as appropriate.

Adjusted EBITDA is the primary measure used by our chief operating decision maker to evaluate segment operating performance and is also a key factor that is used by our internal decision makers to (i) determine how to allocate resources to segments and (ii) evaluate the effectiveness of our management for purposes of annual and other incentive compensation plans. As we use the term, "**Adjusted EBITDA**" is defined as earnings (loss) from continuing operations before net income tax benefit (expense), other non-operating income or expenses, net share of results of affiliates, net gains (losses) on extinguishment of debt, net realized and unrealized gains (losses) due to changes in fair value of certain investments and debt, net foreign currency gains (losses), net gains (losses) on derivative instruments, net interest expense, 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 (a) gains and losses on the disposition of long-lived assets, (b) third-party costs directly associated with successful and unsuccessful acquisitions and dispositions, including legal, advisory and due diligence fees, as applicable, and (c) other acquisition-related items, such as gains and losses on the settlement of contingent consideration. Our internal decision makers believe Adjusted EBITDA 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 (1) readily view operating trends, (2) perform analytical comparisons and benchmarking between segments and (3) identify strategies to improve operating performance in the different countries in which we operate. A reconciliation of Adjusted EBITDA from continuing operations to earnings (loss) from continuing operations is presented below.

As of June 30, 2020, our reportable segments are as follows:

Consolidated:

- U.K./Ireland
- Belgium
- Switzerland
- Central and Eastern Europe

Nonconsolidated:

- VodafoneZiggo JV

All of our reportable segments derive their revenue primarily from residential and B2B communications services, including broadband internet, video, fixed-line telephony and mobile services.

Our central and corporate functions (**Central and Corporate**) primarily include (i) revenue earned from services provided to the VodafoneZiggo JV and various third parties related to transitional service agreements, (ii) revenue from sales of customer premises equipment to the VodafoneZiggo JV, (iii) costs associated with certain centralized functions, including billing systems, network operations, technology, marketing, facilities, finance and other administrative functions, and (iv) less significant consolidated operating segments that provide programming and other services.

During the fourth quarter of 2019, we changed the presentation of certain costs related to our centrally-managed technology and innovation function. These costs, which were previously included in Central and Corporate, are now allocated to our consolidated reportable segments. This change, which we refer to as the "**Centrally-held Cost Allocation**," was made as a result of internal changes with respect to the way in which our chief operating decision maker evaluates the Adjusted EBITDA of our operating segments. Segment information for the three and six months ended June 30, 2019 has been revised to reflect this change. The following table provides a summary of the impact on the Adjusted EBITDA of our consolidated reportable segments and Central and Corporate that resulted from the Centrally-held Cost Allocation.

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Increase (decrease) to Adjusted EBITDA:				
U.K./Ireland	$ (12.3)	$ (15.7)	$ (24.4)	$ (31.8)
Switzerland	(4.8)	(9.9)	(9.6)	(16.7)
Central and Eastern Europe	(2.7)	(3.8)	(5.2)	(7.3)
Central and Corporate	19.8	29.4	39.2	55.8
Total Liberty Global	$ —	$ —	$ —	$ —

Performance Measures of Our Reportable Segments

The amounts presented below represent 100% of each of our reportable segment's revenue and Adjusted EBITDA. As we have the ability to control Telenet, we consolidate 100% of Telenet's revenue and expenses in our condensed consolidated statements of operations despite the fact that third parties own a significant interest. The noncontrolling owners' interests in the operating results of Telenet and other less significant majority-owned subsidiaries are reflected in net earnings or loss attributable to noncontrolling interests in our condensed consolidated statements of operations. Similarly, despite only holding a 50% noncontrolling interest in the VodafoneZiggo JV, we present 100% of its revenue and Adjusted EBITDA in the tables below. Our share of the VodafoneZiggo JV's operating results is included in share of results of affiliates, net, in our condensed consolidated statements of operations.

	Revenue			
	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
U.K./Ireland	$ 1,531.8	$ 1,644.0	$ 3,152.4	$ 3,305.3
Belgium	682.5	713.2	1,400.6	1,425.1
Switzerland	299.1	315.0	615.9	631.0
Central and Eastern Europe	116.2	119.1	235.3	238.2
Central and Corporate	93.7	60.2	194.9	120.9
Intersegment eliminations	(0.4)	(1.1)	(0.4)	(2.1)
Total	$ 2,722.9	$ 2,850.4	$ 5,598.7	$ 5,718.4
VodafoneZiggo JV	$ 1,081.6	$ 1,084.5	$ 2,178.7	$ 2,178.4

	Adjusted EBITDA			
	Three months ended June 30,		Six months ended June 30,	
	2020	2019 (a)	2020	2019 (a)
	in millions			
U.K./Ireland	$ 654.9	$ 687.5	$ 1,310.3	$ 1,379.7
Belgium	354.1	349.4	685.7	688.4
Switzerland	150.9	159.8	285.0	316.1
Central and Eastern Europe	52.7	54.1	107.0	107.8
Central and Corporate	(24.1)	(60.1)	(49.2)	(119.4)
Intersegment eliminations (b)	—	—	—	1.4
Total	$ 1,188.5	$ 1,190.7	$ 2,338.8	$ 2,374.0
VodafoneZiggo JV	$ 531.5	$ 487.6	$ 1,034.3	$ 981.4

____

(a) Amounts have been revised to reflect the retrospective impact of the Centrally-held Cost Allocation, as described above.

(b) Amount for the 2019 six-month period is related to transactions between our continuing and discontinued operations prior to the disposal dates of such discontinued operations.

The following table provides a reconciliation of earnings (loss) from continuing operations to Adjusted EBITDA:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Earnings (loss) from continuing operations	$ (503.8)	$ (339.6)	$ 513.9	$ (646.5)
Income tax expense (benefit)	(158.0)	26.8	(77.9)	54.6
Other income, net	(9.5)	(32.5)	(61.9)	(39.0)
Share of results of affiliates, net	105.4	69.3	72.0	140.2
Losses on debt extinguishment, net	165.6	48.3	220.1	48.8
Realized and unrealized losses (gains) due to changes in fair values of certain investments and debt, net	(152.3)	138.7	377.5	146.9
Foreign currency transactions losses (gains), net	478.0	27.0	86.3	(111.6)
Realized and unrealized losses (gains) on derivative instruments, net	319.7	(152.9)	(917.6)	(70.1)
Interest expense	281.7	363.6	595.0	730.9
Operating income	526.8	148.7	807.4	254.2
Impairment, restructuring and other operating items, net	32.2	33.2	63.2	104.1
Depreciation and amortization	545.7	921.8	1,329.2	1,861.4
Share-based compensation expense	83.8	87.0	139.0	154.3
Adjusted EBITDA	$ 1,188.5	$ 1,190.7	$ 2,338.8	$ 2,374.0

Property and Equipment Additions of our Reportable Segments

The property and equipment additions of our reportable segments (including capital additions financed under vendor financing or finance lease arrangements) are presented below and reconciled to the capital expenditure amounts included in our condensed consolidated statements of cash flows. For additional information concerning capital additions financed under vendor financing and finance lease arrangements, see notes 8 and 10.

	Six months ended June 30,	
	2020	2019
	in millions	
U.K./Ireland	$ 669.4	$ 766.7
Belgium	251.9	275.1
Switzerland	123.8	135.9
Central and Eastern Europe	39.8	41.4
Central and Corporate (a)	157.5	162.2
Total property and equipment additions	1,242.4	1,381.3
Assets acquired under capital-related vendor financing arrangements	(702.9)	(926.3)
Assets acquired under finance leases	(17.2)	(32.6)
Changes in current liabilities related to capital expenditures	127.3	210.5
Total capital expenditures, net	$ 649.6	$ 632.9
Capital expenditures, net:		
Third-party payments	$ 650.9	$ 691.2
Proceeds received for transfers to related parties (b)	(1.3)	(58.3)
Total capital expenditures, net	$ 649.6	$ 632.9
Property and equipment additions - VodafoneZiggo JV	$ 472.4	$ 426.5

____

(a) Includes (i) property and equipment additions representing centrally-owned assets that benefit our operating segments and (ii) the net impact of certain centrally-procured network equipment that is ultimately transferred to our operating segments.

(b) Primarily relates to transfers of centrally-procured property and equipment to the VodafoneZiggo JV and, for the 2019 period, our discontinued operations.

Revenue by Major Category

Our revenue by major category for our consolidated reportable segments is set forth below:

	Three months ended June 30,		Six months ended June 30,	
	2020	**2019**	**2020**	**2019**
	in millions			
Residential revenue:				
Residential cable revenue (a):				
Subscription revenue (b):				
Broadband internet	$ 781.0	$ 799.5	$ 1,577.8	$ 1,602.3
Video	633.6	676.6	1,316.7	1,368.7
Fixed-line telephony	328.3	360.4	666.5	729.2
Total subscription revenue	1,742.9	1,836.5	3,561.0	3,700.2
Non-subscription revenue	35.6	44.5	88.6	98.5
Total residential cable revenue	1,778.5	1,881.0	3,649.6	3,798.7
Residential mobile revenue (c):				
Subscription revenue (b)	227.3	231.4	463.2	459.4
Non-subscription revenue	129.7	173.3	275.0	330.0
Total residential mobile revenue	357.0	404.7	738.2	789.4
Total residential revenue	2,135.5	2,285.7	4,387.8	4,588.1
B2B revenue (d):				
Subscription revenue	123.4	116.8	248.0	230.6
Non-subscription revenue	338.2	357.2	687.7	729.2
Total B2B revenue	461.6	474.0	935.7	959.8
Other revenue (e)	125.8	90.7	275.2	170.5
Total	$ 2,722.9	$ 2,850.4	$ 5,598.7	$ 5,718.4

____

(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 includes, among other items, (i) revenue earned from transitional and other services provided to various third parties, (ii) revenue earned from the JV Services and the sale of customer premises equipment to the VodafoneZiggo JV and (iii) broadcasting revenue in Belgium and Ireland.

Geographic Segments

The revenue of our geographic segments is set forth below:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
U.K.	$ 1,417.2	$ 1,517.7	$ 2,913.6	$ 3,051.2
Belgium	682.5	713.2	1,400.6	1,425.1
Switzerland	299.1	315.0	615.9	631.0
Ireland	114.6	126.3	238.8	254.1
Poland	103.7	106.7	210.4	213.4
Slovakia	12.5	12.4	24.9	24.8
Other, including intersegment eliminations	93.3	59.1	194.5	118.8
Total	$ 2,722.9	$ 2,850.4	$ 5,598.7	$ 5,718.4
VodafoneZiggo JV (the Netherlands)	$ 1,081.6	$ 1,084.5	$ 2,178.7	$ 2,178.4

Item 2. 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 condensed consolidated financial statements and the discussion and analysis included in our 10-K, is intended to assist in providing an understanding of our financial condition, changes in financial condition and results of operations and is organized as follows:

- *Forward-looking Statements.* This section provides a description of certain factors that could cause actual results or events to differ materially from anticipated results or events.
- *Overview.* This section provides a general description of our business and recent events.
- *Material Changes in Results of Operations.* This section provides an analysis of our results of operations for the three and six months ended June 30, 2020 and 2019.
- *Material Changes in Financial Condition.* This section provides an analysis of our corporate and subsidiary liquidity, condensed consolidated statements of cash flows and contractual commitments.

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

Unless otherwise indicated, convenience translations into U.S. dollars are calculated as of June 30, 2020.

Forward-looking Statements

Certain statements in this Quarterly Report on Form 10-Q constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. To the extent that statements in this Quarterly 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, Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations* and *Part I, Item 3. Quantitative and Qualitative Disclosures About Market Risk* may contain forward-looking statements, including statements regarding our business, product, foreign currency and finance strategies, our property and equipment additions (including with respect to the Network Extensions, as defined below), 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 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 in our 10-K and this Quarterly Report on Form 10-Q, as well as the following list of some but not all of the factors that could cause actual results or events to differ materially from anticipated results or events:

- economic and business conditions and industry trends in the countries in which we or our affiliates operate;
- the competitive environment in the industries in the countries in which we or our affiliates operate, 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 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 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 countries in which we or our affiliates operate and adverse outcomes from regulatory proceedings;
- government intervention that requires opening our broadband distribution networks to competitors, such as the obligations imposed in Belgium;
- 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., the U.S. or in other countries in which we or our affiliates operate;
- changes in laws and government regulations that may impact the availability and cost of capital and the derivative instruments that hedge certain of our financial risks;
- 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 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, including retransmission and copyright fees payable to public and private broadcasters;
- 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 our network extension programs;
- 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;
- our equity capital structure; and
- events that are outside of our control, such as political unrest in international markets, terrorist attacks, malicious human acts, natural disasters, pandemics or epidemics (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 Quarterly 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 Quarterly 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.

Overview

General

We are an international provider of broadband internet, video, fixed-line telephony and mobile communications services to residential customers and businesses in Europe. Our continuing operations comprise businesses that provide residential and B2B communications services in (i) the U.K. and Ireland through Virgin Media, (ii) Belgium through Telenet and (iii) Switzerland, Poland and Slovakia through UPC Holding. In addition, we own a 50% noncontrolling interest in the VodafoneZiggo JV, which provides residential and B2B communications services in the Netherlands.

As further described in note 4 to our condensed consolidated financial statements, we (i) completed the sale of our operations in Germany, Romania, Hungary and the Czech Republic (exclusive of our DTH operations) on July 31, 2019 and (ii) completed the sale of the operations of UPC DTH on May 2, 2019. Accordingly, our operations in Germany, Romania, Hungary and the Czech Republic and the operations of UPC DTH for the three and six months ended June 30, 2019 are presented as discontinued operations. In the following discussion and analysis, the operating statistics, results of operations, cash flows and financial condition that we present and discuss are those of our continuing operations unless otherwise indicated.

Effective May 7, 2020, in connection with the pending formation of the U.K. JV, we began accounting for the U.K. JV Entities as held for sale. Accordingly, the assets and liabilities of the U.K. JV Entities are included in assets held for sale and liabilities associated with assets held for sale, respectively, on our June 30, 2020 condensed consolidated balance sheet. Consistent with the applicable guidance, we have not reflected similar reclassifications in our condensed consolidated statements of operations or cash flows.

Operations

At June 30, 2020, our continuing operations owned and operated networks that passed 25,964,000 homes and served 10,716,600 fixed-line customers and 6,413,100 mobile subscribers.

We currently are engaged in certain network extension programs across our footprint, which we collectively refer to as the "**Network Extensions**." During the first six months of 2020, pursuant to the Network Extensions, our operations connected approximately 249,000 additional residential and commercial premises (excluding upgrades) to our two-way networks, including approximately 186,000 residential and commercial premises connected by Virgin Media in the U.K. and Ireland. Depending on a variety of factors, including the financial and operational results of these programs, the Network Extensions may be continued, modified or cancelled at our discretion.

Impact of COVID-19

In March 2020, the World Health Organization declared the outbreak of COVID-19 to be a global pandemic. In response to the COVID-19 pandemic, 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. In accordance with government mandates or recommended guidelines, as well as our desire to protect the health and safety of our employees, customers and communities, many of our retail stores were temporarily closed in mid-March 2020 and remained closed for up to several months. In addition, on March 16, 2020, most of our office personnel began working remotely, and many continue to do so. We have also taken a number of commercial initiatives in response to the pandemic with respect to our product and service offerings, including (i) free-of-charge speed upgrades for many of our broadband internet customers, (ii) the offering of unlimited minutes to many of our postpaid mobile subscribers, (iii) increases in the number of available kids channels, as well as the offering of several free movies and television series to many of our video subscribers, (iv) modifications to our disconnection policies for non-paying customers, including (a) extended time periods for delinquent accounts before we commence service restrictions or disconnections and (b) the temporary suspension of certain late payment charges, and (v) the temporary pausing of certain sports subscription charges.

The facts and circumstances surrounding the COVID-19 pandemic continue to change rapidly and, accordingly, the ultimate impact that COVID-19 will have on the global economy and our company is highly uncertain and impossible to predict. To date, our company has not experienced an overall material adverse impact from the COVID-19 pandemic, as demand for the products and services that we provide has increased following the stay-at-home and remote work restrictions or recommendations that have been implemented throughout the countries in which we operate. In this regard, our residential net customer losses during the period impacted by the COVID-19 pandemic have thus far been generally in line with our expectations, as declines in gross

residential customer additions have been offset by reductions in residential churn rates across all our markets. During the second quarter of 2020, certain of our revenue streams were adversely impacted by the COVID-19 pandemic, the most notable of which include (i) lower revenue associated with the pausing of certain sports leagues during the second quarter of 2020, (ii) lower sales of mobile handsets, due largely to the fact that, as discussed above, many of our retail stores were closed for a significant portion of the quarter, (iii) lower broadcasting revenue in Belgium and Ireland and (iv) lower interconnect and mobile roaming revenue resulting from changes in mobile usage associated with factors such as lower travel and the use of WiFi alternatives during stay-at-home mandates or recommendations. With respect to our Adjusted EBITDA during the second quarter of 2020, the aforementioned revenue declines had a significantly lesser adverse impact on our Adjusted EBITDA, as (a) we received certain credits during the second quarter of 2020 for content costs and lost revenue associated with the paused sports leagues, which offset the related revenue declines, (b) mobile handset sales generate low margins and (c) the lower interconnect and roaming revenue was largely offset by similar declines in interconnect and roaming expenses. In addition, our Adjusted EBITDA during the second quarter of 2020 was positively impacted by various other factors relating to the COVID-19 pandemic, including (1) the acceleration of certain costs for sports rights from the second quarter to the first quarter, as further described in *Discussion and Analysis of our Reportable Segments* below, (2) lower costs associated with customer service and sales and marketing and (3) the benefits to our Adjusted EBITDA related to the aforementioned declines in residential churn rates. In this regard, we estimate that the overall impact of the COVID-19 pandemic on our second quarter 2020 Adjusted EBITDA was minimal. For additional information regarding the impact of COVID-19 on our results of operations for the three and six months ended June 30, 2020, see *Discussion and Analysis of our Reportable Segments* below.

Although we have not yet experienced any material adverse impact to cash collections from our residential or B2B customers, the risk that certain customers will be unable to continue to pay for our services in future periods will increase to the extent that the current economic disruption is prolonged.

As our residential and business customers navigate through the COVID-19 pandemic, the connectivity that our broadband networks allow has been essential, and demand for the products and services that we provide has increased. This has resulted in a significant increase in data consumption by our customers, as well as the extension of peak traffic times, which were previously concentrated during evening hours and now span the majority of the day. Notwithstanding these increased traffic levels, our networks have continued to perform exceptionally well, and our technicians have and will continue to work diligently to ensure the reliability of our networks.

As indicated above, the COVID-19 pandemic has caused significant distress in global financial markets that could have an adverse impact on our company. However, we currently believe our financial risks are mitigated by several factors, including the following: (i) our access to our cash and cash equivalents and short-term investments has not been impaired during the first half of 2020, (ii) we do not currently perceive a significant risk of a credit event that would impair our cash holdings, derivative assets or restrict available credit facilities, (iii) we continue to maintain a strong balance sheet, with over 75% of our debt not due until 2026 or later, (iv) our credit facilities do not contain maintenance-based leverage covenants, with the exception of any revolving facilities that are drawn in excess of 40% of total availability (such revolving facilities were undrawn at June 30, 2020), and (v) our derivative instruments provide protection against adverse changes in financial markets, such as the weakening of the British pound sterling and declines in the value of certain of our fair value investments. In addition, we have implemented enhanced risk monitoring procedures at this time of heightened market volatility.

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.

Competition and Other External Factors

We are experiencing competition in all of the markets in which we or our affiliates operate. 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 revenue impact of changes in fixed-line customers and ARPU of our consolidated reportable segments, see *Discussion and Analysis of our Reportable Segments* 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 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, and has now entered into a transition period until December 31, 2020, during which the U.K. and the E.U. will negotiate to formalize the future U.K.-E.U. relationship with respect to a number of matters, most notably trade. Although the U.K. has ceased to be an E.U. member, during

the transition period their trading relationship will remain the same and the U.K. will continue to follow the E.U.'s rules, such as accepting rulings from the European Court of Justice, and the U.K. will continue to contribute to the E.U.’s budget. Uncertainty remains as to what specific terms of separation may be agreed during the transition period. It is possible that the U.K. will fail to agree to specific separation terms with the E.U. by the end of the transition period, which, absent extension, may require the U.K. to leave the E.U. under a so-called “hard Brexit” or “no-deal Brexit” without specific agreements on trade, finance and other key elements. The foregoing has caused uncertainty as to Brexit’s impact on the free movement of goods, services, people and capital between the U.K. and the E.U., customer behavior, economic conditions, interest rates, currency exchange rates and availability of capital. The effects of Brexit could adversely affect our business, results of operations and financial condition.

Material Changes in Results of Operations

We have completed a number of transactions that impact the comparability of our results of operations, the most notable of which is the De Vijver Media Acquisition on June 3, 2019. For further information, see note 4 to our condensed consolidated financial statements.

In the following discussion, we quantify the estimated impact of acquisitions (the **Acquisition Impact**) on our operating results. The Acquisition Impact represents our estimate of the difference between the operating results of the periods under comparison that is attributable to an acquisition. In general, we base our estimate of the Acquisition Impact on an acquired entity’s operating results during the first three to twelve months following the acquisition date, as adjusted to remove integration costs and any other material unusual or nonoperational items, such that changes from those operating results in subsequent periods are considered to be organic changes. Accordingly, in the following discussion, (i) organic variances attributed to an acquired entity during the first 12 months following the acquisition date represent differences between the Acquisition Impact and the actual results and (ii) the calculation of our organic change percentages includes the organic activity of an acquired entity relative to the Acquisition Impact of such entity.

Changes in foreign currency exchange rates have a significant impact on our reported operating results as all of our operating segments have functional currencies other than the U.S. dollar. Our primary exposure to foreign exchange (**FX**) risk during the six months ended June 30, 2020 was to the British pound sterling and euro as 52.1% and 33.2% of our reported revenue during the period was derived from subsidiaries whose functional currencies are the British pound sterling and euro, respectively. In addition, our reported operating results are impacted by changes in the exchange rates for certain other local currencies in Europe. The portions of the changes in the various components of our results of operations that are attributable to changes in FX are highlighted under *Discussion and Analysis of our Reportable Segments* and *Discussion and Analysis of our Consolidated Operating Results* below. For information regarding our foreign currency risks and the applicable foreign currency exchange rates in effect for the periods covered by this Quarterly Report, see Part I, Item 3. *Quantitative and Qualitative Disclosures about Market Risk — Foreign Currency Risk* below.

The amounts presented and discussed below represent 100% of each of our consolidated reportable segment’s results of operations. As we have the ability to control Telenet, we consolidate 100% of its revenue and expenses in our condensed consolidated statements of operations despite the fact that third parties own a significant interest. The noncontrolling owners’ interests in the operating results of Telenet and other less significant majority-owned subsidiaries are reflected in net earnings or loss attributable to noncontrolling interests in our condensed consolidated statements of operations.

Discussion and Analysis of our Reportable Segments

General

All of our reportable segments derive their revenue primarily from residential and B2B communications services, including broadband internet, video, fixed-line telephony and mobile services. For detailed information regarding the composition of our reportable segments and how we define and categorize our revenue components, see note 17 to our condensed consolidated financial statements. For more information regarding the results of operations of the VodafoneZiggo JV, refer to *Discussion and Analysis of our Consolidated Operating Results — Share of results of affiliates* below.

The tables presented below in this section provide the details of the revenue and Adjusted EBITDA of our consolidated reportable segments for the three months ended June 30, 2020 and 2019. These tables present (i) the amounts reported for the current and comparative periods, (ii) the reported U.S. dollar change and percentage change from period to period and (iii) the organic U.S. dollar change and percentage change from period to period. For our organic comparisons, which exclude the impact of FX, we assume that exchange rates remained constant at the prior-year rate during all periods presented. We also provide a table

showing the Adjusted EBITDA margins of our consolidated reportable segments for three months ended June 30, 2020 and 2019 at the end of this section.

Consolidated Adjusted EBITDA (previously referred to as "Adjusted OIBDA") 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 readily view operating trends from a consolidated view. Investors should view consolidated Adjusted EBITDA as a supplement to, and not a substitute for, GAAP measures of performance included in our condensed consolidated statements of operations. The following table provides a reconciliation of earnings (loss) from continuing operations to Adjusted EBITDA:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Earnings (loss) from continuing operations	$ (503.8)	$ (339.6)	$ 513.9	$ (646.5)
Income tax expense (benefit)	(158.0)	26.8	(77.9)	54.6
Other income, net	(9.5)	(32.5)	(61.9)	(39.0)
Share of results of affiliates, net	105.4	69.3	72.0	140.2
Losses on debt extinguishment, net	165.6	48.3	220.1	48.8
Realized and unrealized losses (gains) due to changes in fair values of certain investments and debt, net	(152.3)	138.7	377.5	146.9
Foreign currency transactions losses (gains), net	478.0	27.0	86.3	(111.6)
Realized and unrealized losses (gains) on derivative instruments, net	319.7	(152.9)	(917.6)	(70.1)
Interest expense	281.7	363.6	595.0	730.9
Operating income	526.8	148.7	807.4	254.2
Impairment, restructuring and other operating items, net	32.2	33.2	63.2	104.1
Depreciation and amortization	545.7	921.8	1,329.2	1,861.4
Share-based compensation expense	83.8	87.0	139.0	154.3
Adjusted EBITDA	$ 1,188.5	$ 1,190.7	$ 2,338.8	$ 2,374.0

Revenue of our Consolidated Reportable Segments

General. While not specifically discussed in the below explanations of the changes in the revenue of our consolidated reportable segments, we are experiencing competition in all of our markets. This competition has an adverse impact on our ability to increase or maintain our total number of customers and/or our ARPU.

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 within a segment during the period.

Revenue

	Three months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 1,531.8	$ 1,644.0	$ (112.2)	(6.8)	$ (59.7)	(3.6)
Belgium	682.5	713.2	(30.7)	(4.3)	(27.9)	(3.9)
Switzerland	299.1	315.0	(15.9)	(5.0)	(27.3)	(8.6)
Central and Eastern Europe	116.2	119.1	(2.9)	(2.4)	4.9	4.2
Central and Corporate (a)	93.7	60.2	33.5	55.6	(6.3)	(6.4)
Intersegment eliminations	(0.4)	(1.1)	0.7	N.M.	0.7	N.M.
Total	$ 2,722.9	$ 2,850.4	$ (127.5)	(4.5)	$ (115.6)	(4.0)

	Six months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 3,152.4	$ 3,305.3	$ (152.9)	(4.6)	$ (70.4)	(2.1)
Belgium	1,400.6	1,425.1	(24.5)	(1.7)	(29.0)	(2.0)
Switzerland	615.9	631.0	(15.1)	(2.4)	(35.8)	(5.7)
Central and Eastern Europe	235.3	238.2	(2.9)	(1.2)	9.2	3.8
Central and Corporate (a)	194.9	120.9	74.0	61.2	(2.4)	(1.2)
Intersegment eliminations	(0.4)	(2.1)	1.7	N.M.	1.7	N.M.
Total	$ 5,598.7	$ 5,718.4	$ (119.7)	(2.1)	$ (126.7)	(2.2)

____

N.M. — Not Meaningful.

(a) Amounts primarily include revenue earned from transition and other services provided to the VodafoneZiggo JV and various third parties and the sale of customer premises equipment to the VodafoneZiggo JV. For additional information, see notes 4 and 5 to our condensed consolidated financial statements.

U.K./Ireland. The details of the decreases in U.K./Ireland's revenue during the three and six months ended June 30, 2020, as compared to the corresponding periods in 2019, are set forth below:

	Three-month period			Six-month period		
	Subscription revenue	Non-subscription revenue	Total	Subscription revenue	Non-subscription revenue	Total
	in millions					
Decrease in residential cable subscription revenue due to change in:						
Average number of customers	$ (3.3)	$ —	$ (3.3)	$ (7.2)	$ —	$ (7.2)
ARPU (a)	(22.0)	—	(22.0)	(8.6)	—	(8.6)
Decrease in residential cable non-subscription revenue (b)	—	(4.3)	(4.3)	—	(3.9)	(3.9)
Total decrease in residential cable revenue	(25.3)	(4.3)	(29.6)	(15.8)	(3.9)	(19.7)
Increase (decrease) in residential mobile revenue (c)	(2.2)	(16.2)	(18.4)	1.2	(29.4)	(28.2)
Increase (decrease) in B2B revenue (d)	2.8	(5.3)	(2.5)	6.0	(19.4)	(13.4)
Decrease in other revenue (e)	—	(9.2)	(9.2)	—	(9.1)	(9.1)
Total organic decrease	(24.7)	(35.0)	(59.7)	(8.6)	(61.8)	(70.4)
Impact of FX	(42.3)	(10.2)	(52.5)	(66.0)	(16.5)	(82.5)
Total	$ (67.0)	$ (45.2)	$ (112.2)	$ (74.6)	$ (78.3)	$ (152.9)

____

(a) The decreases in cable subscription revenue related to changes in ARPU include lower revenue of approximately $28 million during the second quarter of 2020 associated with the pausing or cancellation of certain sporting events due to the COVID-19 pandemic, including (i) credits that were given to certain customers and (ii) the estimated impact of certain customers canceling their premium sports subscriptions.

(b) The decreases in residential cable non-subscription revenue are primarily attributable to lower revenue from late fees in the U.K., largely related to the temporary suspension of late payment charges during the COVID-19 pandemic.

(c) The decreases in residential mobile non-subscription revenue are primarily attributable to (i) decreases in revenue from mobile handset sales in the U.K., due in large part to the impact of retail store closures during the COVID-19 pandemic, and (ii) lower interconnect and mobile roaming revenue driven by stay-at-home behaviors during the COVID-19 pandemic. The decreases in residential mobile non-subscription revenue also include the unfavorable impact of $5.3 million of revenue recognized during the second quarter of 2019 in connection with the sale of rights to future commission payments on customer handset insurance arrangements in the U.K.

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

(e) The decreases in other revenue are attributable to lower broadcasting revenue in Ireland, largely due to the impact of the COVID-19 pandemic.

Belgium. The details of the decreases in Belgium's revenue during the three and six months ended June 30, 2020, as compared to the corresponding periods in 2019, are set forth below:

	Three-month period			Six-month period		
	Subscription revenue	Non-subscription revenue	Total	Subscription revenue	Non-subscription revenue	Total
	in millions					
Increase (decrease) in residential cable subscription revenue due to change in:						
Average number of customers	$ (10.7)	$ —	$ (10.7)	$ (22.3)	$ —	$ (22.3)
ARPU	7.1	—	7.1	10.9	—	10.9
Decrease in residential cable non-subscription revenue	—	(1.7)	(1.7)	—	(2.9)	(2.9)
Total decrease in residential cable revenue	(3.6)	(1.7)	(5.3)	(11.4)	(2.9)	(14.3)
Increase (decrease) in residential mobile revenue (a)	(0.7)	(21.1)	(21.8)	4.2	(22.5)	(18.3)
Increase (decrease) in B2B revenue (b)	7.1	(5.3)	1.8	17.5	(12.2)	5.3
Decrease in other revenue	—	(2.6)	(2.6)	—	(1.7)	(1.7)
Total organic increase (decrease)	2.8	(30.7)	(27.9)	10.3	(39.3)	(29.0)
Impact of acquisitions	—	13.9	13.9	—	42.8	42.8
Impact of disposals	(2.0)	(0.8)	(2.8)	(2.0)	(0.8)	(2.8)
Impact of FX	(10.9)	(3.0)	(13.9)	(26.6)	(8.9)	(35.5)
Total	$ (10.1)	$ (20.6)	$ (30.7)	$ (18.3)	$ (6.2)	$ (24.5)

____

(a) The increase in residential mobile subscription revenue for the six-month comparison is primarily due to an increase in the average number of mobile subscribers. The decreases in mobile non-subscription revenue are primarily attributable to (i) lower interconnect and mobile roaming revenue driven by stay-at-home behaviors during the COVID-19 pandemic and (ii) decreases in revenue from mobile handset sales, due in large part to the impact of retail store closures during the COVID-19 pandemic.

(b) The increases in B2B subscription revenue are primarily due to increases in the average number of SOHO customers. The decreases in B2B non-subscription revenue are primarily attributable to (i) lower interconnect revenue and (ii) decreases in revenue from mobile handset sales, due in large part to the impact of the COVID-19 pandemic.

For information concerning certain regulatory developments that could have an adverse impact on our revenue in Belgium, see "*Belgium Regulatory Developments*" in note 16 to our condensed consolidated financial statements.

Switzerland. The details of the decreases in Switzerland's revenue during the three and six months ended June 30, 2020, as compared to the corresponding periods in 2019, are set forth below:

	Three-month period			Six-month period		
	Subscription revenue	Non-subscription revenue	Total	Subscription revenue	Non-subscription revenue	Total
	in millions					
Decrease in residential cable subscription revenue due to change in:						
Average number of customers	$ (15.7)	$ —	$ (15.7)	$ (31.3)	$ —	$ (31.3)
ARPU	(6.1)	—	(6.1)	(12.3)	—	(12.3)
Decrease in residential cable non-subscription revenue (a)	—	(2.8)	(2.8)	—	(1.9)	(1.9)
Total decrease in residential cable revenue	(21.8)	(2.8)	(24.6)	(43.6)	(1.9)	(45.5)
Increase (decrease) in residential mobile revenue (b)	3.3	(3.6)	(0.3)	7.6	2.1	9.7
Increase (decrease) in B2B revenue	(0.4)	(1.9)	(2.3)	(0.6)	0.6	—
Decrease in other revenue	—	(0.1)	(0.1)	—	—	—
Total organic increase (decrease)	(18.9)	(8.4)	(27.3)	(36.6)	0.8	(35.8)
Impact of FX	9.2	2.2	11.4	16.0	4.7	20.7
Total	$ (9.7)	$ (6.2)	$ (15.9)	$ (20.6)	$ 5.5	$ (15.1)

____

(a) The decrease in residential cable non-subscription revenue for the three-month comparison includes $2.1 million of revenue associated with our Swiss sports channels that was accelerated into the first quarter of 2020. As further described under *Discussion and Analysis of our Consolidated Operating Results — Programming and other direct costs of services*, Switzerland's ice hockey league was cancelled as a result of the COVID-19 pandemic, which resulted in the prepaid amounts for the associated sports rights that would have been expensed during the second quarter of 2020 to be recognized during the first quarter of 2020. Accordingly, $2.1 million of associated revenue that would have been recorded in April 2020 was recognized during the first quarter of 2020.

(b) The increases in residential mobile subscription revenue are primarily due to increases in the average number of mobile subscribers. The decrease in residential mobile non-subscription revenue for the three-month comparison is primarily attributable to lower revenue from mobile handset sales, due in large part to the impact of retail store closures during the COVID-19 pandemic.

Central and Eastern Europe. The details of the decreases in Central and Eastern Europe's revenue during the three and six months ended June 30, 2020, as compared to the corresponding periods in 2019, are set forth below:

	Three-month period			Six-month period		
	Subscription revenue	Non-subscription revenue	Total	Subscription revenue	Non-subscription revenue	Total
	in millions					
Increase in residential cable subscription revenue due to change in:						
Average number of customers	$ 1.4	$ —	$ 1.4	$ 2.9	$ —	$ 2.9
ARPU	1.3	—	1.3	2.7	—	2.7
Decrease in residential cable non-subscription revenue	—	—	—	—	(0.2)	(0.2)
Total increase (decrease) in residential cable revenue	2.7	—	2.7	5.6	(0.2)	5.4
Increase in residential mobile revenue	0.3	0.2	0.5	0.5	0.3	0.8
Increase in B2B revenue	0.3	0.9	1.2	0.9	1.1	2.0
Increase in other revenue	—	0.5	0.5	—	1.0	1.0
Total organic increase	3.3	1.6	4.9	7.0	2.2	9.2
Impact of FX	(7.6)	(0.2)	(7.8)	(11.5)	(0.6)	(12.1)
Total	$ (4.3)	$ 1.4	$ (2.9)	$ (4.5)	$ 1.6	$ (2.9)

Programming and Other Direct Costs of Services, Other Operating Expenses and SG&A Expenses of our Consolidated Reportable Segments

For information regarding the changes in our (i) programming and other direct costs of services, (ii) other operating expenses and (iii) SG&A expenses, see *Discussion and Analysis of our Consolidated Operating Results* below.

Adjusted EBITDA of our Consolidated Reportable Segments

Adjusted EBITDA is the primary measure used by our chief operating decision maker to evaluate segment operating performance. As presented below, consolidated 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 condensed consolidated statements of operations. The following tables set forth the Adjusted EBITDA of our consolidated reportable segments:

	Three months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019 (a)	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 654.9	$ 687.5	$ (32.6)	(4.7)	$ (10.3)	(1.5)
Belgium	354.1	349.4	4.7	1.3	19.4	5.7
Switzerland	150.9	159.8	(8.9)	(5.6)	(14.6)	(9.9)
Central and Eastern Europe	52.7	54.1	(1.4)	(2.6)	2.2	4.2
Central and Corporate	(24.1)	(60.1)	36.0	59.9	(2.4)	(11.1)
Total	$ 1,188.5	$ 1,190.7	$ (2.2)	(0.2)	$ (5.7)	(0.5)

	Six months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019 (a)	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 1,310.3	$ 1,379.7	$ (69.4)	(5.0)	$ (34.9)	(2.5)
Belgium	685.7	688.4	(2.7)	(0.4)	24.4	3.6
Switzerland	285.0	316.1	(31.1)	(9.8)	(40.7)	(12.9)
Central and Eastern Europe	107.0	107.8	(0.8)	(0.7)	4.8	4.5
Central and Corporate	(49.2)	(119.4)	70.2	58.8	(5.7)	(13.2)
Intersegment eliminations (b)	—	1.4	(1.4)	N.M.	(1.4)	N.M.
Total	$ 2,338.8	$ 2,374.0	$ (35.2)	(1.5)	$ (53.5)	(2.2)

____

(a) Amounts have been revised to reflect the retrospective impact of the Centrally-held Cost Allocation, as further described in note 17 to our condensed consolidated financial statements.

(b) Amount for the 2019 period is related to transactions between our continuing and discontinued operations prior to the disposal dates of such discontinued operations.

N.M. — Not Meaningful.

Adjusted EBITDA Margin

The following table sets forth the Adjusted EBITDA margins (Adjusted EBITDA divided by revenue) of each of our consolidated reportable segments:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019 (a)	2020	2019 (a)
U.K./Ireland	42.7%	41.8%	41.6%	41.7%
Belgium	51.9%	49.0%	49.0%	48.3%
Switzerland	50.4%	50.7%	46.3%	50.1%
Central and Eastern Europe	45.5%	45.6%	45.6%	45.3%

____

(a) Amounts have been revised to reflect the retrospective impact of the Centrally-held Cost Allocation, as further described in note 17 to our condensed consolidated financial statements.

In addition to organic changes in the revenue, operating and SG&A expenses of our consolidated reportable segments, the Adjusted EBITDA margins presented above include the impact of acquisitions. For discussion of the factors contributing to the changes in the Adjusted EBITDA margins of our consolidated reportable segments, see the analysis of our revenue included in *Discussion and Analysis of our Reportable Segments* above and the analysis of our expenses included in *Discussion and Analysis of our Consolidated Operating Results* below.

Discussion and Analysis of our Consolidated Operating Results

Revenue

Our revenue by major category is set forth below:

	Three months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
	in millions, except percentages					
Residential revenue:						
Residential cable revenue (a):						
Subscription revenue (b):						
Broadband internet	$ 781.0	$ 799.5	$ (18.5)	(2.3)	$ 1.7	0.2
Video	633.6	676.6	(43.0)	(6.4)	(27.0)	(4.0)
Fixed-line telephony	328.3	360.4	(32.1)	(8.9)	(22.7)	(6.3)
Total subscription revenue	1,742.9	1,836.5	(93.6)	(5.1)	(48.0)	(2.6)
Non-subscription revenue	35.6	44.5	(8.9)	(20.0)	(8.6)	(19.3)
Total residential cable revenue	1,778.5	1,881.0	(102.5)	(5.4)	(56.6)	(3.0)
Residential mobile revenue (c):						
Subscription revenue (b)	227.3	231.4	(4.1)	(1.8)	0.7	0.3
Non-subscription revenue	129.7	173.3	(43.6)	(25.2)	(40.9)	(23.6)
Total residential mobile revenue	357.0	404.7	(47.7)	(11.8)	(40.2)	(9.9)
Total residential revenue	2,135.5	2,285.7	(150.2)	(6.6)	(96.8)	(4.2)
B2B revenue (d):						
Subscription revenue	123.4	116.8	6.6	5.7	9.8	8.4
Non-subscription revenue	338.2	357.2	(19.0)	(5.3)	(12.4)	(3.5)
Total B2B revenue	461.6	474.0	(12.4)	(2.6)	(2.6)	(0.5)
Other revenue (e)	125.8	90.7	35.1	38.7	(16.2)	(11.4)
Total	$ 2,722.9	$ 2,850.4	$ (127.5)	(4.5)	$ (115.6)	(4.0)

	Six months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
			in millions, except percentages			
Residential revenue:						
Residential cable revenue (a):						
Subscription revenue (b):						
Broadband internet	$ 1,577.8	$ 1,602.3	$ (24.5)	(1.5)	$ 8.5	0.5
Video	1,316.7	1,368.7	(52.0)	(3.8)	(26.1)	(1.9)
Fixed-line telephony	666.5	729.2	(62.7)	(8.6)	(47.6)	(6.5)
Total subscription revenue	3,561.0	3,700.2	(139.2)	(3.8)	(65.2)	(1.8)
Non-subscription revenue	88.6	98.5	(9.9)	(10.1)	(8.9)	(9.1)
Total residential cable revenue	3,649.6	3,798.7	(149.1)	(3.9)	(74.1)	(2.0)
Residential mobile revenue (c):						
Subscription revenue (b)	463.2	459.4	3.8	0.8	13.5	2.9
Non-subscription revenue	275.0	330.0	(55.0)	(16.7)	(49.7)	(15.1)
Total residential mobile revenue	738.2	789.4	(51.2)	(6.5)	(36.2)	(4.6)
Total residential revenue	4,387.8	4,588.1	(200.3)	(4.4)	(110.3)	(2.4)
B2B revenue (d):						
Subscription revenue	248.0	230.6	17.4	7.5	23.8	10.3
Non-subscription revenue	687.7	729.2	(41.5)	(5.7)	(27.1)	(3.7)
Total B2B revenue	935.7	959.8	(24.1)	(2.5)	(3.3)	(0.3)
Other revenue (e)	275.2	170.5	104.7	61.4	(13.1)	(4.5)
Total	$ 5,598.7	$ 5,718.4	$ (119.7)	(2.1)	$ (126.7)	(2.2)

____

(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 $48.9 million and $64.4 million during the three months ended June 30, 2020 and 2019, respectively, and $108.5 million and $125.4 million during the six months ended June 30, 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 includes, among other items, (i) revenue earned from transitional and other services provided to various third parties, (ii) revenue earned from the JV Services and the sale of customer premises equipment to the VodafoneZiggo JV and (iii) broadcasting revenue in Belgium and Ireland.

Total revenue. Our consolidated revenue decreased $127.5 million or 4.5% and $119.7 million or 2.1% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases include (i) increases of $13.9 million and $42.8 million, respectively, attributable to the impact of the De Vijver Media Acquisition and (ii) a decrease of $2.8 million in each period attributable to the impact of a disposition. On an organic basis, our consolidated revenue decreased $115.6 million or 4.0% and $126.7 million or 2.2%, respectively.

Residential revenue. The details of the decreases in our consolidated residential revenue for the three and six months ended June 30, 2020, as compared to the corresponding periods in 2019, are as follows:

	Three-month period	Six-month period
	in millions	
Decrease in residential cable subscription revenue due to change in:		
Average number of customers	$ (22.3)	$ (46.4)
ARPU	(25.7)	(18.8)
Decrease in residential cable non-subscription revenue	(8.6)	(8.9)
Total decrease in residential cable revenue	(56.6)	(74.1)
Increase in residential mobile subscription revenue	0.7	13.5
Decrease in residential mobile non-subscription revenue	(40.9)	(49.7)
Total organic decrease in residential revenue	(96.8)	(110.3)
Impact of acquisitions and dispositions	(1.9)	(2.9)
Impact of FX	(51.5)	(87.1)
Total decrease in residential revenue	$ (150.2)	$ (200.3)

On an organic basis, our consolidated residential cable subscription revenue decreased $48.0 million or 2.6% and $65.2 million or 1.8% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases are primarily attributable to decreases in Switzerland and U.K./Ireland.

On an organic basis, our consolidated residential cable non-subscription revenue decreased $8.6 million or 19.3% and $8.9 million or 9.1% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases are primarily due to decreases in U.K./Ireland and Belgium.

On an organic basis, our consolidated residential mobile subscription revenue increased $0.7 million or 0.3% and $13.5 million or 2.9% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These increases are primarily attributable to increases in Switzerland and, for the six-month comparison, Belgium.

On an organic basis, our consolidated residential mobile non-subscription revenue decreased $40.9 million or 23.6% and $49.7 million or 15.1% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases are primarily attributable to decreases in U.K./Ireland and Belgium.

B2B revenue. On an organic basis, our consolidated B2B subscription revenue increased $9.8 million or 8.4% and $23.8 million or 10.3% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These increases are primarily attributable to increases in Belgium and U.K./Ireland.

On an organic basis, our consolidated B2B non-subscription revenue decreased $12.4 million or 3.5% and $27.1 million or 3.7% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases are primarily due to decreases in U.K./Ireland and Belgium.

Other revenue. On an organic basis, our consolidated other revenue decreased $16.2 million or 11.4% and $13.1 million or 4.5% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases are primarily attributable to (i) lower broadcasting revenue in Ireland and (ii) decreases in revenue earned from the JV Services and, for the three-month comparison, sales of customer premises equipment to the VodafoneZiggo JV.

For additional information concerning the changes in our residential, B2B and other revenue, see *Discussion and Analysis of our Reportable Segments* above.

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.

	Three months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 456.7	$ 504.1	$ (47.4)	(9.4)	$ (31.7)	(6.3)
Belgium	142.4	166.4	(24.0)	(14.4)	(34.2)	(19.1)
Switzerland	54.7	63.5	(8.8)	(13.9)	(10.8)	(17.0)
Central and Eastern Europe	30.4	30.0	0.4	1.3	2.5	8.3
Central and Corporate	31.9	22.9	9.0	39.3	9.2	38.8
Intersegment eliminations	(1.1)	(0.6)	(0.5)	N.M.	(0.5)	N.M.
Total	$ 715.0	$ 786.3	$ (71.3)	(9.1)	$ (65.5)	(8.2)

	Six months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 973.2	$ 1,024.4	$ (51.2)	(5.0)	$ (26.0)	(2.5)
Belgium	331.3	333.4	(2.1)	(0.6)	(26.5)	(7.2)
Switzerland	140.9	128.1	12.8	10.0	8.1	6.3
Central and Eastern Europe	60.2	60.2	—	—	3.2	5.3
Central and Corporate	65.6	41.2	24.4	59.2	24.3	56.4
Intersegment eliminations	(1.1)	(0.6)	(0.5)	N.M.	(0.5)	N.M.
Total	$ 1,570.1	$ 1,586.7	$ (16.6)	(1.0)	$ (17.4)	(1.1)

____

N.M. — Not Meaningful.

Our programming and other direct costs of services decreased $71.3 million or 9.1% and $16.6 million or 1.0% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases include increases of $13.6 million and $33.3 million, respectively, attributable to the impact of the De Vijver Media Acquisition. On an organic basis, our programming and other direct costs of services decreased $65.5 million or 8.2% and $17.4 million or 1.1%, respectively. These decreases include the following factors:

- Decreases in programming and copyright costs of $46.5 million or 11.6% and $27.1 million or 3.3%, respectively, primarily due to decreases in U.K./Ireland, Switzerland and Belgium. These decreases are primarily due to lower costs for certain premium and/or basic content, including (i) a decrease of $28.9 million in U.K./Ireland related to credits received during the second quarter of 2020 in connection with the pausing or cancellation of certain sporting events due to the COVID-19 pandemic, which offset the aforementioned revenue declines, and (ii) a decrease of $14.2 million for the three-month comparison due to the acceleration of certain costs for sports rights as a result of the COVID-19 pandemic. In this regard, certain sports leagues in Belgium and Switzerland were cancelled and, accordingly, the prepaid amounts for the associated sports rights that would have been expensed during the second quarter of 2020 were recognized during the first quarter of 2020;

- Decreases in mobile handset and other device costs of $9.1 million or 10.5% and $11.5 million or 6.8%, respectively, primarily due to lower sales volumes in U.K./Ireland, Belgium and, for the three-month comparison, Switzerland, largely due to temporary retail store closures as a result of the COVID-19 pandemic;

- The impact of the classification of costs associated with the delivery of certain transitional services provided by Central and Corporate to various third parties in connection with our recent dispositions. Beginning on the effective dates of the underlying agreements, these costs became direct costs of services, which resulted in direct cost increases of $6.6 million and $11.0 million, respectively, that were fully offset by corresponding decreases, primarily in various other operating expenses within Central and Corporate; and

- An increase (decrease) in interconnect and access costs of ($15.2 million) or (7.2%) and $0.7 million or 0.2%, respectively, primarily due to the net effect of (i) higher MVNO costs in Switzerland and U.K./Ireland and (ii) lower interconnect and mobile roaming costs, as decreases in Belgium were only partially offset by increases in U.K./Ireland. Across all of our markets, interconnect and mobile roaming costs include the positive impact of changes in mobile usage 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, share-based compensation and other costs related to our operations. We do not include share-based compensation in the following discussion and analysis of the other operating expenses of our consolidated reportable segments as share-based compensation expense is not included in the performance measures of our consolidated reportable segments. Share-based compensation expense is separately discussed further below.

	Three months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 228.2	$ 229.9	$ (1.7)	(0.7)	$ 6.2	2.7
Belgium	94.9	98.3	(3.4)	(3.5)	(0.9)	(0.9)
Switzerland	45.5	46.6	(1.1)	(2.4)	(2.9)	(6.2)
Central and Eastern Europe	15.7	17.3	(1.6)	(9.2)	(0.5)	(2.9)
Central and Corporate	13.1	29.4	(16.3)	(55.4)	(19.0)	(66.9)
Intersegment eliminations	2.1	(4.7)	6.8	N.M.	6.8	N.M.
Total other operating expenses excluding share-based compensation expense	399.5	416.8	(17.3)	(4.2)	$ (10.3)	(2.5)
Share-based compensation expense	1.6	1.0	0.6	N.M.		
Total	$ 401.1	$ 417.8	$ (16.7)	(4.0)		

	Six months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 469.7	$ 462.5	$ 7.2	1.6	$ 19.8	4.3
Belgium	188.1	198.8	(10.7)	(5.4)	(5.3)	(2.7)
Switzerland	91.9	92.1	(0.2)	(0.2)	(3.2)	(3.5)
Central and Eastern Europe	32.1	34.3	(2.2)	(6.4)	(0.6)	(1.7)
Central and Corporate	35.0	55.3	(20.3)	(36.7)	(23.2)	(42.6)
Intersegment eliminations	2.1	(7.7)	9.8	N.M.	9.8	N.M.
Total other operating expenses excluding share-based compensation expense	818.9	835.3	(16.4)	(2.0)	$ (2.7)	(0.3)
Share-based compensation expense	2.3	1.9	0.4	21.1		
Total	$ 821.2	$ 837.2	$ (16.0)	(1.9)		

____

N.M. — Not Meaningful.

Our other operating expenses (exclusive of share-based compensation expense) decreased $17.3 million or 4.2% and $16.4 million or 2.0% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. On an organic basis, our other operating expenses decreased $10.3 million or 2.5% and $2.7 million or 0.3%, respectively. These decreases include the following factors:

- Increases in network infrastructure charges in U.K./Ireland of $4.4 million and $14.4 million, respectively, following an increase in the rateable value of certain of Virgin Media's assets. For additional information, see "*Other Regulatory Issues*" in note 16 to our condensed consolidated financial statements;

- Decreases in customer service costs of $13.2 million or 21.4% and $12.5 million or 9.9%, respectively, primarily due to lower call center costs in U.K./Ireland and Belgium. The lower call center costs in U.K./Ireland are primarily due to lockdowns during the second quarter of 2020 associated with the COVID-19 pandemic, which prevented certain outsourced contract services from being performed;

- The aforementioned impact of the classification of costs associated with the delivery of certain transitional services provided by Central and Corporate to various third parties in connection with our recent dispositions. Beginning on the effective dates of the underlying agreements, these costs became direct costs of services, which resulted in decreases in various other operating expenses of $6.3 million and $10.7 million, respectively, within Central and Corporate; and

- Increases in personnel costs of $10.7 million or 8.8% and $8.4 million or 3.4%, respectively, primarily due to the net effect of (i) higher average costs per employee, primarily in U.K./Ireland and Central and Corporate, (ii) lower staffing levels, primarily in U.K./Ireland and Central and Corporate, and (iii) decreases in temporary personnel costs, primarily in U.K./Ireland.

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 the SG&A expenses of our consolidated reportable segments as share-based compensation expense is not included in the performance measures of our consolidated reportable segments. Share-based compensation expense is separately discussed further below.

	Three months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 192.0	$ 222.5	$ (30.5)	(13.7)	$ (23.9)	(10.7)
Belgium	91.1	99.1	(8.0)	(8.1)	(12.2)	(11.6)
Switzerland	48.0	45.1	2.9	6.4	1.0	2.2
Central and Eastern Europe	17.4	17.7	(0.3)	(1.7)	0.7	4.0
Central and Corporate	72.8	68.0	4.8	7.1	5.9	8.7
Intersegment eliminations	(1.4)	4.2	(5.6)	N.M.	(5.6)	N.M.
Total SG&A expenses excluding share-based compensation expense	419.9	456.6	(36.7)	(8.0)	$ (34.1)	(7.4)
Share-based compensation expense	82.2	86.0	(3.8)	(4.4)		
Total	$ 502.1	$ 542.6	$ (40.5)	(7.5)		

	Six months ended June 30,		Increase (decrease)		Organic increase (decrease)	
	2020	2019	$	%	$	%
	in millions, except percentages					
U.K./Ireland	$ 399.2	$ 438.7	$ (39.5)	(9.0)	$ (29.3)	(6.7)
Belgium	195.5	204.5	(9.0)	(4.4)	(21.6)	(9.7)
Switzerland	98.1	94.7	3.4	3.6	—	—
Central and Eastern Europe	36.0	35.9	0.1	0.3	1.8	5.0
Central and Corporate	143.5	143.8	(0.3)	(0.2)	2.2	1.5
Intersegment eliminations	(1.4)	4.8	(6.2)	N.M.	(6.2)	N.M.
Total SG&A expenses excluding share-based compensation expense	870.9	922.4	(51.5)	(5.6)	$ (53.1)	(5.6)
Share-based compensation expense	136.7	152.4	(15.7)	(10.3)		
Total	$ 1,007.6	$ 1,074.8	$ (67.2)	(6.3)		

____

N.M. — Not Meaningful.

Supplemental SG&A expense information

	Three months ended June 30,		Decrease		Organic decrease	
	2020	2019	$	%	$	%
	in millions, except percentages					
General and administrative (a)	$ 334.8	$ 356.0	$ (21.2)	(6.0)	$ (19.0)	(5.3)
External sales and marketing	85.1	100.6	(15.5)	(15.4)	(15.1)	(14.8)
Total	$ 419.9	$ 456.6	$ (36.7)	(8.0)	$ (34.1)	(7.4)

	Six months ended June 30,		Decrease		Organic decrease	
	2020	2019	$	%	$	%
	in millions, except percentages					
General and administrative (a)	$ 691.3	$ 716.6	$ (25.3)	(3.5)	$ (25.7)	(3.5)
External sales and marketing	179.6	205.8	(26.2)	(12.7)	(27.4)	(13.0)
Total	$ 870.9	$ 922.4	$ (51.5)	(5.6)	$ (53.1)	(5.6)

____

(a) General and administrative expenses include all personnel-related costs within our SG&A expenses, including personnel-related costs associated with our sales and marketing function.

Our SG&A expenses (exclusive of share-based compensation expense) decreased $36.7 million or 8.0% and $51.5 million or 5.6% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases include increases of $6.7 million and $18.1 million, respectively, attributable to the impact of the De Vijver Media Acquisition. On an organic basis, our SG&A expenses decreased $34.1 million or 7.4% and $53.1 million or 5.6%, respectively. These decreases include the following factors:

- Decreases in external sales and marketing costs of $15.1 million or 14.8% and $27.4 million or 13.0%, respectively, due to lower costs associated with advertising campaigns in U.K./Ireland, Belgium and Switzerland; and

- Decreases in personnel costs of $11.4 million or 5.3% and $13.4 million or 3.1%, respectively, primarily due to the net effect of (i) higher average costs per employee, primarily in U.K./Ireland, Central and Corporate and, for the six-month comparison, Belgium, (ii) lower staffing levels, primarily in U.K./Ireland and Central and Corporate, and (iii) decreases in temporary personnel costs, primarily in U.K./Ireland. The higher average costs per employee include the impact of (a) lower severance costs in U.K./Ireland of $6.3 million associated with revisions to our operating model and decreases in senior management personnel during the second quarter of 2019 and (b) decreases in Central and Corporate related to a $5.0 million cash bonus associated with the renewal of an existing executive employment contract on similar terms paid in the second quarter of 2019.

Share-based compensation expense

Our share-based compensation expense primarily relates to the share-based incentive awards issued by Liberty Global to its employees and employees of its subsidiaries. A summary of our aggregate share-based compensation expense is set forth below:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Liberty Global:				
Performance-based incentive awards (a)	$ 21.6	$ 38.0	$ 49.3	$ 67.9
Non-performance based incentive awards (b)	47.8	29.0	66.1	51.0
Other (c)	6.0	12.6	12.2	22.5
Total Liberty Global	75.4	79.6	127.6	141.4
Other	8.4	7.4	11.4	12.9
Total	$ 83.8	$ 87.0	$ 139.0	$ 154.3
Included in:				
Other operating expense	$ 1.6	$ 1.0	$ 2.3	$ 1.9
SG&A expense	82.2	86.0	136.7	152.4
Total	$ 83.8	$ 87.0	$ 139.0	$ 154.3

____

(a) Includes share-based compensation expense related to (i) PSUs, (ii) the 2019 Challenge Performance Awards, which were granted in March 2019 and included PSARs and PSUs, and (iii) the performance-based portion of the 2019 CEO Performance Award, which was granted in May 2019.

(b) In 2019, we changed our policy to provide that all new equity grants would have ten-year contractual terms in order to more closely align with common market practice. In April 2020, the compensation committee of our board of directors approved the extension of the expiration dates of outstanding SARs and director options granted in 2013 from a seven-year term to a ten-year term in order to align with this new policy. Accordingly, the Black-Scholes fair values of the outstanding awards increased, resulting in the recognition of an aggregate incremental share-based compensation expense of $18.9 million during the second quarter of 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 expense, see note 13 to our condensed consolidated financial statements.

Depreciation and amortization expense

Our depreciation and amortization expense was $545.7 million and $1,329.2 million for the three and six months ended June 30, 2020, respectively, and $921.8 million and $1,861.4 million for the three and six months ended June 30, 2019, respectively. Excluding the effects of FX, depreciation and amortization expense decreased $365.4 million or 39.6% and $508.5 million or 27.3% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases are primarily due to the net effect of (i) decreases associated with certain assets becoming fully depreciated, primarily in U.K./Ireland, Central and Corporate, Belgium and Switzerland, (ii) increases 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, (iii) decreases in U.K./Ireland of $254.1 million as a result of the held-for-sale presentation of the U.K. JV Entities effective May 7, 2020 and (iv) decreases due to assets becoming fully amortized, primarily in U.K./Ireland. For information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4 to our condensed consolidated financial statements.

Impairment, restructuring and other operating items, net

We recognized impairment, restructuring and other operating items, net, of $32.2 million and $63.2 million during the three and six months ended June 30, 2020, respectively, and $33.2 million and $104.1 million during the three and six months ended June 30, 2019, respectively.

The amounts for the 2020 periods include (i) restructuring charges of $15.4 million and $36.6 million, respectively, including $8.5 million and $28.3 million, respectively, of employee severance and termination costs related to certain reorganization activities, primarily in Switzerland, U.K./Ireland and Central and Corporate, (ii) direct acquisition and disposition costs of $13.7 million and $20.0 million, respectively, primarily related to costs incurred in connection with the pending formation of the U.K. JV, and (iii) for the six-month period, impairment charges of $6.2 million, primarily in Belgium.

The amounts for the 2019 periods include (i) restructuring charges of $18.0 million and $55.5 million, respectively, including $17.2 million and $52.1 million, respectively, of employee severance and termination costs related to certain reorganization activities, primarily in U.K./Ireland and Central and Corporate and Switzerland, (ii) for the six-month period, impairment charges of $22.6 million related to the write-off of certain network assets in U.K./Ireland during the three months ended March 31, 2019, and (iii) aggregate direct acquisition and disposition costs of $7.7 million and $18.1 million, respectively, related to the sales of the Vodafone Disposal Group and UPC DTH and costs incurred related to an agreement to sell our operations in Switzerland, which was terminated in the fourth quarter of 2019.

If, among other factors, (i) our equity values were to decline or (ii) the adverse impacts of economic, competitive, regulatory or other factors (including with respect to COVID-19**)** 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 condensed consolidated financial statements.

Interest expense

We recognized interest expense of $281.7 million and $595.0 million during the three and six months ended June 30, 2020, respectively, and $363.6 million and $730.9 million during the three and six months ended June 30, 2019, respectively. Excluding the effects of FX, interest expense decreased $75.6 million or 20.8% and $123.3 million or 16.9% during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019. These decreases are primarily attributable to lower weighted average interest rates. For additional information regarding our outstanding indebtedness, see note 9 to our condensed consolidated financial statements.

It is possible that the interest rates on (i) any new borrowings could be higher than the current interest rates on our existing indebtedness and (ii) our variable-rate indebtedness could increase in future periods. As further discussed in note 6 to our condensed consolidated financial statements and under *Quantitative and Qualitative Disclosures about Market Risk* below, we use derivative instruments to manage our interest rate risks.

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 gains (losses) on derivative instruments, net, are as follows:

	Three months ended June 30,		Six months ended June 30,	
	2020	**2019**	**2020**	**2019**
	in millions			
Cross-currency and interest rate derivative contracts (a)	$ (309.4)	$ 69.1	$ 532.9	$ (18.2)
Equity-related derivative instruments:				
ITV Collar	(33.1)	86.0	350.3	99.8
Lionsgate Forward	(1.8)	8.8	6.5	9.6
Other	22.1	0.2	20.8	0.4
Total equity-related derivative instruments (b)	(12.8)	95.0	377.6	109.8
Foreign currency forward and option contracts	1.7	(11.6)	7.4	(22.2)
Other	0.8	0.4	(0.3)	0.7
Total	$ (319.7)	$ 152.9	$ 917.6	$ 70.1

____

(a) The results for the 2020 periods are primarily attributable to the net effect of (i) a net loss for the three-month period and a net gain for the six-month period associated with changes in the relative value of certain currencies and (ii) a net loss for the three-month period and a net gain for the six-month period associated with changes in certain market interest rates. In addition, the results for the 2020 periods include net gains of $5.4 million and $71.7 million, respectively, resulting from changes in our credit risk valuation adjustments. The results for the 2019 periods are primarily attributable to the net effect of (a) for the six-month period, a net loss associated with changes in certain market interest rates and (b) net gains associated with changes in the relative value of certain currencies. In addition, the results for the 2019 periods include net losses of $12.6 million and $70.7 million, respectively, resulting from changes in our credit risk valuation adjustments.

(b) The recurring fair value measurements of our equity-related derivative instruments are based on Black-Scholes pricing models.

For additional information concerning our derivative instruments, see notes 6 and 7 to our condensed consolidated financial statements and Part I, Item 3. *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 (losses), net, are as follows:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
U.S. dollar-denominated debt issued by British pound sterling functional currency entities	$ (53.7)	$ (126.2)	$ (349.4)	$ (15.6)
Intercompany payables and receivables denominated in a currency other than the entity's functional currency (a)	(498.1)	4.5	163.1	173.8
British pound sterling-denominated debt issued by a U.S. dollar functional currency entity	1.9	32.1	88.9	5.6
Euro-denominated debt issued by British pound sterling functional currency entities	8.3	18.3	30.5	(2.4)
U.S. dollar-denominated debt issued by euro functional currency entities	98.1	59.1	28.9	(36.8)
Cash and restricted cash denominated in a currency other than the entity's functional currency	(20.0)	(12.8)	(19.0)	(8.1)
Other	(14.5)	(2.0)	(29.3)	(4.9)
Total	$ (478.0)	$ (27.0)	$ (86.3)	$ 111.6

____

(a) Amounts primarily relate to (i) loans between certain of our non-operating and operating subsidiaries in Europe, which generally are denominated in the currency of the applicable operating subsidiary and (ii) loans between certain of our non-operating subsidiaries in the U.S. and Europe.

Realized and unrealized gains (losses) due to changes in fair values of certain investments and debt, net

Our realized and unrealized gains or losses due to changes in fair values of certain investments and 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. For additional information regarding our investments, fair value measurements and debt, see notes 5, 7 and 9, respectively, to our condensed consolidated financial statements. The details of our realized and unrealized gains (losses) due to changes in fair values of certain investments and debt, net, are as follows:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Investments:				
ITV	$ 42.2	$ (111.8)	$ (429.7)	$ (87.8)
Lionsgate	8.5	(17.2)	(20.9)	(17.8)
SMAs	16.6	—	5.9	—
ITI Neovision	6.1	5.3	(1.9)	0.5
Other, net	68.2	(4.6)	60.2	(19.1)
Total investments	141.6	(128.3)	(386.4)	(124.2)
Debt	10.7	(10.4)	8.9	(22.7)
Total	$ 152.3	$ (138.7)	$ (377.5)	$ (146.9)

Losses on debt extinguishment, net

We recognized net losses on debt extinguishment of $165.6 million and $48.3 million during the three months ended June 30, 2020 and 2019, respectively, and $220.1 million and $48.8 million during the six months ended June 30, 2020 and 2019, respectively.

The loss during the six months ended June 30, 2020 is primarily attributable to (i) the payment of $188.2 million of redemption premiums (including $157.5 million during the second quarter) and (ii) the write-off of $35.2 million of net unamortized deferred financing costs, discounts and premiums (including $11.4 million during the second quarter).

The loss during the six months ended June 30, 2019 is primarily attributable to (i) the payment of $43.7 million of redemption premiums and (ii) the write-off of $4.3 million of unamortized deferred financing costs and discounts, all of which occurred during the second quarter.

For additional information concerning our losses on debt extinguishment, net, see note 9 to our condensed consolidated financial statements.

Share of results of affiliates, net

The following table sets forth the details of our share of results of affiliates, net:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
All3Media	$ (14.9)	$ (19.0)	$ (39.8)	$ (22.7)
VodafoneZiggo JV (a)	(89.2)	(40.0)	(28.1)	(102.3)
Formula E	1.9	(9.5)	0.7	(9.9)
Other	(3.2)	(0.8)	(4.8)	(5.3)
Total	$ (105.4)	$ (69.3)	$ (72.0)	$ (140.2)

____

(a) Amounts include the net effect of (i) interest income of $10.8 million, $12.6 million, $21.6 million and $25.2 million, respectively, representing 100% of the interest earned on the VodafoneZiggo JV Receivable and (ii) our 50% share of the results of operations of the VodafoneZiggo JV. The summarized results of operations of the VodafoneZiggo JV are set forth below:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	in millions			
Revenue	$ 1,081.6	$ 1,084.5	$ 2,178.7	$ 2,178.4
Adjusted EBITDA	$ 531.5	$ 487.6	$ 1,034.3	$ 981.4
Operating income	$ 69.8	$ 36.8	$ 151.2	$ 88.6
Non-operating expense (1)	$ (221.6)	$ (171.3)	$ (178.1)	$ (411.9)
Net loss	$ (185.4)	$ (104.0)	$ (85.7)	$ (254.3)

____

(1) Includes interest expense of $143.3 million, $164.4 million, $295.0 million and $328.9 million, respectively.

Other income, net

We recognized other income, net, of $9.5 million and $32.5 million for the three months ended June 30, 2020 and 2019, respectively, and $61.9 million and $39.0 million for the six months ended June 30, 2020 and 2019, respectively. These amounts include (i) interest and dividend income of $10.8 million and $4.0 million during the three-month periods, respectively, and $42.4 million and $7.0 million during the six-month periods, respectively, and (ii) credits related to the non-service components of our net periodic pension costs of $4.3 million and $3.2 million during the three-month periods, respectively, and $8.8 million and $6.5 million during the six-month periods, respectively. In addition, other income, net, for the six months ended June 30, 2020 includes a $15.3 million gain related to certain assets that were contributed to a joint venture.

Income tax expense

We recognized income tax benefit (expense) of $158.0 million and ($26.8 million) during the three months ended June 30, 2020 and 2019, respectively.

The income tax benefit during the three months ended June 30, 2020 differs from the expected income tax benefit of $115.8 million (based on the U.K. blended income tax rate of 17.5%) primarily due to the net positive impact of the recognition of previously unrecognized tax benefits. The net positive impact of these items was partially offset by the negative impact of (i) non-deductible or non-taxable foreign currency exchange results and (ii) certain permanent differences between the financial and tax accounting treatment of interest and other items.

The income tax expense during the three months ended June 30, 2019 differs from the expected income tax benefit of $59.5 million (based on the U.K. statutory income tax rate of 19.0%) primarily due to the net negative impact of certain permanent differences between the financial and tax accounting treatment of (i) interest and other items and (ii) items associated with investments in subsidiaries. The net negative impact of these items was partially offset by the net positive impact of a decrease in valuation allowances.

We recognized income tax benefit (expense) of $77.9 million and ($54.6 million) during the six months ended June 30, 2020 and 2019, respectively.

The income tax benefit during the six months ended June 30, 2020 differs from the expected income tax expense of $76.3 million (based on the U.K. blended income tax rate of 17.5%) primarily due to the net positive impact of (i) the recognition of previously unrecognized tax benefits, (ii) non-deductible or non-taxable foreign currency exchange results, and (iii) tax benefits associated with technology innovation incentives. The net positive impact of these items was partially offset by the negative impact of (a) a net increase in valuation allowances and (b) certain permanent differences between the financial and tax accounting treatment of interest and other items.

The income tax expense during the six months ended June 30, 2019 differs from the expected income tax benefit of $112.5 million (based on the U.K. statutory income tax rate of 19.0%) primarily due to the net negative impact of certain permanent differences between the financial and tax accounting treatment of (i) items associated with investments in subsidiaries and (ii) interest and other items. The net negative impact of these items was partially offset by the net positive impact of (a) a decrease in valuation allowance and (b) non-deductible or non-taxable foreign currency exchange results.

For additional information concerning our income taxes, see note 11 to our condensed consolidated financial statements.

Earnings (loss) from continuing operations

During the three months ended June 30, 2020 and 2019, we reported losses from continuing operations of $503.8 million and $339.6 million, respectively, consisting of (i) operating income of $526.8 million and $148.7 million, respectively, (ii) net non-operating expense of $1,188.6 million and $461.5 million, respectively, and (iii) income tax benefit (expense) of $158.0 million and ($26.8 million), respectively.

During the six months ended June 30, 2020 and 2019, we reported earnings (loss) from continuing operations of $513.9 million and ($646.5 million), respectively, consisting of (i) operating income of $807.4 million and $254.2 million, respectively, (ii) net non-operating expense of $371.4 million and $846.1 million, respectively, and (iii) income tax benefit (expense) of $77.9 million and ($54.6 million), respectively.

Gains or losses associated with (i) changes in the fair values of derivative instruments, (ii) movements in foreign currency exchange rates and (iii) the disposition of assets and changes in ownership 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 aggregate 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 expense.

Due largely to the fact that we seek to maintain our debt at levels that provide for attractive equity returns, as discussed below under *Material Changes in Financial Condition — Capitalization*, we expect 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 condensed consolidated statements of operations, see *Discussion and Analysis of our Reportable Segments* and *Discussion and Analysis of our Consolidated Operating Results* above.

Earnings from discontinued operations, net of taxes

We reported earnings from discontinued operations, net of taxes, of $315.5 million and $638.1 million during the three and six months ended June 30, 2019, respectively, related to the operations of the Vodafone Disposal Group and UPC DTH. In addition, we recognized a gain of $106.6 million related to the second quarter 2019 sale of UPC DTH. For additional information, see note 4 to our condensed consolidated financial statements.

Net earnings attributable to noncontrolling interests

Net earnings attributable to noncontrolling interests increased (decreased) ($9.1 million) and $50.1 million during the three and six months ended June 30, 2020, respectively, as compared to the corresponding periods in 2019, primarily attributable to the results of operations of Telenet.

Material Changes in Financial Condition

Sources and Uses of Cash

We are a holding company that is dependent on the capital resources of our subsidiaries to satisfy our liquidity requirements at the corporate level. Each of our significant operating subsidiaries is separately financed within one of our three subsidiary "borrowing groups." These borrowing groups include the respective restricted parent and subsidiary entities within Telenet, Virgin Media and UPC Holding. Although our borrowing groups typically generate cash from operating activities, the terms of the instruments governing the indebtedness of these borrowing groups may restrict our ability to access the liquidity of these subsidiaries. In addition, our ability to access the liquidity of these and other subsidiaries may be limited by tax and legal considerations, the presence of noncontrolling interests and other factors.

Cash and cash equivalents

The details of the U.S. dollar equivalent balances of our consolidated cash and cash equivalents at June 30, 2020 are set forth in the following table (in millions):

Cash and cash equivalents held by:	
Liberty Global and unrestricted subsidiaries:	
Liberty Global (a)	$ 31.9
Unrestricted subsidiaries (b)	4,189.7
Total Liberty Global and unrestricted subsidiaries	4,221.6
Borrowing groups (c):	
Telenet	80.4
Virgin Media (d)	31.8
UPC Holding	26.8
Total borrowing groups	139.0
Total cash and cash equivalents	$ 4,360.6

(a) Represents the amount held by Liberty Global on a standalone basis.

(b) Represents the aggregate amount held by subsidiaries that are outside of our borrowing groups.

(c) Except as otherwise noted, represents the aggregate amounts held by the parent entity and restricted subsidiaries of our borrowing groups.

(d) Represents the cash and cash equivalents of the Virgin Media borrowing group, which includes (i) certain subsidiaries of Virgin Media, but excludes the parent entity, Virgin Media Inc., and (ii) the cash and cash equivalents of the U.K. JV Entities, as such cash and cash equivalents will be retained by Liberty Global upon the formation of the U.K. JV and are therefore not classified as held for sale. For information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4.

Liquidity of Liberty Global and its unrestricted subsidiaries

The $31.9 million of cash and cash equivalents held by Liberty Global and, subject to certain tax and legal considerations, the $4,189.7 million of aggregate cash and cash equivalents held by unrestricted subsidiaries, together with the $2,986.5 million of investments held under SMAs, represented available liquidity at the corporate level at June 30, 2020. Our remaining cash and cash equivalents of $139.0 million at June 30, 2020 were held by our borrowing groups, as set forth in the table above. As noted above, various factors may limit our ability to access the cash of our borrowing groups. For information regarding certain limitations imposed by our subsidiaries' debt instruments at June 30, 2020, see note 9 to our condensed consolidated financial statements.

Our current sources of corporate liquidity include (i) cash and cash equivalents held by Liberty Global and, subject to certain tax and legal considerations, Liberty Global's unrestricted subsidiaries, (ii) investments held under SMAs, (iii) interest and dividend income received on our and, subject to certain tax and legal considerations, our unrestricted subsidiaries' cash and cash equivalents and investments, including dividends received from the VodafoneZiggo JV, (iv) principal and interest payments received with respect to the VodafoneZiggo JV Receivable and (v) cash received with respect to transitional and other services provided to various third parties.

From time to time, Liberty Global and its unrestricted subsidiaries may also receive (i) proceeds in the form of distributions or loan repayments from Liberty Global's borrowing groups or affiliates (including amounts from the VodafoneZiggo JV) upon (a) the completion of recapitalizations, refinancings, asset sales or similar transactions by these entities or (b) the accumulation of excess cash from operations or other means, (ii) proceeds upon the disposition of investments and other assets of Liberty Global and its unrestricted subsidiaries and (iii) proceeds in connection with the incurrence of debt by Liberty Global or its unrestricted subsidiaries or the issuance of equity securities by Liberty Global, including equity securities issued to satisfy subsidiary obligations. No assurance can be given that any external funding would be available to Liberty Global or its unrestricted subsidiaries on favorable terms, or at all.

At June 30, 2020, our consolidated cash and cash equivalents balance included $4,305.7 million held by entities that are domiciled outside of the U.K. Based on our assessment of our ability to access the liquidity of our subsidiaries on a tax efficient basis and our expectations with respect to our corporate liquidity requirements, we do not anticipate that tax considerations will adversely impact our corporate liquidity over the next 12 months. Our ability to access the liquidity of our subsidiaries on a tax efficient basis is a consideration in assessing the extent of our share repurchase program.

In addition, the amount of cash we receive from our subsidiaries to satisfy U.S. dollar-denominated liquidity requirements is impacted by fluctuations in exchange rates, particularly with regard to the translation of British pounds sterling and euros into U.S. dollars. In this regard, the strengthening (weakening) of the U.S. dollar against these currencies will result in decreases (increases) in the U.S. dollars received from the applicable subsidiaries to fund the repurchase of our equity securities and other U.S. dollar-denominated liquidity requirements.

Our corporate liquidity requirements include (i) corporate general and administrative expenses, (ii) interest payments on the ITV Collar Loan and (iii) principal payments on the ITV Collar Loan and the Lionsgate Loan to the extent not settled through the delivery of the underlying shares. In addition, Liberty Global and its unrestricted subsidiaries may require cash in connection with (a) the repayment of third-party and intercompany debt, (b) the satisfaction of contingent liabilities, (c) acquisitions, (d) the repurchase of equity and debt securities, (e) other investment opportunities, (f) any funding requirements of our subsidiaries and affiliates or (g) income tax payments. In addition, our parent entity uses available liquidity to make interest and principal payments

on notes payable to certain of our unrestricted subsidiaries (aggregate outstanding principal of $8.3 million at June 30, 2020 with varying maturity dates).

During the six months ended June 30, 2020, the aggregate amount of our share repurchases was $700.2 million, including direct acquisition costs. At June 30, 2020, the remaining amount authorized for share repurchases was $370.0 million. For additional information, see note 12 to our condensed consolidated financial statements.

Liquidity of borrowing groups

The cash and cash equivalents of our borrowing groups are detailed in the table above. In addition to cash and cash equivalents, the primary sources of liquidity of our borrowing groups are cash provided by operations and borrowing availability under their respective debt instruments. For the details of the borrowing availability of our borrowing groups at June 30, 2020, see note 9 to our condensed consolidated financial statements. The aforementioned sources of liquidity may be supplemented in certain cases by contributions and/or loans from Liberty Global and its unrestricted subsidiaries. The liquidity of our borrowing groups generally is used to fund property and equipment additions, debt service requirements and income tax payments. From time to time, our borrowing groups may also require liquidity in connection with (i) acquisitions and other investment opportunities, (ii) loans to Liberty Global, (iii) capital distributions to Liberty Global and other equity owners or (iv) the satisfaction of contingent liabilities. No assurance can be given that any external funding would be available to our borrowing groups on favorable terms, or at all.

For additional information regarding our consolidated cash flows, see the discussion under *Condensed Consolidated Statements of Cash Flows* below.

Capitalization

We seek to maintain our debt at levels that provide for attractive equity returns without assuming undue risk. In this regard, we generally seek to cause our operating subsidiaries to maintain their debt at levels that result in a consolidated debt balance (excluding the ITV Collar Loan and Lionsgate Loan and measured using subsidiary debt figures at swapped foreign currency exchange rates, consistent with the covenant calculation requirements of our subsidiary debt agreements) that is between four and five times our consolidated Adjusted EBITDA, although the timing of our acquisitions and financing transactions and the interplay of average and spot foreign currency rates may impact this ratio. Consolidated 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 condensed consolidated statements of operations.

Our ability to service or refinance our debt and to maintain compliance with the leverage covenants in the credit agreements and indentures of our borrowing groups is dependent primarily on our ability to maintain or increase the Adjusted EBITDA of our operating subsidiaries and to achieve adequate returns on our property and equipment additions and acquisitions. In addition, our ability to obtain additional debt financing is limited by the incurrence-based leverage covenants contained in the various debt instruments of our borrowing groups. For example, if the Adjusted EBITDA of one of our borrowing groups were to decline, our ability to obtain additional debt could be limited. Under our credit facilities and senior and senior secured notes there is no cross-default risk between subsidiary borrowing groups in the event that one or more of our borrowing groups were to experience significant declines in their Adjusted EBITDA to the extent they were no longer able to service their debt obligations. Any mandatory prepayment events or events of default that may occur would only impact the relevant borrowing group in which these events occur and do not allow for any recourse to other borrowing groups or Liberty Global plc. Our credit facilities and senior and senior secured notes require that certain members of the relevant borrowing group guarantee the payment of all sums payable thereunder and such group members are required to grant first-ranking security over their shares or, in certain borrowing groups, over substantially all of their assets to secure the payment of all sums payable thereunder. At June 30, 2020, each of our borrowing groups was in compliance with its debt covenants. In addition, we do not anticipate any instances of non-compliance with respect to the debt covenants of our borrowing groups that would have a material adverse impact on our liquidity during the next 12 months.

At June 30, 2020, the outstanding principal amount of our consolidated debt, together with our finance lease obligations, aggregated $12.3 billion, including $1.9 billion that is classified as current on our condensed consolidated balance sheet and $9.1 billion that is not due until 2026 or thereafter. All of our consolidated debt and finance lease obligations have been borrowed or incurred by our subsidiaries at June 30, 2020.

We believe 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 and equity 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, any weakness in the equity markets could make it less attractive to use our shares to satisfy contingent or other obligations, and sustained or increased competition, particularly in combination with adverse economic or regulatory developments, could have an unfavorable impact on our cash flows and liquidity.

For information regarding the potential impact of the COVID-19 pandemic on our company's liquidity, see the discussion included above in *Overview.* For additional information concerning our debt and finance lease obligations, see notes 9 and 10, respectively, to our condensed consolidated financial statements.

Condensed Consolidated Statements of Cash Flows

General. Our cash flows are subject to significant variations due to FX.

Summary. The condensed consolidated statements of cash flows of our continuing operations for the three months ended June 30, 2020 and 2019 are summarized as follows:

	Six months ended June 30,		
	2020	2019	Change
	in millions		
Net cash provided by operating activities	$ 1,591.9	$ 1,628.5	$ (36.6)
Net cash used by investing activities	(3,634.4)	(682.7)	(2,951.7)
Net cash used by financing activities	(1,721.3)	(1,595.4)	(125.9)
Effect of exchange rate changes on cash and cash equivalents and restricted cash	(10.4)	(5.0)	(5.4)
Net decrease in cash and cash equivalents and restricted cash	$ (3,774.2)	$ (654.6)	$ (3,119.6)

Operating Activities. The decrease in net cash provided by our operating activities is primarily attributable to the net effect of (i) an increase in cash provided due to lower payments for taxes, (ii) a decrease in the cash provided by our Adjusted EBITDA and related working capital items, (iii) a decrease in cash provided due to lower cash receipts related to derivative instruments, (iv) an increase in cash provided due to lower payments of interest and (v) a decrease due to FX. Consolidated 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 condensed consolidated statements of operations.

Investing Activities. The increase in net cash used by our investing activities is primarily attributable an increase in cash used of (i) $2,795.0 million associated with higher net cash paid for investments, primarily related to our investments held under SMAs, (ii) $145.8 million as a result of the net cash proceeds received from the sale of UPC DTH in the second quarter of 2019 and (iii) $16.7 million due to higher capital expenditures. Capital expenditures increased from $632.9 million during the first six months of 2019 to $649.6 million during the first six months of 2020 due to the net effect of (a) an increase due to lower proceeds received for transfers to related parties, (b) a decrease in our net local currency capital expenditures and related working capital movements, including the impact of lower capital-related vendor financing, and (c) a decrease due to FX.

The capital expenditures we report in our condensed consolidated 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 condensed consolidated 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. For further details regarding our property and equipment additions, see note 17 to our condensed consolidated financial statements. A reconciliation of our consolidated property and equipment additions to our consolidated capital expenditures, as reported in our condensed consolidated statements of cash flows, is set forth below:

	Six months ended June 30,	
	2020	2019
	in millions	
Property and equipment additions	$ 1,242.4	$ 1,381.3
Assets acquired under capital-related vendor financing arrangements	(702.9)	(926.3)
Assets acquired under finance leases	(17.2)	(32.6)
Changes in current liabilities related to capital expenditures	127.3	210.5
Capital expenditures, net	$ 649.6	$ 632.9
Capital expenditures, net:		
Third-party payments	$ 650.9	$ 691.2
Proceeds received for transfers to related parties (a)	(1.3)	(58.3)
Total capital expenditures, net	$ 649.6	$ 632.9

____

(a) Primarily relates to transfers of centrally-procured property and equipment to the VodafoneZiggo JV and our discontinued operations, as applicable.

The decrease in our property and equipment additions during the six months ended June 30, 2020, as compared to the corresponding period in 2019, is due to (i) a decrease in local currency expenditures of our subsidiaries due to the net effect of (a) a decrease in expenditures for the purchase and installation of customer premises equipment, (b) an increase in expenditures to support new customer products and operational efficiency initiatives, (c) a decrease in expenditures for new build and upgrade projects and (d) a decrease in baseline expenditures, including network improvements and expenditures for property and facilities and information technology systems and (ii) a decrease due to FX.

Financing Activities. The increase in net cash used by our financing activities is primarily attributable to the net effect of (i) a decrease in cash used of $283.3 million due to lower net repayments of debt and finance lease obligations, (ii) an increase in cash used of $189.5 million due to higher repurchases of Liberty Global ordinary shares and (iii) an increase in cash used of $175.4 million due to higher payments for financing costs and debt premiums.

Adjusted Free Cash Flow

We define adjusted free cash flow as net cash provided by the operating activities of our continuing operations, plus (i) cash payments for third-party costs directly associated with successful and unsuccessful acquisitions and dispositions and (ii) expenses financed by an intermediary, less (a) capital expenditures, as reported in our condensed consolidated statements of cash flows, (b) principal payments on amounts financed by vendors and intermediaries and (c) principal payments on finance leases (exclusive of the portions of the network lease in Belgium that we assumed in connection with an acquisition), with each item excluding any cash provided or used by our discontinued operations. We believe our presentation of adjusted free cash flow provides useful information to our investors because this measure can be used to gauge our ability to service debt and fund new investment opportunities. Adjusted free cash flow, which is a non-GAAP measure, should not be understood to represent our ability to fund discretionary amounts, as we have various mandatory and contractual obligations, including debt repayments, that are not deducted to arrive at this amount. Investors should view adjusted free cash flow as a supplement to, and not a substitute for, GAAP measures of liquidity included in our condensed consolidated statements of cash flows.

The following table provides the details of our adjusted free cash flow:

	Six months ended June 30,	
	2020	2019
	in millions	
Net cash provided by operating activities of our continuing operations (a)	$ 1,591.9	$ 1,628.5
Cash payments for direct acquisition and disposition costs	10.4	18.0
Expenses financed by an intermediary (b)	1,274.5	1,086.1
Capital expenditures, net	(649.6)	(632.9)
Principal payments on amounts financed by vendors and intermediaries	(2,054.0)	(2,140.4)
Principal payments on certain finance leases	(34.5)	(31.8)
Adjusted free cash flow	$ 138.7	$ (72.5)

____

(a) The 2019 amount includes interest payments related to debt that was repaid in connection with the completion of the disposition of the Vodafone Disposal Group. These interest payments were not allocated to discontinued operations.

(b) For purposes of our condensed consolidated statements of cash flows, expenses financed by an intermediary are treated as hypothetical operating cash outflows and hypothetical financing cash inflows when the expenses are incurred. When we pay the financing intermediary, we record financing cash outflows in our condensed consolidated statements of cash flows. For purposes of our adjusted free cash flow definition, we add back the hypothetical operating cash outflow when these financed expenses are incurred and deduct the financing cash outflows when we pay the financing intermediary.

Contractual Commitments

The following table sets forth the U.S. dollar equivalents of our commitments as of June 30, 2020. Due to the held-for-sale presentation of the U.K. JV Entities at June 30, 2020, the amounts presented below do not include the maturities of the debt and finance lease obligations, contractual commitments or the related cash interest payments of these entities. For information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4.

	Payments due during:							
	Remainder of 2020	2021	2022	2023	2024	2025	Thereafter	Total
	in millions							
Debt (excluding interest)	$ 902.1	$ 1,412.1	$ 392.9	$ 164.5	$ 26.8	$ 12.9	$ 8,866.2	$ 11,777.5
Finance leases (excluding interest)	33.8	65.2	66.5	72.7	38.7	36.5	201.0	514.4
Operating leases	41.6	67.6	55.9	47.9	40.3	34.0	117.4	404.7
Network and connectivity commitments	78.9	86.2	64.9	41.5	35.8	34.4	681.2	1,022.9
Programming commitments	152.1	171.2	84.1	22.0	14.2	13.9	16.1	473.6
Purchase commitments	250.6	170.1	43.5	30.7	17.3	14.5	10.7	537.4
Other commitments	4.1	3.1	3.0	1.9	1.5	0.4	1.2	15.2
Total (a)	$ 1,463.2	$ 1,975.5	$ 710.8	$ 381.2	$ 174.6	$ 146.6	$ 9,893.8	$ 14,745.7
Projected cash interest payments on debt and finance lease obligations (b)	$ 192.4	$ 348.1	$ 368.7	$ 363.3	$ 354.1	$ 351.6	$ 998.4	$ 2,976.6

____

(a) The commitments included in this table do not reflect any liabilities that are included in our June 30, 2020 condensed consolidated balance sheet other than debt and finance and operating lease obligations. Our liability for uncertain tax positions in the various jurisdictions in which we operate ($356.9 million at June 30, 2020) has been excluded from the table as the amount and timing of any related payments are not subject to reasonable estimation.

(b) Amounts are based on interest rates, interest payment dates, commitment fees and contractual maturities in effect as of June 30, 2020. These amounts are presented for illustrative purposes only and will likely differ from the actual cash payments required in future periods. In addition, the amounts presented do not include the impact of our interest rate derivative contracts, deferred financing costs, original issue premiums or discounts.

For information concerning our debt obligations, finance and operating lease liabilities and commitments, see notes 9, 10 and 16, respectively, to our condensed consolidated financial statements.

In addition to the commitments set forth in the table above, we have significant commitments under (i) derivative instruments and (ii) defined benefit plans and similar agreements, pursuant to which we expect to make payments in future periods. For information regarding our derivative instruments, including the net cash paid or received in connection with these instruments during the six months ended June 30, 2020 and 2019, see note 6 to our condensed consolidated financial statements. For information regarding projected cash flows associated with these derivative instruments, see Part I, Item 3. *Quantitative and Qualitative Disclosures about Market Risk — Projected Cash Flows Associated with Derivative Instruments* below.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

General

We are exposed to market risk in the normal course of our business operations due to our investments in various foreign countries and ongoing investing and financing activities. Market risk refers to the risk of loss arising from adverse changes in foreign currency exchange rates, interest rates and stock prices. 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.

The information in this section should be read in conjunction with the more complete discussion that appears under Part II, Item 7A. *Quantitative and Qualitative Disclosures About Market Risk* in our 10-K. The following discussion updates selected numerical information to June 30, 2020.

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

Unless otherwise indicated, convenience translations into U.S. dollars are calculated as of June 30, 2020.

Cash

We invest our cash in highly liquid instruments that meet high credit quality standards. We are exposed to exchange rate risk to the extent that the denominations of our cash and cash equivalent balances, revolving lines of credit and other short-term sources of liquidity do not correspond to the denominations of our and our subsidiaries' short-term liquidity requirements. In order to mitigate this risk, we actively manage the denominations of our cash balances in light of our and our subsidiaries' forecasted liquidity requirements. At June 30, 2020, $3,685.7 million or 84.5%, $396.9 million or 9.1% and $247.0 million or 5.7% of our consolidated cash balances were denominated in U.S. dollars, British pound sterling and euros, respectively.

Foreign Currency Risk

We are exposed to foreign currency exchange rate risk with respect to our consolidated debt in situations where our debt is denominated in a currency other than the functional currency of the operations whose cash flows support our ability to repay or refinance such debt. For information regarding our use of derivative instruments to manage our foreign currency exchange rate risk, see note 6 to our condensed consolidated financial statements.

The relationships between the primary currencies of the countries in which we operate and the U.S. dollar, which is our reporting currency, are shown below, per one U.S. dollar:

	June 30, 2020	December 31, 2019
Spot rates:		
Euro	0.8894	0.8906
British pound sterling	0.8078	0.7540
Swiss franc	0.9471	0.9664
Polish zloty	3.9544	3.7906

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Average rates:				
Euro	0.9086	0.8898	0.9080	0.8853
British pound sterling	0.8057	0.7783	0.7938	0.7731
Swiss franc	0.9639	1.0023	0.9661	0.9998
Polish zloty	4.0944	3.8092	4.0082	3.7992

Interest Rate Risks

We are exposed to changes in interest rates primarily as a result of our borrowing activities, which include fixed-rate and variable-rate borrowings by our borrowing groups. Our primary exposure to variable-rate debt is through the EURIBOR-indexed and LIBOR-indexed debt of our borrowing groups and the variable-rate debt of certain of our other subsidiaries.

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 and collar agreements and swaptions that lock in a maximum interest rate if variable rates rise, but also allow our company to benefit, to a limited extent in the case of collars, from declines in market rates. 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 6 to our condensed consolidated 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. 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. 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 June 30, 2020, the outstanding principal amount of our variable-rate indebtedness aggregated $6.3 billion, and the weighted average interest rate (including margin) on such variable-rate indebtedness was approximately 2.5%, 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 consolidated interest expense and cash outflows by $31.5 million. As discussed above and in note 6 to our condensed consolidated financial statements, we use interest rate derivative contracts to manage our exposure to increases in variable interest rates. In this regard, increases in the fair value of these contracts generally would be expected to offset most of the economic impact of increases in the variable interest rates applicable to our indebtedness to the extent and during the period that principal amounts are matched with interest rate derivative contracts.

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 6 and 7 to our condensed consolidated financial statements.

UPC Holding Cross-currency and Interest Rate Derivative Contracts

Holding all other factors constant, at June 30, 2020:

(i) an instantaneous increase (decrease) of 10% in the value of the Swiss franc and Polish zloty relative to the euro would have decreased (increased) the aggregate fair value of the UPC Holding cross-currency and interest rate derivative contracts by approximately €300 million ($337 million); and

(ii) an instantaneous increase (decrease) of 10% in the value of the Swiss franc relative to the U.S. dollar would have decreased (increased) the aggregate fair value of the UPC Holding cross-currency and interest rate derivative contracts by approximately €97 million ($109 million).

Telenet Cross-currency and Interest Rate Derivative Contracts

Holding all other factors constant, at June 30, 2020:

(i) an instantaneous increase (decrease) of 10% in the value of the euro relative to the U.S. dollar would have decreased (increased) the aggregate fair value of the Telenet cross-currency and interest rate derivative contracts by approximately €367 million ($412 million); and

(ii) an instantaneous increase (decrease) in the relevant base rate of 50 basis points (0.50%) would have increased (decreased) the aggregate fair value of the Telenet cross-currency and interest rate derivative contracts by approximately €104 million ($117 million).

Projected Cash Flows Associated with Derivative Instruments

The following table provides information regarding the projected cash flows associated with our derivative instruments. The U.S. dollar equivalents presented below are based on interest rate projections and exchange rates as of June 30, 2020. These amounts are presented for illustrative purposes only and will likely differ from the actual cash payments or receipts required in future periods. As a result of the held-for-sale presentation of the debt and finance lease obligations of the U.K. JV Entities on our June 30, 2020 condensed consolidated balance sheet, the amounts presented below do not include projected derivative cash flows related to the U.K. JV Entities. For information regarding the held-for-sale presentation of the U.K. JV Entities, see note 4 to our condensed consolidated financial statements. For additional information regarding our derivative instruments, see note 6 to our condensed consolidated financial statements.

	Payments (receipts) due during:							
	Remainder of 2020	2021	2022	2023	2024	2025	Thereafter	Total
	in millions							
Projected derivative cash payments (receipts), net:								
Interest-related (a)	$ 1.0	$ 49.3	$ 23.9	$ 12.3	$ (12.9)	$ (24.7)	$ (33.1)	$ 15.8
Principal-related (b)	—	(11.4)	66.2	—	(24.1)	(6.7)	0.9	24.9
Other (c)	(135.6)	(637.9)	(241.3)	(0.2)	—	—	—	(1,015.0)
Total	$ (134.6)	$ (600.0)	$ (151.2)	$ 12.1	$ (37.0)	$ (31.4)	$ (32.2)	$ (974.3)

(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 equity-related derivative instruments and foreign currency forward contracts. We may elect to use cash or the collective value of the related shares and equity-related derivative instrument to settle the ITV Collar Loan and the Lionsgate Loan.

Item 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

In accordance with Exchange Act Rule 13a-15, we carried out an evaluation, under the supervision and with the participation of management, including our chief executive officer and chief financial officer (the **Executives**), of the effectiveness of our disclosure controls and procedures as of June 30, 2020. In designing and evaluating the disclosure controls and procedures, the Executives recognize that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is necessarily required to apply judgment in evaluating the cost-benefit relationship of possible controls and objectives. Based on that evaluation, the Executives concluded that our disclosure controls and procedures as of June 30, 2020 effectively provide reasonable assurance that information required to be disclosed in our reports filed or submitted under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

Changes in Internal Controls over Financial Reporting

There have been no changes in our internal controls over financial reporting identified in connection with the evaluation described above that occurred during the fiscal quarter covered by this Quarterly Report on Form 10-Q that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

PART II — OTHER INFORMATION

Item 1A. RISK FACTORS

In addition to the other information contained in this Quarterly Report on Form 10-Q, you should consider the risk factors included in our most recently filed Annual Report on Form 10-K, as amended, and our March 31, 2020 Quarterly Report on Form 10-Q in evaluating our results of operations, financial condition, business and operations or an investment in the shares of our company.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

(c) ***Issuer Purchases of Equity Securities***

Period	Total number of shares purchased	Average price paid per share (a)	Total number of shares purchased as part of publicly announced plans or programs	Approximate dollar value of shares that may yet be purchased under the plans or programs
April 1, 2020 through April 30, 2020:				
Class C	15,198,100	$ 16.95	15,198,100	(b)
May 1, 2020 through May 31, 2020:				
Class C	6,373,500	$ 21.07	6,373,500	(b)
June 1, 2020 through June 30, 2020:				
Class C	3,798,900	$ 21.94	3,798,900	(b)
Total — April 1, 2020 through June 30, 2020:				
Class C	25,370,500	$ 18.73	25,370,500	(b)

____

(a) Average price paid per share includes direct acquisition costs.

(b) In February 2020, our board of directors authorized an additional $1.0 billion for share repurchases. At June 30, 2020, the remaining amount authorized for share repurchases was $370.0 million under our most recent share repurchase program.

Item 6. EXHIBITS

Listed below are the exhibits filed as part of this Quarterly Report (according to the number assigned to them in Item 601 of Regulation S-K):

2 — Plan of Acquisition, Reorganization, Arrangement, Liquidation or Succession

2.1	Contribution Agreement, dated May 7, 2020, by and among Liberty Global plc, Liberty Global Europe 2 Limited, Liberty Global Holdco Limited, Telefónica, S.A., and Telefonica O2 Holdings Limited (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed on May 13, 2020 (File No. 001-35961)).***

4 — Instruments Defining the Rights of Securities Holders, including Indentures

4.1	Supplemental Agreement dated April 6, 2020 between, among others, Telenet BV as company, The Bank of Nova Scotia as facility agent and KBC Bank NV as security agent and attached as a schedule thereto, a copy of the Amended and Restated Credit Agreement dated April 6, 2020, between, among others, Telenet BV as original borrower and The Bank of Nova Scotia as facility agent and KBC Bank NV as security agent (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on April 10, 2020 (File No. 001-35961)).
4.2	Supplemental Deed dated April 23, 2020 between, among others, UPC Broadband Holding B.V. as Obligors' Agent and The Bank of Nova Scotia as facility agent and security agent, and attached as a schedule thereto, a copy of the Amended Senior Facilities Agreement dated April 23, 2020 between, among others, UPC Broadband Holding B.V. as borrower and The Bank of Nova Scotia as facility agent and security agent (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on April 29, 2020 (File No. 001-35961)).

10 — Material Contracts

10.1	Liberty Global 2020 Long-Term Equity Incentive Program for executive officers under the Incentive Plan (description of said plan is incorporated by reference to the description thereof included in Item 5.02(e) of the Registrant's Current Report on Form 8-K filed April 3, 2020 (File No. 001-35961)).
10.2	Employment Agreement, dated May 21, 2020, by and between Liberty Global, Inc. and Bryan H. Hall.*
10.3	Employment Agreement, dated May 19, 2005, by and between Liberty Global Europe Limited (formerly known as UGC Europe Services Ltd.) and Andrea Salvato, assigned by Liberty Global Europe Limited to Liberty Global plc on November 1, 2013.*

31 — Rule 13a-14(a)/15d-14(a) Certification:

31.1	Certification of President and Chief Executive Officer*
31.2	Certification of Executive Vice President and Chief Financial Officer*

32 — Section 1350 Certification**

101.SCH	Inline XBRL Taxonomy Extension Schema Document*
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document*
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase*
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document*
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document*
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)*

---

* Filed herewith

** Furnished herewith

*** Schedules and similar attachments to the agreement have been omitted pursuant to Item 601(a)(5) of Regulation S-K but will be provided to the U.S. Securities and Exchange Commission or its staff upon request

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

LIBERTY GLOBAL PLC

Dated: August 3, 2020

/s/ MICHAEL T. FRIES

Michael T. Fries
President and Chief Executive Officer

Dated: August 3, 2020

/s/ CHARLES H.R. BRACKEN

Charles H.R. Bracken
Executive Vice President and Chief Financial Officer

Exhibit 10.2

EMPLOYMENT AGREEMENT

This EMPLOYMENT AGREEMENT (this "Agreement") is made as of May 21, 2020 by and among Liberty Global, Inc., a Delaware corporation (the "Company") and Bryan H. Hall (the "Executive") (the Company and the Executive collectively, the "Parties").

WHEREAS, the Company desires to continue to employ the Executive as Executive Vice President, General Counsel and Secretary; and

WHEREAS, the Parties desire to enter into this Agreement to secure the Executive's employment during the term hereof, on the terms and conditions set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

ARTICLE I
DEFINITIONS

Section 1.1 Defined Terms. As used in this Agreement, the following terms have the following meanings:

"Board" means the Board of Directors of the Parent.

"Cause" shall mean a determination in good faith by the Company that the Executive (a) has engaged in gross negligence, gross incompetence or willful misconduct in the performance of the Executive's duties with respect to the Parent, the Company or any of their subsidiaries, (b) has refused without proper legal reason to perform the Executive's duties and responsibilities to the Parent, the Company or any of their subsidiaries, (c) has materially breached any provision of this Agreement or any material written agreement or corporate policy or code of conduct established by the Parent, the Company or any of their subsidiaries (and as may be amended from time to time), (d) has engaged in conduct that is materially injurious to the Parent, the Company or any of their subsidiaries, (e) has disclosed without specific authorization from the Company material Confidential Information, (f) has committed an act of theft, fraud, embezzlement, misappropriation or breach of a fiduciary duty to the Parent, the Company or any of their subsidiaries, (g) has been indicted for a crime involving fraud, dishonesty or moral turpitude or any felony (or a crime of similar import in a jurisdiction outside the U.S.), or (h) has, directly or indirectly (through a failure to put in place and enforce appropriate compliance controls and procedures), violated, or there appears to be, after due inquiry, a reasonable basis to conclude that the Executive has violated, the Foreign Corrupt Practices Act, the UK Bribery Act, and/or other similar applicable laws, in any material respect.

"Class A Shares" means the Parent's Class A ordinary shares.

"Class C Shares" means the Parent's Class C ordinary shares.

"Code" means the U.S. Internal Revenue Code of 1986, as amended.

"Company Entity" means the Parent, the Company and/or any of their subsidiaries or other affiliates.

"Compensation Committee" means the Compensation Committee of the Board.

"Date of Termination" shall mean the date specified in the Notice of Termination relating to termination of the Executive's employment with the Company; provided, that the Company may require an earlier Date of Termination than the date specified by the Executive in a Notice of Termination delivered pursuant to Section 4.2.

"Disability" shall mean that the Executive meets the requirements for disability benefits under the Company's long-term disability plan.

"Good Reason" shall mean any of the following events that occur without the Executive's prior written consent: (a) the assignment to the Executive of any duties materially inconsistent with the Executive's position, authority, duties or responsibilities, or any other action by the Company that results in a material diminution in the Executive's authority, duties or responsibilities (excluding for this purpose an isolated, insubstantial and inadvertent action not taken in bad faith); (b) any material breach of this Agreement by the Company; (c) a material reduction in Base Salary or material reduction in target Annual Bonus under Article III, as each may be increased from time to time; or (d) relocation of Executive's principal place of employment from the Company's headquarters in the Denver metropolitan area.

In order for a termination to be considered for "Good Reason," (i) the Executive must provide written notice to the Company of the existence of the condition(s) the Executive claims constitutes Good Reason within 30 days of the initial existence, or if later, the Executive's actual good faith knowledge of the condition(s), (ii) the Company shall have 30 days after such notice is given (the "Cure Period") during which to remedy the condition(s) to the extent that such condition(s) is reasonably curable, and, if not so cured, (iii) the Executive must actually terminate employment within 30 days of the expiration of the Cure Period.

"Grant Award Agreements" means collectively and individually any one of the equity grant agreements in the form established by the Company or the Parent, as the case may be, awarding equity grants to senior management personnel, including the Executive.

"Incentive Plan" means the Liberty Global 2014 Incentive Plan, as may be amended from time to time, or a successor plan.

"Notice of Termination" shall mean a written notice delivered by the Company or the Executive to the other party in accordance with Section 8.9 indicating the specific termination provision in this Agreement relied upon for termination of the Executive's employment and the Date of Termination that sets forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Executive's employment under the provision so indicated.

"Parent" means Liberty Global plc, a company organized under the laws of England & Wales.

Section 1.2 Other Interpretive Provisions.

(a) Capitalized terms are used as defined in this Agreement, unless otherwise indicated.

(b) The name assigned to this Agreement and headings and captions of the sections, paragraphs, subparagraphs, clauses and subclauses of this Agreement are for convenience of reference only and shall not in any way affect the meaning or interpretation of any of the provisions hereof. Words of inclusion shall not be construed as terms of limitation herein, so that references to "include," "includes" and "including" shall not be limiting and shall be regarded as references to non-exclusive and non-characterizing illustrations. Any reference to a Section of the Code shall be deemed to include any successor to such Section.

ARTICLE II
EMPLOYMENT & DUTIES

Section 2.1 Title and Location. The Company will employ the Executive, and the Executive agrees to serve as Executive Vice President, General Counsel and Secretary of the Company and of the Parent, on the terms and conditions hereinafter set forth, with the location of employment to be principally Denver, Colorado.

Section 2.2 Employment Term. The Executive's employment by the Company pursuant to this Agreement will commence on the date hereof and will continue until terminated pursuant to Article IV (the "Employment Period").

Section 2.3 Duties; Other Interests.

(a) *Reporting*. The Executive shall report directly to the President and CEO of the Parent (the "CEO").

(b) *Duties*. The Executive agrees to serve in the positions referred to in Section 2.1 and to perform diligently, faithfully and to the best of the Executive's abilities the usual and customary duties and services appertaining to such positions, as well as such additional duties and services appropriate to such positions which the Parent, the Company and the Executive mutually may agree upon from time to time or which the CEO may lawfully direct. The Executive's employment shall also be subject to the policies maintained and established by the Parent and/or the Company that are of general applicability to the Company's executives and/or employees, as such policies may be amended from time to time, including without limitation all relevant Codes of Conduct.

(c) *Business Time*. As provided in Section 6.1, the Executive will, while employed, devote substantially all of the Executive's business time and attention to the Executive's duties and responsibilities for the Parent and the Company. Notwithstanding the foregoing, the Executive may engage in personal business and non-profit activities that

in no manner conflict with the Executive's ability to fulfill the Executive's duties to the Parent and the Company.

(d) *Fiduciary Duties*. The Executive acknowledges and agrees that the Executive owes a fiduciary duty of loyalty, fidelity and allegiance to act in the best interests of the Parent and the Company and to do no act that would materially injure the business, interests, or reputation of the Parent and the Company or any of their affiliates. In keeping with these duties, the Executive shall make full disclosure to the Parent of all business opportunities pertaining to the Parent's and the Company's business and shall not appropriate for the Executive's own benefit business opportunities concerning the subject matter of the fiduciary relationship.

(e) *Working Abroad.* If duties hereunder require the Executive to work abroad (other than in connection with ordinary course business travel), the Company agrees to make such arrangements as may be appropriate, given the amount of time abroad, to provide for reasonable housing, transportation or other issues or expenses.

ARTICLE III
COMPENSATION & BENEFITS

Section 3.1 Compensation.

(a) *Base Salary*. During the Employment Period, the Company shall pay the Executive a base salary (the "Base Salary"), to be paid on the same payroll cycle as other U.S.-based employees of the Company, at an annual rate of One Million Ninety-Nine Thousand dollars ($1,099,000). The Base Salary will be reviewed annually and may be adjusted upward (but not downward) by the CEO and the Compensation Committee in its discretion.

(b) *Annual Bonus*. For each fiscal year ending during the Employment Period beginning with fiscal year 2020, the Executive will be eligible to earn an "Annual Bonus," provided that the Executive remains employed with a Company Entity through the payment date for such Annual Bonus (except as otherwise provided herein). The Executive's target Annual Bonus opportunity for calendar year 2020 is Two Million Five Hundred Thousand dollars ($2,500,000). The target Annual Bonus will be reviewed annually and for fiscal years after 2020 may be adjusted by the Compensation Committee in its discretion. No portion of the Annual Bonus is guaranteed. The Annual Bonus shall be subject to the terms and conditions established by the Compensation Committee with respect to the Parent's annual incentive program, including any recoupment provision, and shall be paid in the fiscal year following the year of performance in the same manner as for other U.S.-based executives of the Company.

(c) *Annual Equity Awards*. The Executive shall be granted annual equity awards under the terms of the Incentive Plan and the implementing award agreements in each calendar year during the Employment Period, conditioned upon the Executive being employed by a Company Entity on the applicable grant date (the "Annual Equity Grant").

For calendar year 2020, the Annual Equity Grant shall have a target equity value of Four Million dollars ($4,000,000) (the "Annual Grant Value"). The target Annual Grant Value will be reviewed annually and may be adjusted by the Compensation Committee in its sole discretion. The Annual Equity Grant shall be granted in the form, at the same time and on otherwise substantially the same terms and conditions as annual equity grants are made to the Parent's other senior executive officers (pursuant to a Grant Award Agreement in respect thereof to be established by the Parent).

(d) *Automobile Allowance*. During the Employment Period, the Company shall pay the Executive an annual cash automobile allowance of $15,000, paid in equal installments with the Company's standard payroll cycle, subject to adjustment for future periods in line with policy for equivalent level executives at the determination of the Chief Executive Officer.

Section 3.2 Withholding. The Company and the Parent will have the right to withhold from payments otherwise due and owing to the Executive, an amount sufficient to satisfy any federal, state, and/or local income and payroll taxes (and any UK or foreign taxes), any amount required to be deducted under any employee benefit plan in which the Executive participates or as required to satisfy any valid lien or court order.

Section 3.3 Employee Benefits. During the Employment Period, the Executive shall have the opportunity to participate in all U.S.-based employee benefit plans and arrangements sponsored or maintained by the Company for the benefit of its senior executive group based in Denver, including without limitation, all group insurance plans (term life, medical and disability) and retirement plans, subject to the terms and conditions of such plans. The Executive shall be entitled to vacation leave that is consistent with the vacation policy for U.S.-based senior executive personnel in Denver.

Section 3.4 Business Expenses. The Executive shall be reimbursed for all reasonable expenses incurred by the Executive in the discharge of the Executive's duties, subject to and in accordance with the Company's practices and policies for its senior executives.

ARTICLE IV
TERMINATION

Section 4.1 Company's Right to Terminate. This is an at-will employment agreement. The Company may terminate the Executive's employment under this Agreement with or without Cause at any time by providing the Executive with a Notice of Termination, which in the case of a termination without Cause shall have an effective date not less than thirty (30) days after delivery of such Notice of Termination.

Section 4.2 The Executive's Right to Terminate. The Executive may terminate the Executive's employment under this Agreement for any reason whatsoever, by providing the Company with a Notice of Termination, with an effective date not less than thirty (30) days after delivery of such Notice of Termination, unless such termination is effected with Good Reason, in which case the notice shall comply with the timing specified in the definition of Good Reason.

Section 4.3 Death; Disability. If not terminated earlier, the Executive's employment under this Agreement shall terminate upon the date of the Executive's death during his employment or upon the date specified in a Notice of Termination upon the Executive's Disability.

Section 4.4 Deemed Resignations. Unless otherwise agreed by the Parent and the Company in writing prior to the termination of the Executive's employment, any termination of the Executive's employment will constitute an automatic resignation of the Executive as an officer, board member or any other position with the Parent, the Company or any of their affiliates. The Executive agrees to execute and deliver all documents reasonably requested by the Parent in connection therewith.

ARTICLE V
EFFECT OF TERMINATION OF EMPLOYMENT ON COMPENSATION

Section 5.1 Effect of Termination of Employment on Compensation.

(a) *Benefit Obligation and Accrued Obligation Defined*. For purposes of this Agreement, payment of the "Benefit Obligation" shall mean payment by the Company to the Executive (or the Executive's designated beneficiary or legal representative, as applicable), in accordance with the terms of this Agreement or the applicable plan document, of all vested benefits to which he is entitled under the terms of the employee benefit plans and compensation arrangements in which the Executive is a participant as of the Date of Termination. "Accrued Obligation" means the sum of (1) the Executive's Base Salary through the Date of Termination (together with any automobile allowance under Section 3.1(d)) and (2) any incurred but unreimbursed expenses for which the Executive is entitled to reimbursement in accordance with Company policies, in each case, to the extent not theretofore paid.

(b) *Termination by the Company without Cause; Termination by the Executive with Good Reason; Disability*. Subject to Section 5.1(e), if the Executive's employment is terminated involuntarily by the Company without Cause, by the Company due to Disability, or voluntarily by the Executive with Good Reason, the Company shall pay or provide to the Executive (or the Executive's guardian, if applicable):

(i) The Accrued Obligation within thirty (30) days following the Date of Termination or such earlier date as may be required by applicable law;

(ii) The Benefit Obligation at the times specified in and in accordance with the terms of the applicable employee benefit plans and compensation arrangements;

(iii) If the Executive is employed for at least nine (9) months of a calendar year, a pro-rated Annual Bonus for the year in which the Date of Termination occurs based on actual performance results as determined by the Compensation Committee, multiplied by a fraction, the numerator of which shall be the number of days of the Executive's actual employment in the year in which the Date of Termination occurs and the denominator of which shall be the total number of days in the year in which the Date of Termination occurs, which amount shall be paid at the time that bonuses for such year are otherwise paid to the Company's active executives; *provided that* if at any time the Compensation Committee of the Parent adopts a different policy for similarly situated U.S. senior executives regarding such terminations during a calendar year, such policy shall apply. (Any individual performance rating will be at the discretion of the CEO.)

(iv) Severance equal to one (1) times the Executive's annual Base Salary at the rate in effect on the Date of Termination, which shall be paid in equal installments over a twelve- (12-) month period commencing on the sixtieth (60th) day following the Date of Termination in accordance with the Company's standard payroll cycle; provided, however, that if the Executive's termination is due to Disability, the total amount payable pursuant to this Section 5.1(b)(iv) shall be reduced by the total amount of all disability benefits payable to the Executive pursuant to employee benefit plans of any Company Entity during the period of such installment payments; and

(v) During the period beginning on the Date of Termination and ending on the earlier of (A) the date that is twelve (12) months after the Date of Termination or (B) such date that the Executive obtains similar coverage from a subsequent employer, the Executive and the Executive's spouse and eligible dependents, as the case may be, shall be entitled to continue participation in all welfare benefit plans, practices, policies and programs in which the Executive and the Executive's spouse and eligible dependents participate in immediately prior to the Date of Termination at a cost to the Executive no greater than that of active senior executive employees of the Company.

(vi) Unless more favorable treatment is provided under the terms of a Grant Award Agreement, any unvested equity awards previously granted to the Executive and outstanding as of the Date of Termination which are scheduled to vest within a six (6) month period after the Date of Termination will continue to vest through the date that is six (6) months after the Date of Termination. Treatment of any other unvested equity awards will be determined by the Company in good faith.

Any relevant Grant Award Agreement will be deemed to be modified to reflect this provision.

(c) *Death*. Subject to Section 5.1(e), if the Executive's employment is terminated due to the Executive's death, the Company shall pay or provide to the Executive's estate:

(i) The Accrued Obligation within thirty (30) days following the Date of Termination or such earlier date as may be required by applicable law;

(ii) The Benefit Obligation at the times specified in and in accordance with the terms of the applicable employee benefit plans and compensation arrangements;

(iii) A pro-rated Annual Bonus for the year in which the Date of Termination occurs based on actual performance results as determined by the Compensation Committee, multiplied by a fraction, the numerator of which shall be the number of days of the Executive's actual employment in the year in which the Date of Termination occurs and the denominator of which shall be the total number of days in the year in which the Date of Termination occurs, which amount (if any) shall be paid at the time that bonuses for such year are otherwise paid to the Company's active executives (any individual performance rating will be at the discretion of the CEO); and

(iv) Severance equal to one times the Executive's annual Base Salary at the rate in effect on the Date of Termination, which shall be paid in equal installments over a twelve- (12-) month period commencing on the sixtieth (60th) day following the Date of Termination in accordance with the Company's standard payroll cycle.

(d) *Other Terminations*. If, during the Employment Period, the Executive's employment is terminated for any reason other than those specified in Section 5.1(b) or 5.1(c), the Executive shall be entitled only to the Accrued Obligation, payable within thirty (30) days following the Date of Termination or such earlier date as may be required by applicable law, and the Benefit Obligation, payable or due at the times specified in and in accordance with the terms of the applicable employee benefit plans and compensation arrangements, and the Executive shall not be entitled to any other amounts under this Agreement.

(e) *Release of Claims*. Notwithstanding any provision herein to the contrary, if the Executive (or the Executive's estate or guardian, as applicable) has not delivered to the Company an executed release, substantially in the form attached as Exhibit A (the "Release"), which shall effectuate a full and complete release of claims against the Company and its affiliates, officers and directors and acknowledge the applicability of continuing covenants under this Agreement, on or before the fiftieth (50th) day after the Date of Termination, or if the Executive (or the Executive's estate or guardian, as applicable) revokes such executed Release prior to the sixtieth (60th) day after the Date of Termination, the Executive (or the

Executive's estate or guardian, as applicable) shall forfeit all of the payments and benefits described in Sections 5.1(b)(iii) through (vi) and Section 5.1(c)(iii) through (iv).

ARTICLE VI
RESTRICTIVE COVENANTS

Section 6.1 Exclusive Services. Except as permitted in accordance with Section 2.3(c), the Executive shall during the Employment Period, except during vacation periods, periods of illness and the like, devote substantially all of the Executive's business time and attention to the Executive's duties and responsibilities for the Parent and the Company. During the Executive's employment with any Company Entity, the Executive shall not engage in any other business activity that would materially interfere with the Executive's responsibilities or the performance of the Executive's duties under this Agreement, provided that, (i) with the consent of the CEO, the Executive may sit on the boards of directors of other entities (and earn compensation relating to such service as a director), (ii) with prior disclosure to the Parent's General Counsel, the Executive may engage in civic and charitable activities, and (iii) the Executive may manage personal investments and affairs, in each case so long as such other activities do not materially interfere with the performance of the Executive's duties hereunder. If the Executive serves on the board of directors or advisory board or similar body of any entity at the direction of the Parent or the Company, any compensation of the Executive for such service shall be paid to a Company Entity unless otherwise determined by the CEO.

Section 6.2 Non-Solicitation, Non-Interference and Non-Competition. As a means to protect the Company Entities' legitimate business interests including protection of the "Confidential Information" (as defined in Section 6.3(a)) of any Company Entity (the Executive hereby agreeing and acknowledging that the activities prohibited by this Article VI would necessarily involve the use of Confidential Information), during the "Restricted Period" (as defined below), the Executive shall not, directly, indirectly or as an agent on behalf of any person, firm, partnership, corporation or other entity:

(a) solicit for employment, consulting or any other provision of services or hire any person who is a full-time or part-time employee of (or in the preceding six (6) months was employed by) any Company Entity or an individual performing, on average, twenty or more hours per week of personal services as an independent contractor to any Company Entity. This includes, without limitation, inducing or attempting to induce, or influencing or attempting to influence, any such person to terminate his or her employment or performance of services with or for any Company Entity; or

(b) (x) solicit or encourage any person or entity who is or, within the prior six (6) months, was a customer, producer, advertiser, distributor or supplier of any Company Entity during the Employment Period to discontinue such person's or entity's business relationship with the Company Entity; or (y) discourage any prospective customer, producer, advertiser, distributor or supplier of any Company Entity from becoming a customer, producer, advertiser, distributor or supplier of the Company Entity; or

(c) hold any interest in (whether as owner, investor, shareholder, lender or otherwise) or perform any services for (whether as employee, consultant, advisor, director or otherwise), including the service of providing advice for, a Competitive Business. For the purposes of this Agreement, a "Competitive Business" shall be any entity that directly or through subsidiaries in which it has a controlling interest operates a cable, satellite or broadband communications system that is in direct competition with the Parent or the Company.

(d) The "Restricted Period" shall include the Employment Period and shall expire on the first anniversary of the Executive's termination of employment with all Company Entities.

(e) Notwithstanding Section 6.2(c) above, the Executive may own, directly or indirectly, an aggregate of not more than five percent (5%) of the outstanding shares or other equity interest in any entity that engages in a Competitive Business, so long as such ownership therein is solely as a passive investor and does not include the performance of any services (as director, employee, consultant, advisor or otherwise) to such entity.

Section 6.3 Confidential Information.

(a) *No Disclosure*. The Executive shall not, at any time (whether during or after the Employment Period) (x) retain or use for the benefit, purposes or account of himself or any other person or entity, or (y) disclose, divulge, reveal, communicate, share, transfer or provide access to any person or entity outside any Company Entity (other than the Parent, its shareholders, directors, officers, managers, employees, agents, counsel, investment advisers or representatives in the normal course of the performance of their duties), any non-public, proprietary or confidential information (including trade secrets, know-how, research and development, software, databases, inventions, processes, formulae, technology, designs and other intellectual property, information concerning finances, investments, profits, pricing, costs, products, services, vendors, customers, clients, partners, investors, personnel, compensation, recruiting, training, advertising, sales, marketing, promotions, government and regulatory activities and approval) concerning the past, current or future business, activities and operations of any Company Entities and/or any third party that has disclosed or provided any of same to any Company Entity on a confidential basis ("Confidential Information") without the prior authorization of the Board. Confidential Information shall not include any information that is (A) generally known to the industry or the public other than as a result of the Executive's breach of this Agreement; (B) is or was available to the Executive on a non-confidential basis prior to its disclosure to the Executive by any Company Entity, or (C) made available to the Executive by a third party who, to the best of the Executive's knowledge, is or was not bound by a confidentiality agreement with (or other confidentiality obligation to) any Company Entity or another person or entity. The Executive shall handle Confidential Information in accordance with the applicable federal securities laws.

(b) *Permitted Disclosures*. Notwithstanding the provisions of the immediately preceding clause (i), nothing in this Agreement shall preclude the Executive from (x) using

any Confidential Information in any manner reasonably connected to the conduct of the business of any Company Entity; or (y) disclosing the Confidential Information to the extent required by applicable law, rule or regulation (including complying with any oral or written questions, interrogatories, requests for information or documents, subpoena, civil investigative demand or similar process to which the Executive is subject). Nothing contained herein shall prevent the use in any formal dispute resolution proceeding (subject, to the extent possible, to a protective order) of Confidential Information in connection with the assertion or defense of any claim, charge or other dispute by or against any Company Entity or the Executive. Notwithstanding the foregoing, nothing in this Agreement prohibits or restricts the Executive from reporting possible violations of law to any governmental authority or making other disclosures that are protected under whistleblower provisions of applicable law, and the Parties acknowledge and agree that the Executive does not need the prior authorization of any Company Entity to make any such reports or disclosures and the Executive is not required to notify any Company Entity that the Executive has made such reports or disclosures. However, to the maximum extent permitted by law, the Executive agrees that if such an administrative claim is made, the Executive shall not be entitled to recover any individual monetary relief or other individual remedies from any Company Entity; provided, however, that nothing herein limits the Executive's right to receive an award for information provided to any federal, state or local government agency.

(c) *Return All Materials*. Upon termination of the Executive's employment for any reason, the Executive shall (x) cease and not thereafter commence use of any Confidential Information or intellectual property (including any patent, invention, copyright, trade secret, trademark, trade name, logo, domain name or other source indicator) owned or used by any Company Entity, (y) immediately destroy, delete, or return to the Parent (at the Parent's option) all originals and copies in any form or medium (including memoranda, books, papers, plans, computer files, letters and other data) in the Executive's possession or control (including any of the foregoing stored or located in the Executive's office, home, smartphone, laptop or other computer, whether or not such computer is property of any Company Entity) that contain Confidential Information or otherwise relate to the business of any Company Entity, except that the Executive may retain only those portions of any personal notes, notebooks and diaries that do not contain any Confidential Information; and (z) notify and fully cooperate with the Parent regarding the delivery or destruction of any other Confidential Information of which the Executive is or becomes aware; provided that nothing in this Agreement or elsewhere shall prevent the Executive from retaining and utilizing: documents relating to personal benefits, entitlements and obligations; documents relating to personal tax obligations; desk calendar, rolodex, and the like; and such other records and documents as may reasonably be approved by the Parent.

Section 6.4 Reasonableness of Covenants. The Executive acknowledges and agrees that the services to be provided by the Executive under this Agreement are of a special, unique and extraordinary nature. The Executive further acknowledges and agrees that the restrictions contained in this Article VI are necessary to prevent the use and disclosure of Confidential Information and to protect other legitimate business interests of the Company Entities. The Executive acknowledges that all of the restrictions in this Article VI are reasonable in all respects, including duration, territory

and scope of activity. The Executive agrees that the restrictions contained in this Article VI shall be construed as separate agreements independent of any other provision of this Agreement or any other agreement between the Executive and any Company Entity. The Executive agrees that the existence of any claim or cause of action by the Executive against any Company Entity, whether predicated on this Agreement or otherwise, shall not constitute a defense to the enforcement by the Parent or the Company of the covenants and restrictions in this Article VI. The Executive agrees that the restrictive covenants contained in this Article VI are a material part of the Executive's obligations under this Agreement for which the Parent and the Company have agreed to compensate the Executive as provided in this Agreement. The Restricted Period referenced above shall be tolled on a day-for-day basis for each day during which the Executive violates the provisions of the subparagraphs above in any respect, so that the Executive is restricted from engaging in the activities prohibited by the subparagraphs for the full period.

Section 6.5 Works Made for Hire.

(a) *General*. The Executive recognizes and agrees that all original works of authorship, and all inventions, discoveries, improvements and other results of creative thinking or discovery by the Executive during the Employment Period, whether the result of individual efforts or in acts in concert with others, arising in the scope of the Executive's employment, utilizing in any way any of the Confidential Information or property of any Company Entity, or otherwise relating to the business of any Company Entity, are and shall be "works made for hire" within the meaning of the United States copyright laws, to the extent applicable thereto, and in all events shall be the sole and exclusive property of a Company Entity (collectively, the "Created Works"). Without limiting the generality of the foregoing, the Created Works shall include all computer software, written materials, business processes, compilations, programs, improvements, inventions, notes, copyrightable works made, fixed, conceived, or acquired by the Executive in the scope of the Executive's employment, utilizing in any way any of the Confidential Information, or otherwise relating to the business of any Company Entity. No part of the definition of Created Works is intended to exclude the Created Works from being included among the items constituting Confidential Information.

(b) *Assignment of Created Works*. The Executive hereby fully assigns to the Parent or its designee all of the Executive's right, title and interest in and to the Created Works and all aspects thereof, including without limitation all rights to renewals, extensions, causes of action, reproduce, prepare derivative works, distribute, display, perform, transfer, make, use and sell. The Executive will, from time to time during the Employment Period and thereafter, and at any time upon the request of the Parent or its designee, execute and deliver any documents, agreements, certificates or other instruments affirming, giving effect to or otherwise perfecting the Parent's or its designee's rights in the Created Works and will provide such cooperation as the Parent or its designee shall reasonably request in connection with the protection, exploitation or perfection of its rights therein anywhere in the world.

(c) *Power of Attorney*. If the Parent or its designee is unable, after reasonable effort, to secure the Executive's signature on any application for patent, copyright, trademark

or other analogous registration or other documents regarding any legal protection relating to a Created Work, whether because of the Executive's physical or mental incapacity or for any other reason whatsoever, the Executive hereby irrevocably designates and appoints the Parent and its duly authorized designees, officers and agents as the Executive's agent and attorney-in-fact, to act for and in the Executive's behalf and stead to execute and file any such application or applications or other documents and to do all other lawfully permitted acts to further the prosecution and issuance of patent, copyright or trademark registrations or any other legal protection thereon with the same legal force and effect as if executed by the Executive.

(d) *Disclosure of Created Works*. The Executive will promptly and without reservation fully disclose any Created Works to the Parent or its designee both during the Employment Period and thereafter.

Section 6.6 Intangible Property. The Executive will not at any time during or after the Employment Period have or claim any right, title or interest in any trade name, trademark, or copyright belonging to or used by any Company Entity, it being the intention of the Parties that the Executive shall, and hereby does, recognize that the Company Entities now have and shall hereafter have and retain the sole and exclusive rights in any and all such trade names, trademarks and copyrights. The Executive shall cooperate fully with any Company Entity during the Employment Period and thereafter in the securing of trade name, patent, trademark or copyright protection or other similar rights in the United States and in foreign countries and shall give evidence and testimony and execute and deliver to the Company Entity all papers reasonably requested by it in connection therewith; provided, however that the Company shall reimburse the Executive for reasonable expenses related thereto.

ARTICLE VII
OTHER COVENANTS

Section 7.1 409A Limitations. To the extent that any payment to the Executive constitutes a "deferral of compensation" subject to Section 409A of the Code (a "409A Payment"), and such payment is triggered by the Executive's termination of employment for any reason other than death, then such 409A Payment shall not commence unless and until the Executive has experienced a "separation from service," as defined in Treasury Regulation 1.409A-1(h) ("Separation from Service"). Furthermore, if on the date of the Executive's Separation from Service, the Executive is a "specified employee," as such term is defined in Treas. Reg. Section 1.409A-1(i), as determined from time to time by the Company, then such 409A Payment shall be made to the Executive on the earlier of (i) the date that is six (6) months after the Executive's Separation from Service; or (ii) the date of the Executive's death. The 409A Payments under this Agreement that would otherwise be made during such period shall be aggregated and paid in one (1) lump sum, without interest, on the first business day following the end of the six (6) month period or following the date of the Executive's death, whichever is earlier, and the balance of the 409A Payments, if any, shall be paid in accordance with the applicable payment schedule provided in this Agreement. The intent of the parties hereto is that payments and benefits under this Agreement comply with or be exempt from Section 409A of the Code and the regulations and guidance promulgated thereunder. Accordingly,

to the maximum extent permitted, this Agreement shall be interpreted to be in compliance therewith or exempt therefrom. Whenever a payment under this Agreement specifies a payment period with reference to a number of days (e.g., “paid within sixty (60) days”) following the Executive’s termination of employment, such payment shall commence following the Executive’s Separation from Service and the actual date of payment within the specified period shall be within the sole discretion of the Company. With respect to reimbursements (whether such reimbursements are for business expenses or, to the extent permitted under the Company’s policies, other expenses) and/or in-kind benefits, in each case, that constitute deferred compensation subject to Section 409A of the Code, each of the following shall apply: (x) no reimbursement of expenses incurred by the Executive during any taxable year shall be made after the last day of the following taxable year of the Executive; (y) the amount of expenses eligible for reimbursement, or in-kind benefits provided, during a taxable year of the Executive shall not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, to the Executive in any other taxable year; and (z) the right to reimbursement of such expenses or in-kind benefits shall not be subject to liquidation or exchange for another benefit.

Section 7.2 280G Matters.

(a) *Gross-Up Waiver*. The Executive hereby acknowledges and agrees that he shall have no rights to any additional payments intended to make the Executive whole for any taxes relating to “parachute payments” (as defined in Section 280G of the Code), including without limitation excise taxes imposed by Section 4999 of the Code and any related federal, state or local taxes (including without limitation any interest or penalties imposed with respect to such taxes) under any plans, agreements or arrangements, including the Grant Award Agreements by and between the Executive and the Parent and/or the Company.

(b) *Potential Reduction in Payments*. The following shall apply with respect to all plans, agreements and arrangements applicable to the Executive and shall supersede any provisions in such plans, agreements or arrangements relating to the reduction of payments or benefits in connection with Section 280G and Section 4999 of the Code.

(i) Notwithstanding any provision of this Agreement, if any portion of the payments or benefits under this Agreement, or under any other agreement with the Executive or plan of the Company or its affiliates (in the aggregate, “Total Payments”), would constitute an “excess parachute payment” and would, but for this Section 7.2, result in the imposition on the Executive of an excise tax under Section 4999 of the Code (the “Excise Tax”), then the Total Payments to be made to the Executive shall either be (i) delivered in full, or (ii) delivered in such reduced amount in the manner determined in accordance with Section 7.2(b)(ii) so that no portion of such Total Payments would be subject to the Excise Tax, whichever of the foregoing clauses (i) or (ii) results in the receipt by the Executive of the greatest benefit on an after-tax basis (taking into account the applicable federal, state and local income taxes and the Excise Tax). The determinations with respect to this Section 7.2(b) shall be made by an independent auditor (the “Auditor”) paid by the

Company. The Auditor shall be a nationally recognized certified public accounting firm or other professional organization that is a certified public accounting firm recognized as an expert in determinations and calculations for purposes of Section 280G of the Code that is selected by the Parent or the Company for purposes of making the applicable determinations hereunder.

(ii) If the Auditor determines that payments or benefits included in the Total Payments shall be reduced or eliminated, such reduction or elimination shall be accomplished by applying the following principles, in order: (1) the payment or benefit with the higher ratio of the parachute payment value to present economic value (determined using reasonable actuarial assumptions) shall be reduced or eliminated before a payment or benefit with a lower ratio; (2) the payment or benefit with the later possible payment date shall be reduced or eliminated before a payment or benefit with an earlier payment date; and (3) cash payments shall be reduced prior to non-cash benefits; provided that if the foregoing order of reduction or elimination would violate Section 409A of the Code, then the reduction shall be made pro rata among the payments or benefits included in the Total Payments (on the basis of the relative present value of the parachute payments).

(iii) It is possible that after the determinations and selections made pursuant to this Section 7.2, the Executive will receive Total Payments that are, in the aggregate, either more or less than the amount provided under this Section 7.2 (hereafter referred to as an "Excess Payment" or "Underpayment," respectively). If it is established, pursuant to a final determination of a court or an Internal Revenue Service proceeding that has been finally and conclusively resolved, that an Excess Payment has been made, then the Executive shall promptly pay an amount equal to the Excess Payment to the Company (or the Parent), together with interest on such amount at the applicable federal rate (as defined in and under Section 1274(d) of the Code) from the date of the Executive's receipt of such Excess Payment until the date of such payment. In the event that it is determined by the Auditor upon request by a Party that an Underpayment has occurred, the Company shall promptly pay an amount equal to the Underpayment to the Executive, together with interest on such amount at the applicable federal rate from the date such amount would have been paid to the Executive had the provisions of this Section 7.2 not been applied until the date of such payment.

(iv) The Company agrees that, in connection with making determinations under this Section 7.2, it shall instruct the Auditor to take into account the value of any reasonable compensation for services to be rendered by the Executive in connection with making determinations with respect to Section 280G and/or Section 4999 of the Code, including the non-competition provisions applicable to the Executive under Article VI of this Agreement and any other non-competition provisions that may apply to the Executive, and the Company and the Parent agree to fully cooperate in the valuation of any such services, including any non-competition provisions.

Section 7.3 Legal Fees. The Company agrees to pay as incurred (within thirty (30) business days following the Company's receipt of an invoice from counsel), all reasonable legal fees and expenses that the Executive incurs in connection with the negotiation and execution of this Agreement, but only up to a maximum amount of $20,000.

ARTICLE VIII
MISCELLANEOUS

Section 8.1 Waiver or Modification. Any waiver by either Party of a breach of any provision of this Agreement shall not operate as, or to be, construed to be a waiver of any other breach of such provision of this Agreement. The failure of a Party to insist upon strict adherence to any term of this Agreement on one or more occasions shall not be considered a waiver or deprive that Party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement. Neither this Agreement nor any part of it may be waived, changed or terminated orally, and any waiver, amendment or modification must be in writing and signed by each of the Parties.

Section 8.2 Successors and Assigns. The rights and obligations of the Company under this Agreement shall be binding on and inure to the benefit of the Company, its successors and permitted assigns. The rights and obligations of the Executive under this Agreement shall be binding on and inure to the benefit of the heirs and legal representatives of the Executive. The Company may assign this Agreement to a successor in interest, including the purchaser of all or substantially all of the assets of the Company, provided that the Company shall remain liable hereunder unless the assignee purchased all or substantially all of the assets of the Company. The Executive may not assign any of the Executive's duties under this Agreement.

Section 8.3 Mitigation/Offset. The Executive shall be under no obligation to seek other employment or to otherwise mitigate the obligations of the Company under this Agreement, and there shall be no offset against amounts or benefits due to the Executive under this Agreement or otherwise on account of any claim the Company or its affiliates may have against the Executive or any remuneration or other benefit earned or received by the Executive after such termination.

Section 8.4 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall, when executed, be deemed to be an original and all of which shall be deemed to be one and the same instrument; and all signatures need not appear on any one Counterpart.

Section 8.5 Governing Law; Dispute Resolution. This Agreement will be governed and construed and enforced in accordance with the laws of the State of Colorado, without regard to its conflicts of law rules, which might result in the application of laws of any other jurisdiction. Any dispute, controversy or claim, whether based on contract, tort or statute, between the Parties arising out of or relating to or in connection with this Agreement, or in any amendment, modification hereof (including, without limitation, any dispute, controversy or claim as to the validity, interpretation, enforceability or breach of this Agreement or any amendment or modification hereof) will be resolved in the state or federal courts located in the State of Colorado. The parties acknowledge that venue in such courts is proper and that those courts possess personal jurisdiction over them, to which the Parties' consent. It is agreed that service of process may be effectuated pursuant to Section 8.8 of this Agreement.

Section 8.6 Dispute Resolution. Any controversy or claim arising out of or relating to this Agreement, other than claims entitling the claimant to injunctive relief or claims or disputes arising from a violation or alleged violation by the Executive of the provisions of Article VI shall be settled exclusively by final and binding arbitration in Denver, Colorado in accordance with the Employment Arbitration Rules of the American Arbitration Association (the "AAA"), and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction. The arbitrator

shall be selected by mutual agreement of the parties, if possible. If the parties fail to reach agreement upon appointment of an arbitrator within thirty (30) days following receipt by one party of the other party's notice of desire to arbitrate, the arbitrator shall be selected from a panel or panels of persons submitted by the AAA. The selection process shall be that which is set forth in the AAA Employment Arbitration Rules then prevailing. The costs of the arbitrator shall be borne by both parties equally; provided that each party will pay its own attorneys' fees. Either party may appeal the arbitration award and judgment thereon and, in actions seeking to vacate an award, the standard of review to be applied to the arbitrator's findings of fact and conclusions of law will be the same as that applied by an appellate court reviewing a decision of a trial court sitting without a jury. This agreement to arbitrate shall not preclude the parties from engaging in voluntary, non-binding settlement efforts including mediation.

Section 8.7 Entire Agreement. This Agreement (together with the Grant Award Agreements with respect to equity awards) contains the entire understanding of the Parties relating to the subject matter of this Agreement and supersedes all other prior written or oral agreements, understandings or arrangements regarding the subject matter hereof. The Parties each acknowledge that, in entering into this Agreement, such Party does not rely on any statements or representations not contained in this Agreement or in the Grant Award Agreements.

Section 8.8 Severability. Any term or provision of this Agreement which is determined to be invalid or unenforceable by any court of competent jurisdiction in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity or unenforceability without rendering invalid or unenforceable the remaining terms and provisions of this Agreement or affecting the validity or enforceability of any of the terms or provisions of this Agreement in any other jurisdiction and such invalid or unenforceable provision shall be modified by such court so that it is enforceable to the extent permitted by applicable law.

Section 8.9 Notices. Except as otherwise specifically provided in this Agreement, all notices and other communications required or permitted to be given under this Agreement shall be in writing and delivery thereof shall be deemed to have been made (i) three (3) business days following the date when such notice shall have been deposited in first class mail, postage prepaid, return receipt requested, or any comparable or superior postal or air courier service then in effect, or (ii) on the date transmitted by hand delivery to the Party entitled to receive the same, at the address indicated below or at such other address as such Party shall have specified by written notice to the other Parties given in accordance with this Section 8.9:

If to the Company:

Liberty Global, Inc.
Attn: General Counsel/Chief People Officer
1550 Wewatta Street, Suite 1000
Denver, CO 80202
Tel: 303-220-6600

If to the Executive: At the address then on file with the Company.

Section 8.10 No Third Party Beneficiaries. Except as provided in Section 5.1(c) in the event of the Executive's death or Disability, this Agreement does not create, and shall not be construed as creating, any rights enforceable by any person not a party to this Agreement.

Section 8.11 Survival. The covenants, agreements, representations and warranties contained in this Agreement shall survive the termination of the Employment Period and the Executive's termination of employment with the Company for any reason.

[Remainder of page blank; Signature page follows]

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the Parties as of the first date written above, but effective as of the Effective Date.

LIBERTY GLOBAL, INC.

By: /s/ Michael T. Fries
Michael T. Fries
Chief Executive Officer & President

EXECUTIVE

/s/ Bryan H. Hall
Bryan H. Hall

[Signature Page to Employment Agreement]

EXHIBIT A

WAIVER AND RELEASE AGREEMENT

I, **[NAME]**, do freely and voluntarily enter into this WAIVER AND RELEASE AGREEMENT (this "Agreement"), intending to be legally bound, according to the terms set forth below. I acknowledge that my employment with any and all of **[___________________]** (collectively, the "Company"), and their affiliates (together with the Company, the "Employer") has been terminated as of ____________________ (the "Termination Date").

I acknowledge that my Employer has agreed to provide me certain benefits (the "Benefits") pursuant to Section (__) of that certain Employment Agreement between _________, and me effective as of ________ (the "Employment Agreement"). Such Benefits shall be provided in accordance with the terms and conditions of the Employment Agreement.

I understand that the Company will not deduct from the Benefits any employee contributions to the [Liberty Global 401(k) Savings and Stock Ownership Plan] (the "Plan").

For this valuable consideration, I hereby agree and state as follows:

1. I, individually and on behalf of my successors, heirs and assigns, release, waive and discharge Employer, and any of its parents, subsidiaries, or otherwise affiliated corporations, partnerships or business enterprises, and their respective present and former directors, officers, shareholders, employees, and assigns (hereinafter, "Released Parties"), from any and all causes of action, claims, charges, demands, losses, damages, costs, attorneys' fees and liabilities of any kind that I may have or claim to have relating to my employment relationship with the Employer, including my service as a director of the Company, or the termination thereof, relating to or arising out of any act of commission or omission from the beginning of time through the date of my execution of this Agreement; provided, however, nothing contained herein shall release any claim I may have: (i) for indemnification under Employer's constituent documents or any other agreement that I have with any of the Released Parties; (ii) for unemployment compensation benefits; (iii) to enforce the obligations of Employer set forth in the Employment Agreement; (iv) to vested amounts held in my name in accordance with the conditions and terms of any plan, program or arrangement sponsored or maintained by any of the Released Parties, including, without limitation the Plan and any nonqualified deferred compensation plan; (v) to outstanding equity awards granted to me (collectively, the "Grants"), which shall be subject to the terms and conditions of the applicable incentive plan and the agreement evidencing the respective Grant, as modified by the Employment Agreement; (vi) to benefits under any employee benefit plan maintained or sponsored by any of the Released Parties, including health care continuation under COBRA; or (vii) to rights as a shareholder of the Company.

2. This release includes, but is not limited to, the following claims, and shall apply to claims made in the United States, the United Kingdom, and/or any country or territory where such a claim can be made:

a. Claims under federal, state, local or foreign laws prohibiting age, sex, race, national origin, disability, religion, sexual orientation, marital status, retaliation, or any other form of discrimination, or mistreatment, such as, but not limited to, the Age Discrimination in Employment Act, (29 U.S.C. §621 et seq), Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, 42 U.S.C. §1981, §1985, §1986, the Americans with Disabilities Act, and the National Labor Relations Act, as amended, 29 U.S.C. §151, et seq;

b. Intentional or negligent infliction of emotional distress, defamation, invasion of privacy, and other tort claims;

c. Breach of express or implied contract claims;

d. Promissory estoppel claims;

e. Retaliatory discharge claims;

f. Wrongful discharge claims;

g. Breach of any express or implied covenant of good faith and fair dealing;

h. Constructive discharge;

i. Claims arising out of or related to any applicable federal, state or foreign constitutions;

j. Claims for compensation, including without limitation, any wages, bonus payments, on call pay, overtime pay, commissions, and any other claim pertaining to local, state, federal or foreign wage and hour or other compensation laws, such as, but not limited to, the Worker Adjustment and Retraining Notification Act, 29 U.S.C. §2101, et seq, and the Fair Labor Standards Act, as amended, 29 U.S.C. §201, et seq.;

k. Fraud, misrepresentation, and/or fraudulent inducement;

l. Claims made under or pursuant to any severance plan or program maintained by any of the Released Parties;

m. Claims of breach of any data privacy or similar laws in connection with the handling or investigation of any whistleblower complaints or any other investigation by Employer or its representatives; and

n. Other legal and equitable claims regarding my employment or the termination of my employment, other than as set forth herein.

3. I hereby warrant and represent that I have not filed or caused to be filed any charge or claim against any Released Party with any administrative agency, court of law or other tribunal. I agree that I am not entitled to any remedy or relief if I were to pursue any such claim, complaint or charge.

4. I hereby acknowledge that I am age forty (40) or older.

5. BY SIGNING THIS AGREEMENT, I ACKNOWLEDGE THAT EMPLOYER HAS ADVISED ME TO DISCUSS THIS WAIVER AND RELEASE AGREEMENT WITH AN ATTORNEY BEFORE SIGNING THIS AGREEMENT. I acknowledge and agree that the Released Parties are not responsible for any of my costs, expenses, and attorney's fees, if any, incurred in connection with any claim or the review and signing of this Agreement.

6. I acknowledge and state that I have been given a period of at least twenty-one (21) days in which to consider the terms of this Agreement.

7. I understand that I have the right to revoke this Agreement at any time within **seven (7) days** after signing it, by providing **written notice** to the Company, Attn. General Counsel at 1550 Wewatta Street, Denver, CO 80202, and this Agreement is not effective or enforceable until the seven (7) day revocation period has expired. In the event I revoke this Agreement, the Company shall have no obligation to provide me the Benefits. I understand that failure to revoke my acceptance of this Agreement will result in this Agreement being permanent and irrevocable.

8. I agree that this Agreement is a compromise of claims and charges and/or potential claims and charges which are or may be in dispute, and that this Agreement does not constitute an admission of liability or an admission against interest of any Released Party.

9. Nothing herein prohibits or prevents me from filing a charge with or participating, testifying or assisting in any investigation, hearing, whistleblower action or other proceeding before any federal, state or local government agency, nor does anything herein preclude, prohibit or otherwise limit, in any way, my rights and abilities to contact, communicate with, report matters to or otherwise participate in any whistleblower program administered by any such agencies. Pursuant to the Defend Trade Secrets Act of 2016, I understand that I shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of any confidential information of the Company that (i) is made (A) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney and (B) solely for the purpose of reporting or investigating a suspected violation of law or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

10. This Agreement is made and is effective as of the date first written below.

11. This Agreement becomes null and void and has no further force or effect if Employer does not receive the executed Agreement by 5:00 p.m., Mountain Time, __________, 20___.

IN WITNESS WHEREOF, I have placed my signature this ____ day of _________, 20___.

EXECUTIVE:

—

[NAME]

Dated 19th May 2005

UGC EUROPE SERVICES LTD

and

ANDREA SALVATO

EXECUTIVE SERVICE AGREEMENT

THIS AGREEMENT is made on / / 2005

BETWEEN:

(1) **UGC Europe Services Ltd**, a limited liability company duly organised and existing under the laws of England and Wales, whose registered office is at Michelin House, 81 Fulham Road, London, SW3 6RD. United Kingdom (the **"Company"**); and

(2) **Andrea Salvato,** of (the **"Executive"**).

THE PARTIES AGREE AS FOLLOWS:

1 DEFINITIONS

In this agreement unless the context otherwise requires:-

1.1 "**Group Company**" means any holding company from time to time of the Company or any subsidiary from time to time of the Company or of any such holding company (other than the Company) (for which purpose "subsidiary" and "holding company" shall have the meanings given to them in Section 736 of the Companies Act 1985).

1.2 "**Group**" means the Company and the Group Companies.

1.3 "**Supervisor**" means the line manager notified to the Executive by the Company, or such other Supervisor as designated by the Company.

2 APPOINTMENT AND NOTICE PERIOD

2.1 The Company shall engage the Executive and the Executive shall serve the Company as hereinafter provided (the **"Appointment"**). The Appointment shall commence on 4th July 2005 and shall, subject to clause 12, continue unless and until terminated by either party giving to the other not less than six months notice in writing.

2.2 The Executive's period of continuous employment with the Company began 4th July 2005.

3 DUTIES

3.1 The Executive shall perform the duties of Managing Director, Mergers and Acquisitions – Europe, reporting directly to the Supervisor, on and subject to the terms and conditions specified in this agreement. During the Appointment the Executive shall devote the whole of his professional time and attention to the duties assigned to him and shall well and faithfully serve the Company and use his best endeavours to promote the interests of the Company.

3.2 The Executive will be required to work from 9.00 am to 6.00 pm Monday to Friday inclusive. The Executive shall also work, without additional remuneration, such additional hours as may be necessary for the proper performance of the Executive's duties.

3.3 The Executive's normal place of work shall London.

3.4 The Executive may be required in pursuance of his duties hereunder:-

(a) to perform services not only for the Company but also for any Group Company (including acting as a director of such companies as his Supervisor shall direct);

(b) to travel to such places whether in or outside the United Kingdom by such means and on such occasions as the Company may require and in particular to the Netherlands.

3.5 Notwithstanding the foregoing or any other provision of this agreement the Company shall not be under any obligation to vest in or assign to the Executive any powers or duties and may at any time require the Executive to perform:-

(a) all his normal duties;

(b) a part only of his normal duties and no other duties;

(c) such duties as it may reasonably require and no others;

(d) no duties whatever;

and may from time to time suspend or exclude the Executive from the performance of his duties and/or from all or any premises of the Company without the need to give any reason for so doing but his salary will not cease to be payable (in whole or in part) nor will he cease to be entitled to any other benefits hereunder by reason only of such requirement as mentioned in paragraphs 3.5(b) to 3.5(d) of this clause or such suspension or exclusion (unless or until his employment under this agreement shall be terminated).

4 HOLIDAY ENTITLEMENT

During the Appointment the Executive shall be entitled to 25 working days' holiday (in addition to public holidays in England) in each calendar year January to December at full salary to be taken at such time or times as may be approved by his Supervisor. Holidays can only be carried over to the subsequent year with the prior approval of his Supervisor (and such carry-over shall not exceed 5 days). Upon the termination of the Appointment either the Executive shall be entitled to receive payment in lieu of accrued holidays not taken at that date (provided that such termination is not pursuant to clause 12) or the Company shall be entitled to make a deduction from the Executive's remuneration in respect of holidays taken in excess of the accrued entitlement.

5 REMUNERATION

5.1 During the Appointment, as remuneration for his services hereunder, the Executive shall be paid a fixed salary at the rate of £225,000 gross per annum payable in equal monthly instalments in arrears on or before the last working day of each calendar month.

5.2 The salary shall be reviewed along with the Executive’s performance in January of each year. The first review will be in January 2006.

5.3 The Executive’s salary and/or any other sums due to him under this agreement shall be subject to such deductions as may be required by law to be made (including, without limitation, tax and national insurance deductions).

5.4 The Executive shall receive an initial enhanced grant of 250,000 UGC Stock Appreciation Rights (“SARs”) at the closing price on the Executive’s date of joining the Company, or

in the event that the market is closed, the first trading day after the Executive’s date of joining the Company. The Executive’s participation in the UGC Equity Incentive Plan is at the sole discretion of the Company and shall be subject to the rules of the Plan, details of which will be given to the Executive in due course.

6 EXPENSES/COMPANY EQUIPMENT

6.1 The Executive shall be entitled to recover all reasonable travelling, hotel and other expenses incurred in connection with the performance of the duties hereunder, which expenses shall be evidenced in such manner as the Company may specify from time to time and are subject to compliance with the Company’s business expense policy. The Executive agrees to repay to the Company any expenses he owes the Company.

6.2 The Executive may be provided equipment to utilise during his employment with the Company and agrees to return such equipment to the Company as and when demanded. The Executive agrees to repay to the Company any charges for damage done to any equipment (excluding normal wear and tear). In the event any equipment is not returned it will be given a fair market value, which the Executive agrees to repay to the Company on demand. These repayment obligations are without prejudice to any other legal remedies that the Company may have.

6.3 The Company reserves the right to make deductions from the Executive’s salary and/or any other sums due to him under this agreement in respect of any sums due to be repaid by him under clauses 6.1 and 6.2.

7 PENSIONS

7.1 Subject to 7.2 the Executive will be eligible to participate in the UGC Europe Services Limited Group Personal Pension Plan, as exists from time to time, in the calendar month following three months continuous employment with the Company.

7.2 Contributions by the Company will be in compliance with the Company's policy on pensions contributions as amended from time to time.

8 BENEFITS

8.1 The Executive and his family are entitled to become members of the Company’s Private Medical Insurance scheme and Dental Insurance Scheme subject to the rules of the schemes as amended from time to time. For the Medical Insurance Scheme, all monthly premiums will be borne by the Company. With regards to the Dental Insurance Scheme, only the monthly premiums for the Executive will be borne by the Company. Full details of the schemes are available from Human Resources.

8.2 The Executive may participate in the Company’s Permanent Health Insurance scheme subject to the rules of the scheme as amended from time to time. Full details of the scheme are available from Human Resources.

8.3 The Company will provide the Executive with group life assurance cover, subject to the rules of the scheme as amended from time to time. Full details of the scheme are available from Human Resources.

8.4 To assist in the performance of the duties hereunder the Company shall during the Appointment provide the Executive with a car allowance of £1,208 gross per month.

9 CONFIDENTIAL INFORMATION/TRADE SECRETS/NON-COMPETITION

The Executive shall be subject to the Company's policy in respect of confidential information and trade secrets and non-competition as set out in Schedule 1 attached.

10 INVENTIONS AND CREATIVE WORKS

10.1 The Executive acknowledges that because of the nature of his duties and the particular responsibilities arising as a result of such duties which he owes to the Company and the Group Companies he has a special obligation to further the interests of the Company and the Group Companies. In particular the duties of the Executive may include reviewing the products and services of the Company and Group Companies with a view to improving them by new and/or original ideas and inventions and implementing such improvements.

10.2 The Executive shall promptly disclose to the Company any idea, invention or work which is relevant to or capable of use in the business of the Company or any of the Group Companies made by the Executive in the course of his employment whether or not in the course of his duties. The Executive acknowledges that the intellectual property rights subsisting or which may in the future subsist in any such ideas, inventions or works created by him in the course of his employment will, on creation, vest in and be the exclusive property of the Company and where the same does not automatically vest as aforesaid, the Executive shall assign the same to the Company (upon the request and at the cost of the Company). The Executive hereby irrevocably waives any rights which he may have in any such ideas, inventions or works which are or have been conferred upon him by chapter IV of part I of the Copyright, Designs and Patents Act 1988 headed "Moral Rights".

10.3 The Executive hereby irrevocably appoints the Company to be his attorney in his name and on his behalf to execute and do any such instrument or thing and generally to use his name for the purpose of giving to the Company or its nominee the full benefit of the provisions of this clause 10 and acknowledges in favour of any third party that a certificate in writing signed by any Director or Secretary of the Company that any instrument or act falls within the authority hereby conferred shall be conclusive evidence that such is the case.

11 CODE OF BUSINESS CONDUCT

The Executive shall be subject to the Company's Code of Business Conduct issued by the Company to him from time to time, the current version of which is set out in Schedule 2.

12 TERMINATION BY EVENTS OF DEFAULT

12.1 The Appointment shall be subject to summary termination at any time by the Company by notice in writing if the Executive shall:-

(a)have committed any serious breach or (after warning in writing) any repeated or continued material breach of the obligations hereunder; or

(b)shall have been guilty of any act of dishonesty or serious misconduct or any conduct which in the reasonable opinion of the Board of Directors of the Company tends to bring the Executive, the Company or any of the Group Companies into

disrepute including but not limited to any breach of the Company's Code of Business Conduct as set out in Schedule 2; or

(c) shall be declared bankrupt or shall compound with his creditors;

(d) be convicted of any criminal offence (excluding an offence under the road traffic legislation in the United Kingdom or elsewhere for which the Executive is not sentenced to any term of imprisonment, whether suspended or not);

(e) be incapacitated during the Appointment by ill-health or accident from performing his duties hereunder for an aggregate of 130 working days or more in any period of 12 months provided that this clause 12.1(f) shall not apply if using it would deprive the Executive of any permanent health insurance benefits under Clause 8.2.

12.2 Any delay by the Company in exercising such right to termination shall not constitute a waiver thereof.

13 INCAPACITY

13.1 If the Executive shall be incapacitated during the Appointment by ill-health or accident from performing his duties hereunder for an aggregate of 130 working days or more in any period of 12 months the Company may by written notice to the Executive forthwith (or as from a future date specified in the notice) discontinue payment in whole or part of the remuneration and benefits under this Agreement until such incapacity shall cease or (whether or not his remuneration and benefits shall have been discontinued as aforesaid) terminate pursuant to Clause 12.1(e) the Appointment provided that the Company shall, except where the Appointment has been terminated, take all reasonable steps to ensure that the Executive receives benefits pursuant to clauses 8.1, 8.2 and 8.3. Subject as aforesaid the said remuneration and benefits shall continue to be payable to the Executive notwithstanding such incapacity, but the Company shall be entitled to set off or deduct therefrom the amount of any sickness or other benefit to which the Executive is entitled under Social Security legislation for the time being in force. If requested by the Company, doctor’s certificates must be obtained for any period of incapacity due to sickness or injury of more than 7 days (including weekends). This clause 13.1 is without prejudice to the Company's rights to terminate the Appointment pursuant to Clause 2.1 and clause 12.1.

13.2 It is a condition of the Executive’s employment that the Executive consents to an examination by a doctor nominated by the Company should the Company so require.

13.3 If the Executive’s absence shall be occasioned by the actionable negligence of a third party in respect of which damages are recoverable, then all sums paid by the Company to the Executive under this clause 13 shall constitute loans to the Executive, who shall:

(a) immediately notify the Company of all the relevant circumstances and of any claim, compromise, settlement or judgment made or awarded in connection therewith;

(b) if the Company so requires, refund to the Company such sum as the Company may determine, not exceeding the lesser of:

(i) the amount of damages recovered by the Executive under any compromise settlement or judgment; and

(ii) the sums advanced to the Executive by the Company in respect of the period of incapacity.

14 OBLIGATIONS UPON TERMINATION

Upon the termination of the Appointment howsoever arising the Executive shall:-

14.1 at any time or from time to time thereafter upon the request of the Company, resign without claim for compensation from:-

(a) all offices held in the Company or any of the Group Companies; and

(b) membership of any organisation and any office in any other company acquired by reason of or in connection with the Appointment;

and should he fail to do so the Company is hereby irrevocably appointed to be the Executive's Attorney in his name and on his behalf to execute any documents and to do any things necessary or requisite to give effect to this clause; and

14.2 deliver to the Company all documents (including, but not limited to, correspondence, lists of clients or customers, notes, memoranda, plans, drawings and other documents of whatsoever nature and all copies thereof) made or compiled or acquired by the Executive during the Appointment and concerning the business, finances or affairs of the Company or any of the Group Companies or customers together with all other property of or relating to the business of the Company or any of the Group Companies which may be in the Executive’s possession or under the Executive’s power or control.

15 RECONSTRUCTION AND AMALGAMATION

If at any time the Executive's employment is terminated in connection with any reconstruction or amalgamation of the Company or any of the Group Companies whether by winding up or otherwise and the Executive receives an offer on terms which (considered in their entirety) are not less favourable to any material extent than the terms of this agreement from a company involved in or resulting from such reconstruction or amalgamation the Executive shall have no claim whatsoever against the Company or any such company arising out of or connected with such termination.

16 NOTICES

Any notice to be given hereunder shall be in writing. Notices may be given by either party by personal delivery or post or by fax addressed to the other party at (in the case of the Company) its registered office for the time being and (in the case of the Executive) his last known address and any such notice given by letter or fax shall be deemed to have been served at the time at which the letter was delivered personally or transmitted or if sent by post would be delivered in the ordinary course of first class post.

17 PREVIOUS CONTRACTS

17.1 This agreement is in substitution for any previous contract of service between the Company or any of the Group Companies and the Executive which shall be deemed to have been terminated by mutual consent as from the commencement of the Appointment.

17.2 The Executive hereby warrants and represents to the Company that he will not, in entering into this agreement or carrying out his duties hereunder, be in breach of any terms of employment whether express or implied or any other obligation binding upon him.

18 PROPER LAW

This agreement shall be governed and construed in all respects in accordance with English law.

19 CONSTRUCTION

19.1 The headings in this agreement are inserted for convenience only and shall not affect its construction.

19.2 Any reference to a statutory provision shall be construed as a reference to any statutory modification or re-enactment thereof (whether before or after the date hereof) for the time being in force.

20 STATUTORY INFORMATION, POLICIES AND SCHEDULES

20.1 This agreement constitutes a written statement as at the date hereof of the terms of employment of the Executive in compliance with the provisions of the Employment Rights Act 1996.

20.2 There are no collective agreements applicable to the Executive.

20.3 The Executive will observe such rules, regulations and policies relating to the grievance and disciplinary procedure as the Company may from time to time notify to the Executive.

20.4 If the Executive is dissatisfied with any disciplinary decision relating to him he should apply orally or in writing to his Supervisor. Any application for the purpose of seeking redress of any grievance relating to the Executive's employment should be made either orally or in writing to his Supervisor.

20.5 The Executive shall comply with all of the Company's rules, regulations and policies in force from time to time.

20.6 This agreement together with Schedules 1 and 2 constitute the entire agreement between the Executive and the Company.

21 DATA PROTECTION

The Executive consents to the Company or any Group Company holding and processing both electronically and in hard copy form any personal and sensitive data relating to the Executive for the purposes of employee-related administration, processing the Executive's file and management of its business, for compliance with applicable procedures, laws and regulations and for providing data to external suppliers who administer the Executive's benefits solely for the purpose of providing the Executive with those benefits. It may also be necessary for the Company to forward such personal and sensitive information to other offices it may have or to another Group Company outside the European Economic Area where such a company has offices for storage and processing for administrative purposes and the Executive consents to the Company doing so as may be necessary from time to time.

IN WITNESS whereof this agreement has been executed on the date stated on the first page of this agreement.

Signed as a deed by the said **ANDREA SALVATO** in the presence of:-	)))	…………………..……………
Signed by **AUTHORIZED SIGNATORY** Duly authorised for and on behalf of **UGC EUROPE SERVICES LIMITED** in the presence of:-	))))	....

322520-1

SCHEDULE 1

TRADE SECRETS, CONFIDENTIAL INFORMATION AND NON-COMPETITION

During the Appointment, the Executive will acquire knowledge of confidential and propriety information regarding, among other things, the Company's and the Group's present and future operations, its customers and suppliers, pricing and bidding strategies, and the methods used by the Company and its employees.

Therefore, the Executive hereby agrees to the following:

A. During the Appointment and after the termination of the Appointment the Executive will hold in a fiduciary capacity for the benefit of the Company, and shall not directly or indirectly use or disclose any Trade Secret, as defined below, that the Executive may acquire during the Appointment for so long as such information remains a trade secret. The term "**Trade Secret**" as used in this agreement shall mean information including, but not limited to, technical or non-technical data, a formula, a pattern, a compilation, a program, a device, a method, a technique, a drawing, a process, financial data, financial plans, product plans or a list of actual or potential customers or suppliers which:

(1) derives economic value, actual or potential from not being generally known to, and not being readily ascertainable by proper means by other persons who can obtain economic value from its disclosure or use; and

(2) is the subject of reasonable efforts by the Company or its Group to maintain its confidentiality.

B. In addition to A above and not in limitation thereof, the Executive agrees that, during the Appointment and for a period of 2 years after termination, the Executive will hold in a fiduciary capacity for the benefit of the Company and the Group, and shall not directly or indirectly use or disclose, any Confidential or Proprietary information, as defined below, that the Executive may have acquired (whether or not developed or compiled by the Executive and whether or not the Executive was authorised to have access to such information) during the term of, in the course of or as a result of the Appointment. The term "**Confidential or Proprietary Information**" as used in this agreement means any secret, confidential, or proprietary information of the Company not otherwise included in the definition of "Trade Secret" above and does not include information that has become generally available to the public by the act of one who has the right to disclose such information without violating any right of the client to which such information pertains.

C. 1. In this Section C

1.1 "**Restricted Business**" means those of the businesses of the Company and any Group Company at the time of the termination of the Appointment with which the Executive was involved to a material extent during the period of 12 months ending on the date of the termination of the Appointment;

1.2 "**Restricted Customer**" means any firm, company or other person who, during the period of 12 months ending on the date of the termination of the Appointment, was a customer of or in the habit of dealing with the Company or any Group Company and with whom the Executive had contact or about whom the Executive became aware or informed in the course of the Appointment; and

1.3 **"Restricted Employee**" means any person who, at the date of the termination of the Appointment, either:-

(a) was employed by the Company or any Group Company at a level at least equal to the Executive and was a person with whom the Executive had material contact; or

(b) was employed by the Company or any Group Company and reported to the Executive directly or indirectly at any time during the 12 months prior to the termination of the Appointment.

2. The Executive will not, for a period of 6 months after the termination of the Appointment, solicit or endeavour to entice away from the Company or any Group Company the business or custom of a Restricted Customer with a view to providing goods or services to that Restricted Customer in competition with any Restricted Business.

3. The Executive will not, for a period of 6 months after the termination of the Appointment, provide goods or services to or otherwise have any business dealings with any Restricted Customer in the course of any business concern which is in competition with any Restricted Business.

4. The Executive will not, for a period of 6 months after the termination of the Appointment, in the course of any business concern which is in competition with any Restricted Business solicit or endeavour to entice away from the Company or any Group Company any Restricted Employee or employ or otherwise engage the services of, whether as employee, consultant, or otherwise, any Restricted Employee.

5. Any period of restriction under clauses 2, 3 and 4 of this Section C shall be reduced by any period during which the Executive is prevented from carrying out his normal duties during his notice period pursuant to clauses 3.5(b), (c) or (d) of the Service Agreement.

6. The obligations imposed on the Executive by this Section C extend to the Executive acting not only on the Executive's own account but also on behalf of any other firm, company or other person and shall apply whether the Executive acts directly or indirectly.

D. The covenants contained in this Schedule shall inure to the benefit of the Company, and successor of it and every Group Company.

SCHEDULE 2

Code of Business Conduct for All Employees

Amended and Restated March 11, 2004

Code of Business Conduct

Introduction

UnitedGlobalCom, Inc. (the “Company”), is committed to conducting its business with honesty and integrity. This Code of Business Conduct (this “Code”) is designed to fulfill this mandate. It is also intended to help each of us focus on the duty we owe to each other, to the Company’s stockholders and to others with whom we do business to conduct ourselves honestly and ethically.

This Code applies to each of the Company’s and to all other companies in which the Company directly or indirectly owns and has the right to vote shares or other interests representing more than 50% of the voting power of such companies (the “Controlled Companies”) with respect to the election of directors or similar officials, and to the directors, officers and employees thereof (referred to collectively as “employees”). Notwithstanding the foregoing, unless otherwise determined by the Board of Directors, this Code does not apply to (i) any Controlled Company and its employees if the Controlled Company is an “issuer” as defined in Section 2(a)(7) of the Sarbanes-Oxley Act of 2002 (generally, a company that files disclosure documents with the Securities and Exchange Commission), or (ii) any other Controlled Company that is excluded from the application of the Code by the Board of Directors; provided, however, that such Controlled Company has its own Code of Business Conduct, which has been approved by its board of directors. A violation of the standards contained in this Code will result in disciplinary action, up to and including possible dismissal.

Company Assets

Company assets should be safeguarded and used for Company business only, except for limited personal use approved by your supervisor that does not interfere with Company use. This includes protection of the Company’s physical facilities, office equipment (for example, all computer-related equipment, furniture and supplies), computer software, records, intellectual property rights and third party information. We also must safeguard the Company’s trademarks and other proprietary information, as discussed in the section “Confidential Information.”

Compliance with Laws

In conducting our business, the Company and every employee must obey and comply with applicable laws, rules and regulations. It is your job to be aware of those rules and to comply with the legal requirements affecting you and your job.

You may learn information about the Company or companies with whom we do business that is unavailable to the public. Such information may be “insider information” within the meaning of the U.S. federal securities laws. As provided in the Company’s policy on trading in Company securities, you may not use inside information when making personal investment decisions or investment decisions for others regarding our stock or the stock of companies with whom we do business. In addition, you may not pass insider information on to persons outside the Company. This includes family and friends.

If you have any questions regarding compliance with these laws and principles, please call a member of the Company's Legal Department immediately. Remember that compliance with this Code is your responsibility.

Confidential Information

You shall not, during or after your employment, disclose to or use for the benefit of any person or entity other than the Company, any Company confidential information that you develop or receive during employment. "Confidential information" refers to information that is not available to the public. For example, Company confidential information includes:

- trade secrets, research and development information, product and marketing plans;
- personnel data, financial data, product and service specifications, prototypes, software, models, business planning models, customer lists;
- information relating to current and future business plans, strategies and methods, divestitures, mergers, acquisitions and marketing and sales plans and data;
- technical and engineering information; and
- other information relating to the Company, its subsidiaries or its customers.

If you are unsure about the confidential nature of specific information you must ask your supervisor or a member of the Company's Legal Department for clarification. You must return to the Company all Company confidential information when your employment ends.

You should use reasonable care to protect the confidentiality of all Company confidential information, and should not disclose Company confidential information to unauthorized persons. This means that you should exercise care when discussing Company matters in the presence of third parties, and should contact the Company's Legal Department before disclosing Company confidential information to a third party. Company confidential information should never be disclosed for personal profit or for the advantage of yourself or anyone else.

Also, you should not accept any confidential information from any third party without approval of his/her supervisor or a member of the Company's Legal Department. If you have third party confidential information, you must take care to observe the terms of any agreement under which such confidential information has been received from the third party, and not to violate the rights of the third party. Particular care should be taken when dealing with competitors and former employees. You must never knowingly request, accept, use or disclose the confidential information of these parties unless you have consulted with your supervisor or a member of the Company's Legal Department. In addition, you may not disclose, or induce any other employee to disclose, any former employer's confidential information, or ask a third party to violate a non-compete or non-disclosure agreement.

You will be subject to appropriate disciplinary action, up to and including dismissal, for knowingly or unknowingly (such as through casual conversation) revealing confidential information of the Company or of a third party.

Conflicts of Interest

You must avoid any situation that involves or may involve a conflict between your personal interest and the interest of the Company. A conflict of interest occurs when personal interests interfere with your ability to (i) exercise good judgment concerning the Company's best interests or (ii) do your job at the Company in a way that is in the

best interest of the Company. You may not use Company property, information or position for personal gain, including by taking for yourself personal opportunities that are discovered through the use of Company property, information or position. You must make prompt and full disclosure in writing to senior management of any potential conflict of interest situation and receive written approval from senior management regarding the situation. You should avoid even the appearance of such a conflict.

Examples of conflict situations include:

- Ownership, directly or indirectly (including through family members), of more than a modest financial interest in any outside entity that does or seeks to do business with the Company or a competitor of the Company.
- Serving as a director, officer, partner, consultant, or in a managerial or technical capacity with an outside entity that does or is seeking to do business with the Company or a competitor of the Company.
- Acting as a broker, finder, go-between or otherwise for the benefit of a third party in transactions involving or potentially involving the Company or its interests.
- Buying or selling assets to/from the Company.
- Using Company-owned assets for other than Company-related business.
- Business relationships between the Company and any person who is a relative or personal friend or an entity controlled by any such person.
- Compete or prepare to compete with the Company while still employed by the Company.

There are other situations in which a conflict of interest may arise. If you have any questions regarding whether a type of action may create a conflict of interest situation, you should consult a member of the Company's Legal Department. Also, if you become aware of any material transaction or relationship that could reasonably be expected to give rise to such a conflict of interest, or if you have concerns about any situation, follow the steps outlined in the section "Reporting Ethical Violations."

Fraudulent Activities

Fraudulent Activities encompass an array of irregularities and illegal acts characterized by intentional deception. Fraud can be perpetrated by persons outside as well as inside the Company. No one has the authority to commit illegal acts related to the Company. Fraudulent activities include acts that are not only a detriment to the Company, but also a detriment to third parties. Engaging in any act that involves fraud, theft, embezzlement or misappropriation of any property, including that of the Company, or any of its employees, suppliers or customers is strictly prohibited. It is the Company's policy to ensure that incidents of fraud related to the Company are promptly investigated, reported and, where appropriate, prosecuted. Some examples of fraudulent conduct are:

- Falsification of financial records such as valuation of transactions, amount of income/loss, or failure to disclose financial information;
- Acceptance of bribes or kickbacks, see the Section "Gifts, Entertainment and Bribes";
- Diversion of potentially profitable transactions outside the Company;
- Claims submitted for services or goods not actually provided to the Company or a third party;
- Embezzlement; and

- Intentional concealment or misrepresentation of events or information, including expense reimbursement.

Work Conduct

Conduct that interferes with operations of the Company, discredits the Company, or is offensive to third parties or co-workers will not be tolerated. You are expected to observe the highest standard of conduct in your relationships with other employees, shareholders, suppliers, government officials and the general public in order to represent the best interests of the Company. Appropriate employee conduct includes:

- Refraining from behaviour or conduct which is contrary to the Company's best interests;
- Reporting to management suspicious, unethical, or illegal conduct by co-workers or suppliers; and
- Reporting to management any threatening or potentially violent behaviour by co-workers.

The following conduct is prohibited and individuals engaged in it will be subject to discipline, up to and including possible termination:

- Engaging in or threatening any acts in violation of any workplace violence policy adopted by the Company or any harassment policy adopted by the Company.
- Committing any illegal act, except minor traffic offences.
- Being under the influence of alcohol, an intoxicant, illegal drug or narcotic while at work; having possession of, selling, giving or circulating alcohol, drugs or sources of drugs, intoxicants or narcotics to other employees. Moderate alcohol consumption at events provided by the Company is, however, permissible.
- Stealing, destroying, defacing, or misusing Company property or another employee's property;
- Misusing Company communications systems, including electronic mail, computers, Internet access, and telephones. Misuse includes excessive personal telephone calls or emails. See Internet and E-mail Policy.
- Disobedience or insubordination, or the use of abusive, threatening, or obscene language.
- Failing to comply with any Company policy.

The examples of prohibited behaviour described above are not intended to be an all-inclusive list. Employees who participate in any conduct that is in violation of this Code shall be subject to disciplinary action, up to and including possible termination. In addition, if the conduct in question is an illegal act, such as fraud, the Company will report and, where appropriate, prosecute the employee to the fullest extent permitted by law.

Gifts, Entertainment and Bribes

The Company expects you to conduct the Company's business with integrity and to comply with all applicable laws in a manner that excludes considerations of personal advantage or gain. Employees shall maintain the highest ethical standards in the conduct of Company affairs.

- Other than for modest gifts given or received in the normal course of business (including travel or entertainment), neither you nor your relatives may give gifts to, or receive gifts from, the persons doing business with the Company. Other

gifts may be given or accepted only with prior approval of your senior management. In no event should you put the Company or yourself in a position that would be embarrassing if the gift was made public.

- No gifts or business entertainment of any kind may be given to any government official without the prior approval of the Company's Legal Department. For such approval to be given, the gift must be in compliance with this Code and not in violation of the Company's Foreign Corrupt Practices Policy.
- Appropriate business entertainment in connection with business discussions or the development of business relationships is generally acceptable. Such entertainment may include business-related meals and trips, refreshments before and after business meetings and tickets to sporting, theatrical or cultural events. Notwithstanding the foregoing, any entertainment that would cause a feeling or expectation of personal obligation should not be extended or accepted.
- If an employee has any question regarding the type of gift or entertainment to be given or received, he or she should consult with a member of the Company's Legal Department.
- Reimbursement for gifts and entertainment will be made in accordance with the appropriate business expense policy.

Any employee who pays or receives bribes or kickbacks will be subject to disciplinary action, which may include being immediately terminated and reported, as warranted, to the appropriate authorities. A kickback or bribe includes any item intended to improperly obtain favourable treatment.

Political Contributions

No Company funds may be given directly to political candidates. You may, however, engage in political activity with your own resources on your own time.

Reporting Ethical Violations

If you become aware of a suspected ethical violation, whether before or after it has occurred, you must promptly report it to a member of the Company's Legal Department in the country in which you are located. If you still are concerned after speaking with the Company's Legal Department or feel uncomfortable speaking with such person (for whatever reason), you may contact the Chief Financial Officer, President or Chief Executive Officer. You have the Company's commitment that you will be protected from retaliation as stated in the Company's non-retaliation policy.

Report of ethical violations will be kept confidential to the extent possible, consistent with the Company's need to investigate and take action regarding the matter. Employees are also expected to keep information regarding such matters confidential and understand that they are expected to fully cooperate with any such investigation.

Waivers

Under appropriate circumstances, the Company may waive application of this Code to certain otherwise prohibited conduct. A waiver must be requested in advance and in writing, and the request must describe the contemplated conduct for which the waiver is sought and why a waiver would be appropriate under the circumstances.

If you are a director or executive officer, a waiver request must be directed to the independent members of the Board of Directors. The waiver may be granted only by a vote of such Board members following a determination by the Legal Department that a waiver is appropriate under the circumstances. The reasons for granting the waiver should be recorded in the minutes of the meeting at which it was granted and the waiver must be accompanied by appropriate controls designed to protect the Company.

If you are not a director or executive officer, a waiver request must be directed to the Legal Department. The waiver may be granted only following a determination by the Legal Department that the waiver is appropriate under the circumstances and accompanied by appropriate controls designed to protect the Company.

The Company will post on its web site for a period of at least 12 months a description of any changes to, amendments or waivers of this Code applicable to directors or executive officers. Implicit waivers due to inaction by Company management with respect to reported or known Code violations shall be similarly disclosed.

Conclusion

Each employee is responsible for safeguarding and promoting the Company's ethics and business reputation. Of course, doing the right thing is not always easy. Many situations will involve subtleties and complexities that lead to difficult choices. When in doubt, take a step back to ask yourself whether the situation feels right, and consider whether you feel confident that your actions would withstand scrutiny. If necessary, take another careful look at this Code for guidance and seek advice from a supervisor or other colleague. Your actions should not have even the appearance of impropriety. You should be able to feel comfortable that your actions would not embarrass yourself, your colleagues or the Company's stockholders should it turn out that your conduct becomes "front page" news.

If you are uncertain about a contemplated course of action or have questions about this Code, you should raise the issue with a member of the Company's Legal

Department or another member of senior management with whom you feel comfortable. If you still are uncomfortable, please follow the steps outlined above in the section “Reporting Ethical Violations.”

Any employee who ignores or violates any provision of this Code, and any manager who penalizes a subordinate for trying to follow this Code, will be subject to corrective action, up to and including possible termination. Simply put, the Company seeks to employ people who believe that honest and ethical behaviour is not only good business, but also the right thing to do personally.

This Code is posted to the Company's website at http://www.unitedglobal.com/.

UnitedGlobalCom, Inc. reserves the right to amend or cancel this Policy at any time.

322520-1

Exhibit 31.1

CERTIFICATION

I, Michael T. Fries, certify that:

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

Date: August 3, 2020

/s/ Michael T. Fries

Michael T. Fries
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Charles H.R. Bracken, certify that:

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

Date: August 3, 2020

/s/ Charles H.R. Bracken

Charles H.R. Bracken

Executive Vice President and Chief Financial Officer

Exhibit 32

Certification
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Liberty Global plc (the "Company"), does hereby certify, to such officer's knowledge, that:

The Quarterly Report on Form 10-Q for the period ended June 30, 2020 (the "Form 10-Q") of the Company fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company as of June 30, 2020 and December 31, 2019, and for the three and six months ended June 30, 2020 and 2019.

Dated: August 3, 2020

/s/ Michael T. Fries
Michael T. Fries
President and Chief Executive Officer

Dated: August 3, 2020

/s/ Charles H.R. Bracken
Charles H.R. Bracken
Executive Vice President and Chief Financial Officer

The foregoing certification is being furnished solely pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code) and is not being filed as part of the Form 10-Q or as a separate disclosure document.