UPC HOLDING B.V.

Consolidated Financial Statements
December 31, 2016

UPC Holding B.V.
Boeing Avenue 53
1119PE, Schiphol-Rijk
The Netherlands

UPC HOLDING B.V.

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Independent Auditors' Report

The Board of Directors
UPC Holding B.V.:

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of UPC Holding B.V. (a B.V. registered in the Netherlands) and its subsidiaries, which comprise the consolidated balance sheets as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, owners' deficit, and cash flows for the years ended December 31, 2016, 2015 and 2014, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

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

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

Opinion

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

Amstelveen, the Netherlands
March 21, 2017

KPMG Accountants N.V.

UPC HOLDING B.V.

CONSOLIDATED BALANCE SHEETS

	December 31,	
	2016	2015
	in millions	
ASSETS		
Current assets:		
Cash and cash equivalents	€ 26.8	€ 139.0
Trade receivables, net	326.7	283.3
Related-party receivables (note 11)	114.3	137.6
Derivative instruments (note 5)	159.1	136.9
Prepaid expenses	21.6	15.4
Other current assets	36.8	29.9
Total current assets	685.3	742.1
Related-party receivables (note 11)	421.2	287.0
Property and equipment, net (note 7)	2,509.3	2,364.4
Goodwill (note 7)	4,349.8	4,313.7
Derivative instruments (note 5)	463.1	433.1
Intangible assets subject to amortization, net (note 7)	99.0	115.6
Other assets, net (note 9)	82.7	89.0
Total assets	€ 8,610.4	€ 8,344.9

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

UPC HOLDING B.V.

CONSOLIDATED BALANCE SHEETS — (Continued)

	December 31,	
	2016	2015
	in millions	
LIABILITIES AND OWNERS' DEFICIT		
Current liabilities:		
Accounts payable (note 11)	€ 324.7	€ 286.7
Deferred revenue and advance payments from subscribers and others	344.5	347.9
Derivative instruments (note 5)	162.9	159.6
Current portion of debt and capital lease obligations (note 8)	740.8	548.7
Accrued interest	104.1	134.2
Other accrued and current liabilities (note 11)	898.5	615.8
Total current liabilities	2,575.5	2,092.9
Long-term debt and capital lease obligations (note 8):		
Third-party	5,679.2	5,446.7
Related-party (note 11)	6,161.4	5,825.4
Derivative instruments (note 5)	625.9	778.9
Other long-term liabilities (notes 9, 11 and 12)	196.0	217.6
Total liabilities	15,238.0	14,361.5
Commitments and contingencies (notes 4, 5, 8, 9, 12, 14 and 16)		
Owners' deficit (notes 10 and 13):		
Parent's deficit:		
Distributions and accumulated losses in excess of contributions	(7,472.6)	(6,833.3)
Accumulated other comprehensive earnings, net of taxes	763.5	735.0
Total parent's deficit	(6,709.1)	(6,098.3)
Noncontrolling interests	81.5	81.7
Total owners' deficit	(6,627.6)	(6,016.6)
Total liabilities and owners' deficit	€ 8,610.4	€ 8,344.9

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

UPC HOLDING B.V.

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year ended December 31,		
	2016	2015	2014
		in millions	
Revenue (notes 11 and 15)	€ 2,569.8	€ 2,544.8	€ 2,337.8
Operating costs and expenses (exclusive of depreciation and amortization, shown separately below):			
Programming and other direct costs of services (note 11)	451.7	424.5	375.9
Other operating (note 11)	379.5	403.4	406.6
Selling, general and administrative (**SG&A**) (note 11)	364.1	366.2	328.4
Related-party fees and allocations, net (note 11)	341.0	293.1	213.2
Depreciation and amortization	548.4	572.1	524.9
Impairment, restructuring and other operating items, net	5.3	5.0	(3.3)
	2,090.0	2,064.3	1,845.7
Operating income	479.8	480.5	492.1
Non-operating income (expense):			
Interest expense:			
Third-party	(336.3)	(367.6)	(508.0)
Related-party (note 11)	(564.7)	(600.1)	(1,060.2)
Interest income (note 11)	2.7	10.6	186.3
Realized and unrealized gains (losses) on derivative instruments, net (note 5)	(28.9)	(42.3)	103.1
Foreign currency transaction losses, net	(117.8)	(216.0)	(437.1)
Losses on debt modification and extinguishment, net (note 8)	(70.3)	(183.9)	(42.0)
Other income (expense), net	13.5	3.5	(3.3)
	(1,101.8)	(1,395.8)	(1,761.2)
Loss before income taxes	(622.0)	(915.3)	(1,269.1)
Income tax expense (note 9)	(57.3)	(85.5)	(89.9)
Net loss	(679.3)	(1,000.8)	(1,359.0)
Net earnings attributable to noncontrolling interests	(13.0)	(12.0)	(9.5)
Net loss attributable to parent	€ (692.3)	€ (1,012.8)	€ (1,368.5)

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

UPC HOLDING B.V.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Year ended December 31,		
	2016	2015	2014
		in millions	
Net loss	€ (679.3)	€ (1,000.8)	€ (1,359.0)
Other comprehensive earnings (loss), net of taxes (note 13):			
Foreign currency translation adjustments	19.6	222.6	43.8
Other	8.9	(31.4)	(14.7)
Other comprehensive earnings	28.5	191.2	29.1
Comprehensive loss	(650.8)	(809.6)	(1,329.9)
Comprehensive earnings attributable to noncontrolling interests	(13.0)	(12.0)	(9.9)
Comprehensive loss attributable to parent	€ (663.8)	€ (821.6)	€ (1,339.8)

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

UPC HOLDING B.V.

CONSOLIDATED STATEMENTS OF OWNERS' DEFICIT

	Parent's deficit				
	Distributions and accumulated losses in excess of contributions	Accumulated other comprehensive earnings, net of taxes	Total parent's deficit	Non-controlling interests	Total owners' deficit
			in millions		
Balance at January 1, 2014	€ (13,889.7)	€ 515.1	€ (13,374.6)	€ 20.9	€ (13,353.7)
Net loss	(1,368.5)	—	(1,368.5)	9.5	(1,359.0)
Other comprehensive earnings, net of taxes (note 13)	—	28.7	28.7	0.4	29.1
Consideration received in connection with the VTR Extraction (note 11)	2,450.0	—	2,450.0	—	2,450.0
Distributions to other subsidiaries of Liberty Global (note 10)	(1,059.5)	—	(1,059.5)	—	(1,059.5)
Deemed contribution of technology-related services (note 11)	97.1	—	97.1	—	97.1
Property and equipment contributed by parent company (notes 7 and 11)	18.6	—	18.6	—	18.6
Distributions by subsidiaries to noncontrolling interest owners	—	—	—	(9.0)	(9.0)
Share-based compensation (note 11)	5.4	—	5.4	—	5.4
Capital charge in connection with the exercise or vesting of share-based incentive awards (note 11)	(5.4)	—	(5.4)	—	(5.4)
Other, net	7.7	—	7.7	—	7.7
Balance at December 31, 2014	€ (13,744.3)	€ 543.8	€ (13,200.5)	€ 21.8	€ (13,178.7)

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

UPC HOLDING B.V.

CONSOLIDATED STATEMENTS OF OWNERS' DEFICIT — (Continued)

	Parent's deficit				
	Distributions and accumulated losses in excess of contributions	Accumulated other comprehensive earnings, net of taxes	Total parent's deficit	Non-controlling interests	Total owners' deficit
			in millions		
Balance at January 1, 2015	€ (13,744.3)	€ 543.8	€ (13,200.5)	€ 21.8	€ (13,178.7)
Net loss	(1,012.8)	—	(1,012.8)	12.0	(1,000.8)
Other comprehensive earnings, net of taxes (note 13)	—	191.2	191.2	—	191.2
Consideration received in connection with the Ziggo Services Transfer (note 1)	5,371.8	—	5,371.8	—	5,371.8
Consideration received in connection with the UPC Ireland Transfer (note 1)	1,087.7	—	1,087.7	—	1,087.7
Contributions from other subsidiaries of Liberty Global (note 11)	953.4	—	953.4	—	953.4
Contribution in connection with novation of third-party debt to another Liberty Global subsidiary (note 11)	689.2	—	689.2	—	689.2
Distributions to other subsidiaries of Liberty Global (note 11)	(230.9)	—	(230.9)	—	(230.9)
Impact of consolidation of UMI (note 11)	—	—	—	62.8	62.8
Deemed contribution of technology-related services (note 11)	33.3	—	33.3	—	33.3
Property and equipment contributed by parent company (notes 7 and 11)	16.0	—	16.0	—	16.0
Share-based compensation (note 11)	12.1	—	12.1	—	12.1
Distributions by subsidiaries to noncontrolling interest owners	—	—	—	(10.3)	(10.3)
Capital charge in connection with exercise or vesting of share-based incentive awards (note 11)	(10.1)	—	(10.1)	—	(10.1)
Other, net	1.3	—	1.3	(4.6)	(3.3)
Balance at December 31, 2015	€ (6,833.3)	€ 735.0	€ (6,098.3)	€ 81.7	€ (6,016.6)

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

UPC HOLDING B.V.

CONSOLIDATED STATEMENTS OF OWNERS' DEFICIT — (Continued)

	Parent's deficit				
	Distributions and accumulated losses in excess of contributions	Accumulated other comprehensive earnings, net of taxes	Total parent's deficit	Non-controlling interests	Total owners' deficit
			in millions		
Balance at January 1, 2016	€ (6,833.3)	€ 735.0	€ (6,098.3)	€ 81.7	€ (6,016.6)
Net loss	(692.3)	—	(692.3)	13.0	(679.3)
Other comprehensive earnings, net of taxes (note 13)	—	28.5	28.5	—	28.5
Deemed contribution of technology-related services (note 11)	27.3	—	27.3	—	27.3
Share-based compensation (note 11)	17.0	—	17.0	—	17.0
Capital charge in connection with exercise or vesting of share-based incentive awards (note 11)	(8.1)	—	(8.1)	—	(8.1)
Property and equipment contributed by parent company (notes 7 and 11)	17.3	—	17.3	—	17.3
Distributions by subsidiaries to noncontrolling interest owners	—	—	—	(13.0)	(13.0)
Other, net	(0.5)	—	(0.5)	(0.2)	(0.7)
Balance at December 31, 2016	€ (7,472.6)	€ 763.5	€ (6,709.1)	€ 81.5	€ (6,627.6)

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

UPC HOLDING B.V.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31,		
	2016	2015	2014
		in millions	
Cash flows from operating activities:			
Net loss	€ (679.3)	€ (1,000.8)	€ (1,359.0)
Adjustments to reconcile net loss to net cash provided (used) by operating activities:			
Share-based compensation expense	17.0	12.1	5.4
Related-party fees and allocations, net	341.0	293.1	213.2
Depreciation and amortization	548.4	572.1	524.9
Impairment, restructuring and other operating items, net	5.3	5.0	(3.3)
Non-cash interest on related-party loans	564.7	600.1	1,060.2
Amortization of deferred financing costs and non-cash interest	7.6	6.7	12.5
Realized and unrealized losses (gains) on derivative instruments, net	28.9	42.3	(103.1)
Foreign currency transaction losses, net	117.8	216.0	437.1
Losses on debt modification and extinguishment, net	70.3	183.9	42.0
Deferred income tax expense (benefit)	(3.5)	10.4	4.2
Changes in operating assets and liabilities, net of the effects of acquisitions and dispositions:			
Receivables and other operating assets	164.1	295.1	464.0
Payables and accruals	(423.2)	(2,044.7)	(961.4)
Net cash provided (used) by operating activities	759.1	(808.7)	336.7
Cash flows from investing activities:			
Capital expenditures	(175.0)	(139.7)	(255.0)
Sale of related-party receivable	—	—	323.3
Repayments from (advances to) related parties and affiliates, net	8.6	(55.9)	138.9
Cash paid in connection with acquisitions, net of cash acquired	(19.6)	(24.8)	(53.4)
Other investing activities, net	2.6	2.9	1.0
Net cash provided (used) by investing activities	€ (183.4)	€ (217.5)	€ 154.8

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

UPC HOLDING B.V.

CONSOLIDATED STATEMENTS OF CASH FLOWS — (Continued)

	Year ended December 31,		
	2016	2015	2014
		in millions	
Cash flows from financing activities:			
Repayments and repurchases of third-party debt and capital lease obligations	€(1,288.7)	€(5,940.2)	€(1,374.6)
Borrowings of third-party debt	854.8	3,429.1	290.7
Borrowings of related-party debt, net	71.2	3,964.5	1,020.5
Net cash paid related to derivative instruments	(255.1)	(229.7)	(19.2)
Payments of financing costs and debt premiums	(61.4)	(177.8)	(16.5)
Change in cash collateral	—	51.5	(51.3)
Distributions by subsidiaries to noncontrolling interest owners	(11.9)	(10.3)	(9.0)
Contributions from (distributions to) other Liberty Global subsidiaries, net	(0.4)	1.1	(323.4)
Cash repaid related to an advance from a related-party	—	—	(418.4)
Other financing activities, net	(2.2)	(2.8)	(1.9)
Net cash provided (used) by financing activities	(693.7)	1,085.4	(903.1)
Effect of exchange rate changes on cash	5.8	28.5	1.2
Net increase (decrease) in cash and cash equivalents	(112.2)	87.7	(410.4)
Cash and cash equivalents:			
Beginning of year	139.0	51.3	461.7
End of year	€ 26.8	€ 139.0	€ 51.3
Cash paid for interest – third-party	€ 361.6	€ 397.4	€ 503.7
Cash paid for interest – related-party	€ —	€ 1,363.2	€ —
Net cash paid for taxes	€ 114.7	€ 92.7	€ 13.8

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

(1) Basis of Presentation

UPC Holding B.V. (**UPC Holding**) is a wholly-owned subsidiary of Liberty Global plc (**Liberty Global**). In these notes, the terms, "we," "our," "our company" and "us" may refer, as the context requires, to UPC Holding or collectively to UPC Holding and its subsidiaries.

As of December 31, 2016, we provided (i) video, broadband internet and fixed-line telephony services in seven European countries and (ii) mobile services in four European countries. We also provide direct-to-home satellite (**DTH**) services to customers in the Czech Republic, Hungary, Romania and Slovakia through a Luxembourg-based organization that we refer to as "**UPC DTH**."

During the first quarter of 2015, we completed (i) the transfer of Ziggo Services B.V. (**Ziggo Services**) and its subsidiaries from our company to another subsidiary of Liberty Global outside of UPC Holding (the **Ziggo Services Transfer**), (ii) the transfer of UPC Broadband Ireland Ltd. (**UPC Ireland**) and its subsidiaries from our company to certain subsidiaries of Liberty Global outside of UPC Holding (the **UPC Ireland Transfer**) and (iii) the transfer of Liberty Global Services II B.V. (**Liberty Global Services II**) and Liberty Global Operations B.V. (**Liberty Global Operations**) from our company to certain other subsidiaries of Liberty Global outside of UPC Holding (the **Corporate Entities Transfer**). The Ziggo Services Transfer, the UPC Ireland Transfer and the Corporate Entities Transfer are collectively referred to as the "**UPC Transfers**". As the UPC Transfers constitute transactions between entities under common control, we have reflected these transfers at carryover basis, and our consolidated financial statements give effect to these transfers for all periods presented.

Unless otherwise indicated, ownership percentages and convenience translations into euros are calculated as of December 31, 2016.

These consolidated financial statements reflect our consideration of the accounting and disclosure implications of subsequent events through March 21, 2017, the date of issuance.

(2) Accounting Changes and Recent Accounting Pronouncements

Accounting Changes

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

Recent Accounting Pronouncements

ASU 2014-09

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

- When we enter into contracts to provide services to our customers, we often provide time-limited discounts or free service periods. Under current accounting rules, we recognize revenue net of discounts during the promotional periods and do not recognize any revenue during free service periods. Under ASU 2014-09, revenue recognition will be

accelerated for these contracts as the impact of the discount or free service period will be recognized uniformly over the total contractual period.

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

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

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

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

ASU 2016-02

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

ASU 2016-09

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

ASU 2017-04

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

(3) Summary of Significant Accounting Policies

Estimates

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

Reclassifications

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

Principles of Consolidation

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

Cash and Cash Equivalents and Restricted Cash

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

Restricted cash consists of cash held in restricted accounts, including cash held as collateral for debt and other compensating balances. Restricted cash amounts that are required to be used to purchase long-term assets or repay long-term debt are classified as long-term assets. All other cash that is restricted to a specific use is classified as current or long-term based on the expected timing of the disbursement. At December 31, 2016 and 2015, our restricted cash balances, which are included in other current assets in our consolidated balance sheets, aggregated €1.6 million and €1.8 million, respectively.

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

Cash Flow Statement

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

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

Trade Receivables

Our trade receivables are reported net of an allowance for doubtful accounts. Such allowance aggregated €13.9 million and €20.0 million at December 31, 2016 and 2015, respectively. The allowance for doubtful accounts is based upon our assessment of probable loss related to uncollectible accounts receivable. We use a number of factors in determining the allowance, including, among other things, collection trends, prevailing and anticipated economic conditions and specific customer credit risk. The allowance is maintained until either payment is received or the likelihood of collection is considered to be remote.

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

Financial Instruments

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

Derivative Instruments

All derivative instruments are recorded on the balance sheet at fair value. As we do not apply hedge accounting to any of our derivative instruments, changes in the fair values of our derivative instruments are recorded in realized and unrealized gains or losses on derivative instruments, net, in our consolidated statements of operations.

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

For information regarding our derivative instruments, see note 5.

Property and Equipment

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

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

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

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

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

As of December 31, 2016 and 2015, the recorded value of our asset retirement obligations was €8.4 million and €8.2 million, respectively.

Intangible Assets

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

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

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

Impairment of Property and Equipment and Intangible Assets

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

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

Income Taxes

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

UPC Holding and its Dutch subsidiaries are part of a Dutch tax fiscal unity (the **Dutch Fiscal Unity**) with its ultimate Dutch parent company, Liberty Global Holding B.V. (**Liberty Global Holding**), and other Dutch subsidiaries of Liberty Global. The income taxes of UPC Holding and its subsidiaries are presented in our consolidated statements of operations on a separate return basis for each tax paying entity or group. For additional information on our income taxes, see note 9.

Foreign Currency Translation and Transactions

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

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

Revenue Recognition

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

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

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

Mobile Revenue – Airtime Services. We recognize revenue from mobile services in the period the related services are provided.

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

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

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

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

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

Share-based Compensation

We recognize all share-based payments from Liberty Global to employees of our subsidiaries, including grants of employee share-based incentive awards, based on their grant date fair values and Liberty Global's estimates of forfeitures. We recognize the grant date fair value of outstanding awards as a charge to operations over the vesting period.

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

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

Litigation Costs

Legal fees and related litigation costs are expensed as incurred.

(4) Acquisition

Pending Acquisition

On October 18, 2016, our subsidiary UPC Polska SP Z.o.o. entered into a definitive agreement to acquire the cable business of Multimedia Polska S.A. (**Multimedia**), the third-largest cable operator in Poland, for cash consideration of PLN 3.0 billion (€681.0 million), which is equal to the enterprise value assigned to Multimedia for purposes of this transaction. We intend to finance the acquisition of Multimedia with existing liquidity. The final purchase price is subject to potential downward adjustments for the operational and financial performance of Multimedia prior to closing. The transaction is subject to customary closing conditions, including regulatory approval, and is expected to close in late 2017 or early 2018.

(5) Derivative Instruments

In general, we seek to enter into derivative instruments to protect against (i) increases in the interest rates on our variable-rate debt and (ii) foreign currency movements, particularly with respect to borrowings that are denominated in a currency other than the functional currency of the borrowing entity. In this regard, through our subsidiaries, we have entered into various derivative instruments to manage interest rate exposure and foreign currency exposure with respect to the euro (**€**), the United States (**U.S.**) dollar (**$**), the British pound sterling (**£**), the Swiss franc (**CHF**), the Czech koruna (**CZK**), the Hungarian forint (**HUF**), the Polish zloty (**PLN**) and the Romanian lei (**RON**).

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

	December 31, 2016			December 31, 2015		
	Current	Long-term	Total	Current	Long-term	Total
	in millions					
Assets:						
Cross-currency and interest rate derivative contracts (a)	€ 158.5	€ 462.9	€ 621.4	€ 135.3	€ 432.2	€ 567.5
Foreign currency forward contracts	0.4	—	0.4	1.1	—	1.1
Other	0.2	0.2	0.4	0.5	0.9	1.4
Total	€ 159.1	€ 463.1	€ 622.2	€ 136.9	€ 433.1	€ 570.0
Liabilities:						
Cross-currency and interest rate derivative contracts (a)	€ 158.6	€ 625.8	€ 784.4	€ 158.9	€ 778.9	€ 937.8
Foreign currency forward contracts	4.3	—	4.3	0.7	—	0.7
Other	—	0.1	0.1	—	—	—
Total	€ 162.9	€ 625.9	€ 788.8	€ 159.6	€ 778.9	€ 938.5

(a) We consider credit risk in our fair value assessments. As of December 31, 2016 and 2015, (i) the fair values of our cross-currency and interest rate derivative contracts that represented assets have been reduced by credit risk valuation adjustments aggregating €16.2 million and €9.5 million, respectively, and (ii) the fair values of our cross-currency and interest rate derivative contracts that represented liabilities have been reduced by credit risk valuation adjustments aggregating €50.3 million and €62.2 million, respectively. The adjustments to our derivative assets relate to the credit risk associated with counterparty nonperformance and the adjustments to our derivative liabilities relate to credit risk associated with our own nonperformance. In all cases, the adjustments take into account offsetting liability or asset positions within a given contract. Our determination of credit risk valuation adjustments generally is based on our and our counterparties' credit risks, as observed in the credit default swap market and market quotations for certain of our debt instruments, as applicable. The changes in the credit risk valuation adjustments associated with our cross-currency and interest rate derivative contracts resulted in net gains (losses) of (€18.5 million), €26.6 million and (€47.7 million) during 2016, 2015 and 2014, respectively. These amounts are included in realized and unrealized gains (losses) on derivative instruments, net, in our consolidated statements of operations. For further information regarding our fair value measurements, see note 6.

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

	Year ended December 31,		
	2016	2015	2014
		in millions	
Cross-currency and interest rate derivative contracts	€ (22.7)	€ (41.3)	€ 92.6
Foreign currency forward contracts	(5.3)	(1.8)	10.5
Other	(0.9)	0.8	—
Total	€ (28.9)	€ (42.3)	€ 103.1

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

	Year ended December 31,		
	2016	2015	2014
		in millions	
Operating activities	€ 26.6	€ (111.9)	€ (210.4)
Investing activities	(2.5)	—	—
Financing activities	(255.1)	(229.7)	(19.2)
Total	€ (231.0)	€ (341.6)	€ (229.6)

Counterparty Credit Risk

We are exposed to the risk that the counterparties to our derivative instruments will default on their obligations to us. We manage these credit risks through the evaluation and monitoring of the creditworthiness of, and concentration of risk with, the respective counterparties. In this regard, credit risk associated with our derivative instruments is spread across a relatively broad counterparty base of banks and financial institutions. Collateral is generally not posted by either party under our derivative instruments. At December 31, 2016, our exposure to counterparty credit risk included derivative assets with an aggregate fair value of €418.0 million.

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

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

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

Details of our Derivative Instruments

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

Cross-currency and Interest Rate Derivative Contracts

Cross-currency Swaps:

The terms of our outstanding cross-currency swap contracts at December 31, 2016, are as follows:

Final maturity date	Notional amount due from counterparty		Notional amount due to counterparty		Interest rate due from counterparty	Interest rate due to (from) counterparty
	in millions					
January 2023	$	1,140.0	€	1,043.7	5.38%	3.71%
August 2024	$	412.9	€	315.8	6 mo. LIBOR + 3.00%	6 mo. EURIBOR + 3.36%
August 2024	$	325.0	€	238.7	6 mo. LIBOR + 3.00%	3.87%
January 2017 - August 2024	$	262.1	€	194.1	6 mo. LIBOR + 3.00%	6 mo. EURIBOR + 3.13%
August 2024	$	250.0	€	181.4	7.25%	7.15%
August 2024	$	225.0	CHF	206.3	6 mo. LIBOR + 3.00%	3.02%
August 2024	$	200.0	CHF	186.0	6 mo. LIBOR + 3.00%	6 mo. CHF LIBOR + 3.05%
January 2017 - July 2023	$	200.0	CHF	185.5	6 mo. LIBOR + 2.50%	6 mo. CHF LIBOR + 2.48%
August 2024	$	175.0	CHF	158.7	7.25%	6 mo. CHF LIBOR + 5.01%
January 2017 - July 2021	$	100.0	CHF	92.8	6 mo. LIBOR + 2.50%	6 mo. CHF LIBOR + 2.49%
July 2021 - August 2024	$	100.0	CHF	92.8	6 mo. LIBOR + 3.00%	6 mo. CHF LIBOR + 2.48%
August 2024 (a)	€	379.2	$	425.0	2.45%	2.76%
September 2022	€	600.0	CHF	728.2	6 mo. EURIBOR + 2.59%	6 mo. CHF LIBOR + 2.71%
January 2020	€	460.1	CHF	566.5	9.41%	8.21%
July 2023	€	450.0	CHF	488.6	—%	(0.45)%
January 2017 - August 2024	€	383.8	CHF	477.0	6 mo. EURIBOR + 2.00%	6 mo. CHF LIBOR + 2.27%
January 2021	€	234.2	CHF	253.0	2.51%	2.22%
January 2020	€	161.0	CHF	264.0	6 mo. EURIBOR + 3.75%	6 mo. CHF LIBOR + 2.88%
August 2024	€	70.1	CHF	84.8	6 mo. EURIBOR + 2.50%	6 mo. CHF LIBOR + 3.07%
July 2023	€	56.0	CHF	62.4	6 mo. EURIBOR + 2.21%	6 mo. CHF LIBOR + 2.65%
January 2020	€	318.9	CZK	8,818.7	5.58%	5.44%
January 2022	€	99.6	CZK	2,703.1	4.51%	4.82%
December 2021	€	488.0	HUF	138,437.5	5.50%	7.39%
January 2022	€	707.0	PLN	2,999.5	5.10%	8.15%
January 2020	€	144.6	PLN	605.0	5.50%	7.98%
January 2022	€	191.0	RON	490.0	3.19%	10.94%

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

Interest Rate Swaps:

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

Final maturity date	Notional amount		Interest rate due from counterparty	Interest rate due to (from) counterparty
	in millions			
January 2017 - January 2018	$	2,150.0	1 mo. LIBOR + 3.00%	6 mo. LIBOR + 2.56%
August 2024	$	425.0	6 mo. LIBOR + 5.76%	7.25%
September 2022	€	600.0	6.38%	6 mo. EURIBOR + 4.14%
January 2026 (a)	€	600.0	6 mo. EURIBOR	1.54%
September 2022	CHF	728.2	6 mo. CHF LIBOR	1.75%
August 2024	CHF	558.8	6 mo. CHF LIBOR	0.93%
July 2021 - August 2024	CHF	400.0	6 mo. CHF LIBOR	0.02%
July 2021	CHF	400.0	6 mo. CHF LIBOR	0.40%
August 2024	CHF	279.2	6 mo. CHF LIBOR + 2.85%	3.13%
January 2020	CHF	264.0	6 mo. CHF LIBOR	(0.65)%

(a) Represents interest rate swap contracts in which the receivable portion of the contract has an interest rate floor.

Interest Rate Cap

Our sold interest rate cap contract with respect to EURIBOR at December 31, 2016, is detailed below:

Final maturity date	Notional amount		EURIBOR cap rate
	in millions		
January 2020 (a)	€	735.0	7.00%

(a) Represents a sold interest rate cap, which requires that we make payments to the counterparty when the relevant EURIBOR rate exceeds the EURIBOR cap rate during the specified observation periods.

Interest Rate Collars

Our interest rate collar contracts establish floor and cap rates with respect to EURIBOR on the indicated notional amount at December 31, 2016, as detailed below:

Final maturity date	Notional amount		EURIBOR floor rate (a)	EURIBOR cap rate (b)
	in millions			
July 2017 - January 2020	€	1,135.0	1.00%	3.54%

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(a) We make payments to the counterparty when the relevant EURIBOR rate is less than the EURIBOR floor rate during the specified observation periods.

(b) We receive payments from the counterparty when the relevant EURIBOR rate is greater than the EURIBOR cap rate during the specified observation periods.

Foreign Currency Forwards

The following table summarizes our outstanding foreign currency forward contracts at December 31, 2016:

Maturity dates	Currency purchased forward		Currency sold forward	
	in millions			
January 2017 - December 2017	$	2.6	CZK	60.0
January 2017 - June 2017	€	368.1	CHF	398.6
January 2017 - December 2017	€	20.1	CZK	540.0
January 2017 - December 2017	€	19.0	HUF	6,000.0
January 2017 - December 2017	€	36.0	PLN	160.9
January 2017 - March 2017	£	0.9	€	1.2

Foreign Currency Forward Options

The following table sets forth the outstanding foreign currency forward option contract at December 31, 2016:

Maturity date	Notional		Exchange currency	Weighted average strike price	
	in millions				
April 2018	€	286.6	Polish zloty	PLN	4.07

(6) Fair Value Measurements

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

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

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

fair values of our derivative instruments. The midpoints of applicable bid and ask ranges generally are used as inputs for our internal valuations.

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

Fair value measurements are also used in connection with nonrecurring valuations performed in connection with impairment assessments and acquisition accounting. These nonrecurring valuations include the valuation of reporting units, customer relationship intangible assets, property and equipment and the implied value of goodwill. The valuation of private 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. The implied value of goodwill is determined by allocating the fair value of a reporting unit to all of the assets and liabilities of that unit as if the reporting unit had been acquired in a business combination, with the residual amount allocated to goodwill. All of our nonrecurring valuations use significant unobservable inputs and therefore fall under Level 3 of the fair value hierarchy. We did not perform significant nonrecurring fair value measurements during 2016 or 2015.

At December 31, 2016 and 2015, all of our derivative instruments fell under Level 2 of the fair value hierarchy.

(7) Long-lived Assets

Property and Equipment, Net

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

	Estimated useful life at December 31, 2016	December 31, 2016	December 31, 2015
		in millions	
Distribution systems	3 to 30 years	€ 3,829.8	€ 3,808.9
Customer premises equipment	5 years	1,176.3	1,160.6
Support equipment, buildings and land	3 to 50 years	447.9	425.1
		5,454.0	5,394.6
Accumulated depreciation		(2,944.7)	(3,030.2)
Total property and equipment, net		€ 2,509.3	€ 2,364.4

Depreciation expense related to our property and equipment was €517.1 million, €518.7 million and €459.9 million during 2016, 2015 and 2014, respectively.

At December 31, 2016 and 2015, the amount of property and equipment, net, recorded under capital leases was €28.1 million and €19.2 million, respectively. Most of these amounts relate to assets included in our distribution systems category. Depreciation of assets under capital leases is included in depreciation and amortization in our consolidated statements of operations.

During 2016, 2015 and 2014, we recorded non-cash increases to our property and equipment related to (i) certain vendor financing arrangements of €640.0 million, €517.8 million and €313.1 million, respectively, which exclude related VAT of €63.5 million, €55.3 million and €28.4 million, respectively, that were also financed by our vendors under these arrangements and (ii) assets acquired under capital leases of €12.2 million, €1.0 million and €0.9 million, respectively. Furthermore, during 2016, 2015 and 2014, we recorded non-cash increases to our property and equipment of €17.3 million, €16.0 million and €18.6 million, respectively, related to assets acquired on our behalf pursuant to vendor financing and capital lease arrangements of Liberty Global B.V. (**LG B.V.**), a subsidiary of Liberty Global that is outside of UPC Holding. For additional information, see notes 8 and 11.

Goodwill

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

	January 1, 2016	Acquisitions and related adjustments	Foreign currency translation adjustments	December 31, 2016
	in millions			
Switzerland/Austria	€ 3,221.4	€ 10.4	€ 32.9	€ 3,264.7
Central and Eastern Europe	1,092.3	1.6	(8.8)	1,085.1
Total	€ 4,313.7	€ 12.0	€ 24.1	€ 4,349.8

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

At December 31, 2016 and 2015 and based on exchange rates as of those dates, our accumulated goodwill impairments were €171.1 million and €171.9 million, respectively. These amounts represent accumulated impairments related to our broadband communications operations in Romania, which operations are included within our Central and Eastern Europe segment.

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

	January 1, 2015	Acquisitions and related adjustments	Foreign currency translation adjustments	December 31, 2015
	in millions			
Switzerland/Austria	€ 2,968.4	€ —	€ 253.0	€ 3,221.4
Central and Eastern Europe	1,076.1	6.6	9.6	1,092.3
Total	€ 4,044.5	€ 6.6	€ 262.6	€ 4,313.7

Intangible Assets Subject to Amortization, Net

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

	Estimated useful life at December 31, 2016	December 31, 2016			December 31, 2015		
		Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
		in millions					
Customer relationships	4 to 10 years	€ 256.8	€ (158.2)	€ 98.6	€ 249.0	€ (134.3)	€ 114.7
Other	2 years	3.3	(2.9)	0.4	3.7	(2.8)	0.9
Total		€ 260.1	€ (161.1)	€ 99.0	€ 252.7	€ (137.1)	€ 115.6

Amortization expense related to intangible assets with finite useful lives was €31.3 million, €53.4 million and €65.0 million during 2016, 2015 and 2014, respectively. Based on our amortizable intangible asset balances at December 31, 2016, we expect that amortization expense will be as follows for the next five years and thereafter. The euro equivalents of such amortization expense amounts as of December 31, 2016 are presented below (in millions):

2017	€ 31.2
2018	28.1
2019	10.5
2020	8.3
2021	7.2
Thereafter	13.7
Total	€ 99.0

(8) Debt and Capital Lease Obligations

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

	December 31, 2016		Estimated fair value (c)		Principal amount	
	Weighted average interest rate (a)	Unused borrowing capacity (b)	December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015
			in millions			
Third-party debt:						
Parent – UPC Holding Senior Notes	6.59%	€ —	€ 1,488.3	€ 1,473.8	€ 1,376.2	€ 1,372.2
Subsidiaries:						
UPC Broadband Holding Bank Facility	3.83%	990.1	2,666.1	1,181.9	2,638.5	1,201.0
UPCB SPE Notes	4.88%	—	1,691.2	2,882.1	1,680.9	2,891.5
Vendor financing (d)	3.53%	—	736.7	546.4	736.7	546.4
Total third-party debt before unamortized discounts and deferred financing costs	4.66%	€ 990.1	€ 6,582.3	€ 6,084.2	€ 6,432.3	€ 6,011.1

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

	December 31,	
	2016	2015
	in millions	
Total third-party debt before unamortized discounts and deferred financing costs	€ 6,432.3	€ 6,011.1
Unamortized discounts	(13.8)	(7.9)
Unamortized deferred financing costs	(30.2)	(30.5)
Total carrying amount of third-party debt	6,388.3	5,972.7
Capital lease obligations	31.7	22.7
Total third-party debt and capital lease obligations	6,420.0	5,995.4
Related-party debt (note 11)	6,161.4	5,825.4
Total debt and capital lease obligations	12,581.4	11,820.8
Current maturities of debt and capital lease obligations	(740.8)	(548.7)
Long-term debt and capital lease obligations	€ 11,840.6	€ 11,272.1

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(a) Represents the weighted average interest rate in effect at December 31, 2016 for all borrowings outstanding pursuant to each debt instrument, including any applicable margin. The interest rates presented represent stated rates and do not include the impact of derivative instruments, deferred financing costs, original issue premiums or discounts and commitment fees, all of which affect our overall cost of borrowing. Including the effects of derivative instruments, original issue premiums or discounts and commitment fees, but excluding the impact of financing costs, our weighted average interest rate on our aggregate third-party variable- and fixed-rate indebtedness was 5.3% at December 31, 2016. For information regarding our derivative instruments, see note 5.

(b) Unused borrowing capacity represents the maximum availability under the UPC Broadband Holding Bank Facility (as defined and described below) at December 31, 2016 without regard to covenant compliance calculations or other conditions precedent to borrowing. At December 31, 2016, based on the applicable leverage and other financial covenants, our availability under the UPC Broadband Holding Bank Facility was limited to €676.0 million. When the relevant December 31, 2016 compliance reporting requirements have been completed and assuming no changes from December 31, 2016 borrowing levels, we anticipate that the full amount of unused borrowing capacity under the UPC Broadband Holding Bank Facility will be available to be borrowed.

(c) The estimated fair values of our debt instruments are determined using the average of applicable bid and ask prices (mostly Level 1 of the fair value hierarchy). For additional information regarding fair value hierarchies, see note 6.

(d) Represents amounts owed pursuant to interest-bearing vendor financing arrangements that are used to finance certain of our property and equipment additions and, to a lesser extent, certain of our operating expenses. These obligations are generally due within one year and include VAT that was paid on our behalf by the vendor. At December 31, 2016 and 2015, the amounts owed pursuant to these arrangements include €12.8 million and €6.7 million, respectively, related to third-party capital-related vendor financing obligations for which we and LG B.V. are co-obligors. We expect to cash settle the co-obligor obligations with LG B.V. in advance of when we and LG B.V. are required to settle the obligations with the applicable third parties. Our cash payments to LG B.V. will be reflected as cash capital expenditures in our consolidated statements of cash flows and any cash payments made prior to the settlement of the related co-obligor obligation will be reflected in our related-party accounts receivable from LG B.V. in our consolidated balance sheets. Repayments of vendor financing obligations other than the co-obligor obligations are included in repayments and repurchases of debt and capital lease obligations in our consolidated statements of cash flows.

General Information

Credit Facility. We have entered into a credit facilities agreement with certain financial institutions (the "**credit facility"**). Our credit facility contains certain covenants, the more notable of which are as follows:

- Our credit facility contains certain consolidated net leverage ratios, as specified in the credit facility, which are required to be complied with on an incurrence and/or maintenance basis;
- Our credit facility contains certain restrictions which, among other things, restrict our ability to (i) incur or guarantee certain financial indebtedness, (ii) make certain disposals and acquisitions, (iii) create certain security interests over our assets, in each case, subject to certain customary and agreed exceptions and (iv) make certain restricted payments to our direct and/or indirect parent companies through dividends, loans or other distributions, subject to compliance with applicable covenants;
- Our credit facility requires that UPC Holding and certain of its subsidiaries (i) guarantee the payment of all sums payable under the relevant credit facility and (ii) grant first-ranking security over their shares and certain intercompany loan receivables to secure the payment of all sums payable thereunder;
- In addition to certain mandatory prepayment events, the instructing group of lenders under our credit facility may cancel the commitments thereunder and declare the loans thereunder due and payable after the applicable notice period following the occurrence of a change of control (as specified in the credit facility);
- Our credit facility contains certain customary events of default, the occurrence of which, subject to certain exceptions and materiality qualifications, would allow the instructing group of lenders to (i) cancel the total commitments, (ii) accelerate all outstanding loans and terminate their commitments thereunder and/or (iii) declare that all or part of the loans be payable on demand;
- Our credit facility requires that we observe certain affirmative and negative undertakings and covenants, which are subject to certain materiality qualifications and other customary and agreed exceptions; and
- In addition to customary default provisions, our credit facility includes cross-default and cross-acceleration provisions with respect to our other indebtedness, subject to agreed minimum thresholds and other customary and agreed exceptions.

Senior Notes. UPC Holding has issued certain senior notes. In general, our senior notes (i) are senior obligations of UPC Holding that rank equally with all of the existing and future senior debt of UPC Holding and are senior to all existing and future subordinated debt of UPC Holding and (ii) are secured by a pledge over the shares of UPC Holding. In addition, the indentures governing our senior notes contain certain covenants, the more notable of which are as follows:

- Our notes contain (i) certain customary incurrence-based covenants and (ii) certain restrictions that, among other things, restrict the ability of UPC Holding to (a) incur or guarantee certain financial indebtedness, (b) make certain disposals and acquisitions, (c) create certain security interests over our assets, in each case, subject to certain customary and agreed exceptions and (d) make certain restricted payments to our direct and/or indirect parent companies through dividends, loans or other distributions, subject to compliance with applicable covenants;
- Our notes provide that any failure to pay principal prior to expiration of any applicable grace period, or any acceleration with respect to other indebtedness of UPC Holding or certain of its subsidiaries, over agreed minimum thresholds (as specified under the applicable indenture), is an event of default under the respective notes; and
- If UPC Holding or certain of its subsidiaries (as specified in the applicable indenture) sell certain assets, UPC Holding must offer to repurchase the applicable notes at par, or if a change of control (as specified in the applicable indenture) occurs, UPC Holding must offer to repurchase all of the relevant notes at a redemption price of 101%.

SPE Notes. From time to time, we create special purpose financing entities, which are 100% owned by third parties, for the primary purpose of facilitating the offering of senior secured notes, which we collectively refer to as the "**UPCB SPE Notes**." In this regard, UPCB SPE Notes have been issued, and are outstanding at December 31, 2016, by UPCB Finance IV Limited (**UPCB Finance IV**, the "**UPCB SPE**").

As further described below, the UPCB SPE used the proceeds from the issuance of UPCB SPE Notes to fund term loan facilities to UPC Financing Partnership (**UPC Financing**), each a "**UPC Funded Facility**" and collectively the "**UPC Funded Facilities**." Each UPCB SPE is dependent on payments from UPC Financing under the applicable UPC Funded Facility in order to service its payment obligations under each respective UPCB SPE Note. Although UPC Financing has no equity or voting interest in the UPCB SPE, the UPC Funded Facilities create a variable interest in the UPCB SPE for which UPC Financing is the primary beneficiary. As such, UPC Financing is required to consolidate the UPCB SPE. As a result, the amounts outstanding under the UPC Funded Facilities are eliminated in UPC Holding's consolidated financial statements.

Pursuant to the respective indentures for the UPCB SPE Notes (the **UPCB SPE Indentures**) and the respective accession agreements for the UPC Funded Facilities, the call provisions, maturity and applicable interest rate for each UPC Funded Facility are the same as those of the related UPCB SPE Notes. The UPCB SPE, as a lender under the credit facility, is treated the same as the other lenders under the credit facility with benefits, rights and protections similar to those afforded to the other lenders. Through the covenants in the applicable UPCB SPE Indentures and the applicable security interests over (i) all of the issued shares of the UPCB SPE and (ii) the UPCB SPE's rights under the UPC Funded Facilities granted to secure the UPCB SPE's obligations under the relevant UPCB SPE Notes, the holders of the UPCB SPE Notes are provided indirectly with the benefits, rights, protections and covenants granted to the UPCB SPE as lenders under the credit facility. The UPCB SPE is prohibited from incurring any additional indebtedness, subject to certain exceptions under the UPCB SPE Indentures.

UPC Holding Senior Notes

The details of the UPC Holding Senior Notes as of December 31, 2016 are summarized in the following table:

UPC Holding Senior Notes	Maturity	Outstanding principal amount: Borrowing currency	Outstanding principal amount: Euro equivalent	Estimated fair value	Carrying value (a)
			in millions		
UPC Holding 6.375% Senior Notes	September 15, 2022	€ 600.0	€ 600.0	€ 640.8	€ 593.4
UPC Holding 6.75% Senior Notes:					
UPC Holding 6.75% Euro Senior Notes	March 15, 2023	€ 450.0	450.0	491.9	448.1
UPC Holding 6.75% CHF Senior Notes	March 15, 2023	CHF 350.0	326.2	355.6	324.7
Total			€ 1,376.2	€ 1,488.3	€ 1,366.2

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

At any time prior to September 15, 2017, in the case of the UPC Holding 6.375% Senior Notes, and March 15, 2018, in the case of the UPC Holding 6.75% Senior Notes, UPC Holding may redeem some or all of such UPC Holding Senior Notes by paying a "make-whole" premium, which is the present value of all scheduled interest payments until September 15, 2017 or March 15, 2018 (as applicable) using the discount rate (as specified in the applicable indenture) as of the redemption date, plus 50 basis points.

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

	Redemption price	
	UPC Holding 6.375% Senior Notes	UPC Holding 6.75% Senior Notes
12-month period commencing	September 15	March 15
2017	103.188%	N.A.
2018	102.125%	103.375%
2019	101.063%	102.250%
2020	100.000%	101.125%
2021 and thereafter	100.000%	100.000%

2015 and 2014 Financing Transactions. During 2015 and 2014, UPC Holding completed a number of financing transactions that generally resulted in lower interest rates and extended maturities. In connection with these transactions, we recognized losses on debt modification and extinguishment, net, of €61.8 million and €30.0 million during 2015 and 2014, respectively, which includes (i) the payment of redemption premiums of €52.8 million and €14.3 million, respectively, (ii) the write-off of deferred financing costs of €9.0 million and €3.2 million, respectively, and (iii) the write-off of unamortized discount of nil and €12.5 million, respectively.

UPC Broadband Holding Bank Facility

The UPC Broadband Holding Bank Facility is the senior secured credit facility of certain subsidiaries of UPC Holding. The details of our borrowings under the UPC Broadband Holding Bank Facility as of December 31, 2016 are summarized in the following table:

UPC Broadband Holding Facility	Maturity	Interest rate	Facility amount (in borrowing currency) (a)	Outstanding principal amount	Unused borrowing capacity (b)	Carrying value (c)
				in millions		
AK (d)	January 15, 2027	4.000%	€ 600.0	€ 600.0	€ —	€ 595.3
AL (d)	January 15, 2025	5.375%	$ 1,140.0	1,080.9	—	1,073.5
AM	December 31, 2021	EURIBOR + 2.75%	€ 990.1	—	990.1	—
AN	August 31, 2024	LIBOR + 3.00%	$ 2,150.0	2,038.5	—	2,021.3
AO	January 15, 2026	EURIBOR + 3.00%	€ 600.0	600.0	—	595.3
Elimination of Facilities AK and AL in consolidation (d)				(1,680.9)	—	(1,668.8)
Total				€ 2,638.5	€ 990.1	€ 2,616.6

(a) Except as described in (d) below, amounts represent total third-party facility amounts at December 31, 2016.

(b) At December 31, 2016, our availability under the UPC Broadband Holding Bank Facility was limited to €676.0 million. When the relevant December 31, 2016 compliance reporting requirements have been completed, and assuming no changes from the December 31, 2016 borrowing levels, we anticipate that the full amount of unused borrowing capacity under the UPC Broadband Holding Bank Facility will be available to be borrowed. UPC Facility AM has a fee on unused commitments of 1.1% per year.

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

(d) As further discussed in the below description of the UPCB SPE Notes, the amounts borrowed by UPC Financing outstanding under UPC Facilities AK and AL are eliminated in our consolidated financial statements.

2016 Refinancing Transactions. In August 2016, UPC Broadband Holding entered into UPC Facility AN. UPC Facility AN was issued at 99.5% of par and is subject to a LIBOR floor of 0.0%. The net proceeds from UPC Facility AN were used to prepay (i) in full the $1,305.0 million (€1,237.3 million) outstanding principal amount under UPC Facility AH, (ii) in full the $675.0 million (€640.0 million) outstanding principal amount under UPC Facility AC, together with accrued and unpaid interest and the related prepayment premium, to UPCB Finance V Limited (**UPCB Finance V**) and, in turn, UPCB Finance V used such proceeds to fully redeem the $675.0 million (€640.0 million) principal amount of its 7.250% senior secured notes and (iii) 10% of the $750.0 million (€711.1 million) original principal amount under UPC Facility AD, together with accrued and unpaid interest and the related prepayment premium, to UPCB Finance VI Limited (**UPCB Finance VI**) and, in turn, UPCB Finance VI used such proceeds to redeem 10% of its $750.0 million (€711.1 million) original principal amount of 6.875% senior secured notes due January 15, 2022 (the **UPCB Finance VI Notes**). The redemption price for the UPCB Finance VI Notes was 103% of the applicable redeemed principal amount. In connection with these transactions, we recognized a loss on debt modification and extinguishment, net, of €43.5 million. This loss includes (a) the payment of €30.5 million of redemption premium, (b) the write-off of €9.8 million of deferred financing costs and (c) the write-off of unamortized discount of €3.2 million.

In November 2016, UPC Financing entered into UPC Facility AO. UPC Facility AO was issued at 99.75% of par and is subject to a EURIBOR floor of 0.0%. The net proceeds from UPC Facility AO, in conjunction with existing cash, were used to prepay in full the remaining $600.0 million (€568.9 million) outstanding principal amount under UPC Facility AD, together with accrued and unpaid interest and the related prepayment premium to UPCB Finance VI and, in turn, UPCB Finance VI used such proceeds to redeem the remaining $600.0 million (€568.9 million) outstanding principal amount of the UPCB Finance VI Notes. The redemption price for the UPCB Finance VI Notes was 103% of the applicable redeemed principal amount. In connection with these transactions, we recognized a loss on debt modification and extinguishment, net, of €26.8 million. This loss includes (i) the payment of €21.8 million of redemption premium and (ii) the write-off of €5.0 million of deferred financing costs.

For information regarding a refinancing transaction completed subsequent to December 31, 2016 that impacts the UPC Broadband Holding Bank Facility, see note 16.

2015 and 2014 Refinancing Transactions. During 2015 and 2014, we completed a number of refinancing transactions that generally resulted in lower interest rates or extended maturities under the UPC Broadband Holding Bank Facility. In connection with these transactions, we recognized losses on debt modification and extinguishment, net, of €68.7 million and €12.0 million during 2015 and 2014, respectively. These losses include (i) the payment of €47.8 million of redemption premium in 2015, (ii) the write-off of deferred financing costs of €16.7 million and €8.5 million, respectively, and (iii) the write-off of unamortized discounts of €4.2 million and €3.5 million, respectively.

UPCB SPE Notes

The details of the UPCB SPE Notes as of December 31, 2016 are summarized in the following table:

				Outstanding principal amount			
UPCB SPE Notes	**Maturity**	**Interest rate**	**Original issue amount**	**Borrowing currency**	**Euro equivalent**	**Estimated fair value**	**Carrying value (a)**
					in millions		
UPCB Finance IV Dollar Notes...	January 15, 2025	5.375%	$ 1,140.0	$ 1,140.0	€ 1,080.9	€ 1,089.7	€ 1,073.5
UPCB Finance IV Euro Notes.....	January 15, 2027	4.000%	€ 600.0	€ 600.0	600.0	601.5	595.3
Total..........					€ 1,680.9	€ 1,691.2	€ 1,668.8

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

Subject to the circumstances described below, the UPCB Finance IV Dollar Notes are non-callable until January 15, 2020 and the UPCB Finance IV Euro Notes are non-callable until January 15, 2021 (each a **UPCB SPE Notes Call Date**). If, however, at any time prior to the applicable UPCB SPE Notes Call Date, all or a portion of the loans under the related UPC Funded Facility

are voluntarily prepaid (an **Early Redemption Event**), then the UPCB SPE will be required to redeem an aggregate principal amount of its UPCB SPE Notes equal to the aggregate principal amount of the loans so prepaid under the relevant UPC Funded Facility. In general, the redemption price payable will equal 100% of the principal amount of the applicable UPCB SPE Notes to be redeemed and a "make-whole" premium, which is the present value of all remaining scheduled interest payments to the applicable UPCB SPE Notes Call Date using the discount rate (as specified in the applicable UPCB SPE Indenture) as of the redemption date plus 50 basis points.

Upon the occurrence of an Early Redemption Event on or after the UPCB SPE Notes Call Date, the UPCB SPE will redeem an aggregate principal amount of its UPCB SPE Notes equal to the principal amount of the related UPC Funded Facility prepaid at the following redemption prices (expressed as a percentage of the principal amount), plus accrued and unpaid interest and additional amounts (as specified in the applicable UPCB SPE Indentures), if any, to the applicable redemption date as set forth below:

	Redemption price	
	UPCB Finance IV Dollar Notes	**UPCB Finance IV Euro Notes**
12-month period commencing	January 15	January 15
2020	102.688%	N.A.
2021	101.792%	102.000%
2022	100.896%	101.000%
2023	100.000%	100.500%
2024 and thereafter	100.000%	100.000%

2016 Refinancing Transactions. In August 2016, UPC Broadband Holding entered into UPC Facility AN. A portion of the net proceeds from UPC Facility AN were ultimately used to redeem (i) in full the amount outstanding under the UPCB Finance V Notes and (ii) 10% of the original principal amount under the UPCB Finance VI Notes, as further described above under *UPC Broadband Holding Bank Facility - 2016 Refinancing Transactions.*

In November 2016, UPC Financing and UPC Broadband Holding entered into UPC Facility AO. A portion of the net proceeds from UPC Facility AO were ultimately used to redeem the remaining outstanding amount under the UPCB Finance VI Notes, as further described above under *UPC Broadband Holding Bank Facility - 2016 Refinancing Transactions.*

2015 Refinancing Transactions. During 2015, we completed a number of refinancing transactions that generally resulted in lower interest rates and extended maturities. In connection with these transactions, we recognized a loss on debt modification and extinguishment, net, of €53.4 million. This loss includes (i) the payment of €48.6 million of redemption premium and (ii) the write-off of €4.8 million of deferred financing costs.

Maturities of Debt and Capital Lease Obligations

Maturities of our debt and capital lease obligations as of December 31, 2016 are presented below and such amounts represent euro equivalents based on December 31, 2016 exchange rates:

Debt:

	Third-party debt (a)	Shareholder Loan and related-party debt	Total
		in millions	
Year ending December 31:			
2017	€ 736.7	€ —	€ 736.7
2018	—	—	—
2019	—	—	—
2020	—	—	—
2021	—	—	—
Thereafter	5,695.6	6,161.4	11,857.0
Total debt maturities	6,432.3	6,161.4	12,593.7
Unamortized discount	(13.8)	—	(13.8)
Unamortized deferred financing costs	(30.2)	—	(30.2)
Total debt	€ 6,388.3	€ 6,161.4	€ 12,549.7
Current portion	€ 736.7	€ —	€ 736.7
Noncurrent portion	€ 5,651.6	€ 6,161.4	€ 11,813.0

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(a) Amounts include the UPCB SPE Notes issued by the UPCB SPE. As described above, the UPCB SPE is consolidated by UPC Holding.

Capital lease obligations (in millions):

Year ending December 31:	
2017	€ 6.1
2018	6.0
2019	5.3
2020	4.4
2021	4.0
Thereafter	16.7
Total principal and interest payments	42.5
Amounts representing interest	(10.8)
Present value of net minimum lease payments	€ 31.7
Current portion	€ 4.1
Noncurrent portion	€ 27.6

Non-cash Financing Transactions

During 2016, 2015 and 2014, certain of our financing transactions included non-cash borrowings and repayments of debt aggregating €1,815.7 million, €1,378.4 million and €1,005.3 million, respectively.

(9) Income Taxes

UPC Holding and its Dutch subsidiaries are part of the Dutch Fiscal Unity. The Dutch Fiscal Unity combines individual tax-paying Dutch entities and their ultimate Dutch parent company as one taxpayer for Dutch tax purposes. The income taxes of UPC Holding and its subsidiaries are presented in our consolidated statements of operations on a separate return basis for each tax paying entity or group. Tax amounts allocated between members of the Dutch Fiscal Unity are not subject to tax-sharing agreements and no cash payments are made between the companies related to the Dutch tax attributes. Accordingly, any related-party tax allocations are reflected as an adjustment of parent's equity in our consolidated statements of owners' deficit. During the periods presented in these consolidated financial statements, all related-party tax allocations represented tax benefits generated by UPC Dutch subsidiaries that were recorded net of applicable valuation allowances, thereby resulting in no net related-party tax allocations. Furthermore, Unitymedia International GmbH (**UMI**) has entered into a tax integration agreement and a profit-sharing agreement with its immediate parent, Unitymedia Hessen GmbH & Co. KG (**Unitymedia Hessen**), who is primarily liable for the related tax obligations. As a result, UMI's income is fully attributed to Unitymedia Hessen and no provision for income taxes has been made in our consolidated financial statements for UMI on a separate return basis. The income taxes of subsidiaries other than UMI that are not included within the Dutch Fiscal Unity are included in our consolidated financial statements on a separate return basis for each tax-paying entity or group based on the local tax law.

For tax purposes, UPC Holding's net operating losses for the year can be offset with taxable income of non-UPC Holding subsidiaries within the Dutch Fiscal Unity. UPC Holding and Liberty Global Holding do not operate under a tax sharing agreement and no cash payments are made between the companies related to Dutch tax liabilities.

The domestic (Dutch Fiscal Unity) and foreign components of our loss before income taxes are as follows:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Domestic	€ (804.5)	€ (1,207.4)	€ (1,487.1)
Foreign:			
Switzerland	246.0	353.4	242.8
Other	(63.5)	(61.3)	(24.8)
Total	€ (622.0)	€ (915.3)	€ (1,269.1)

Income tax expense consists of:

	Current	Deferred	Total
		in millions	
Year ended December 31, 2016:			
Domestic	€ (0.2)	€ —	€ (0.2)
Foreign:			
Switzerland	(43.6)	5.2	(38.4)
Other	(17.0)	(1.7)	(18.7)
Total	€ (60.8)	€ 3.5	€ (57.3)
Year ended December 31, 2015:			
Domestic	€ —	€ —	€ —
Foreign:			
Switzerland	(56.9)	(13.9)	(70.8)
Other	(18.2)	3.5	(14.7)
Total	€ (75.1)	€ (10.4)	€ (85.5)
Year ended December 31, 2014:			
Domestic	€ —	€ —	€ —
Foreign:			
Switzerland	(57.9)	2.3	(55.6)
Other	(27.8)	(6.5)	(34.3)
Total	€ (85.7)	€ (4.2)	€ (89.9)

Income tax expense attributable to our loss before income taxes differs from the amounts computed using the Dutch income tax rate of 25.0%, as a result of the following factors:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Computed "expected" tax benefit	€ 155.5	€ 228.8	€ 317.3
Change in valuation allowances	(179.6)	(269.8)	(319.0)
Non-deductible or non-taxable interest and other expenses	(44.3)	(52.0)	(84.2)
Other, net	11.1	7.5	(4.0)
Total income tax expense	€ (57.3)	€ (85.5)	€ (89.9)

The components of our deferred tax liabilities are as follows:

	December 31,	
	2016	2015
	in millions	
Deferred tax assets (a)	€ 20.5	€ 20.3
Deferred tax liabilities (a)	(98.7)	(97.3)
Net deferred tax liability	€ (78.2)	€ (77.0)

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

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

	December 31,	
	2016	2015
	in millions	
Deferred tax assets:		
Net operating loss and other carryforwards	€ 2,356.7	€ 2,180.9
Debt	92.1	159.3
Intangible assets	50.0	99.9
Derivative instruments	41.7	92.5
Property and equipment, net	21.3	21.3
Other future deductible amounts	25.1	27.0
Deferred tax assets	2,586.9	2,580.9
Valuation allowance	(2,507.0)	(2,492.4)
Deferred tax assets, net of valuation allowance	79.9	88.5
Deferred tax liabilities:		
Property and equipment, net	(64.0)	(70.6)
Intangible assets	(47.2)	(45.8)
Other future taxable amounts	(46.9)	(49.1)
Deferred tax liabilities	(158.1)	(165.5)
Net deferred tax liability	€ (78.2)	€ (77.0)

Our deferred income tax valuation allowance increased €14.6 million during 2016. This increase reflects the net effect of (i) the net tax expense related to our continuing operations of €179.6 million, (ii) the effect of rate changes, (iii) the expiration of net operating losses and (iv) other individually insignificant items.

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

Country	Tax loss carryforward	Related tax asset	Expiration date
	in millions		
The Netherlands	€ 8,039.0	€ 2,009.8	2017-2025
Luxembourg	685.9	178.4	Indefinite
France	479.1	138.6	Indefinite
Hungary	158.2	14.3	2020-2025
Other	90.9	15.6	Various
Total	€ 9,453.1	€ 2,356.7	

Our tax loss carryforwards within each jurisdiction combine all companies' tax losses (both capital and ordinary losses) in that jurisdiction, however, certain tax jurisdictions limit the ability to offset taxable income of a separate company or different tax group with the tax losses associated with another separate company or group. Most of the tax losses shown in the above table are not expected to be realized, including certain losses that are limited in use due to change in control or same business tests. In addition, the pre-fiscal unity losses in the Netherlands of Liberty Global Holding and of UPC Holding and its subsidiaries can only be offset with profits that occur within these groups. Losses that relate to UPC Holding and its subsidiaries can also be offset against profits of other entities within the fiscal unity of Liberty Global Holding.

Although we intend to take reasonable tax planning measures to limit our tax exposures, no assurance can be given that we will be able to do so.

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

In general, tax returns filed by our company or our subsidiaries for years prior to 2010 are no longer subject to examination by tax authorities.

The changes in our unrecognized tax benefits are summarized below:

	2016	2015	2014
		in millions	
Balance at January 1	€ 19.6	€ 21.2	€ 15.4
Additions based on tax positions related to the current year	10.1	1.0	3.6
Foreign currency translation	(5.4)	0.4	(0.2)
Reductions for tax positions of prior years	(4.4)	—	(1.0)
Lapse of statute of limitations	(1.6)	(2.4)	(1.1)
Additions for tax positions of prior years	0.2	—	4.5
Reductions for tax positions of current year	—	(0.6)	—
Balance at December 31	€ 18.5	€ 19.6	€ 21.2

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

As of December 31, 2016, our unrecognized tax benefits included €12.5 million of tax benefits that would have a favorable impact on our effective income tax rate if ultimately recognized, after considering amounts that we would expect to be offset by valuation allowances and other factors.

No assurance can be given as to the nature or impact of any changes in our unrecognized tax positions during 2017.

(10) Owners' Deficit

General

UPC Holding is a private limited liability company under Dutch law. The authorized share capital of our company equals one hundred thousand euros (€100,000), divided into one thousand shares with a nominal value of one hundred euros (€100) each. As of December 31, 2016 and 2015, two hundred shares have been issued and fully paid-in. All shares are registered; no share certificates can be issued. All shares are ordinary shares for a private limited liability company under Dutch law. A shareholder wishing to transfer one or more shares must first offer such shares to co-shareholders in a written notification to the management board, stating the number of shares to be transferred, and the management board is required to notify the co-shareholders within two weeks. Co-shareholders then have two weeks to notify the management board of a decision to purchase the shares. If the company itself is a co-shareholder, it can only be entitled to act as an interested party with the consent of the offer or of the shares. Each shareholder has the right of pre-emption in proportion to the aggregate nominal value of its shares subject to certain limitations including as prescribed by Dutch law. No preference or priority rights exist for profit distribution, voting or dissolution and liquidation.

Distributions

As further described in note 11, we converted certain related-party receivables to equity during 2015 in connection with the Ziggo Services Transfer and the Corporate Entities Transfer, resulting in an aggregate non-cash capital distribution of €230.9 million. During 2014, we made (i) a non-cash capital distribution of €733.9 million to Liberty Global Services II in connection with the Corporate Entities Transfer and (ii) a capital distribution of €325.6 million to VTR (as defined and described in note 11), which was used to acquire a loan receivable from VTR to our subsidiary, UPC Broadband France SAS, and pay related accrued interest.

Contributions

As further described in note 11, we recorded (i) charges from another subsidiary of Liberty Global during 2016 and 2015 of €27.3 million and €33.3 million, respectively, related to the contribution of technology-related services, which are reflected as deemed contributions in our statements of owners' deficit, and (ii) non-cash contributions from other subsidiaries of Liberty Global during 2015 of (a) an aggregate €953.4 million and (b) €689.2 million in connection with the Ziggo Services Transfer.

(11) Related-party Transactions

Our related-party transactions are as follows:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Credits (charges) included in:			
Revenue	€ 1.8	€ 2.3	€ 2.7
Programming and other direct costs of services	(9.4)	(9.9)	(9.5)
Other operating expenses	(1.4)	(5.4)	(7.6)
SG&A expenses	3.4	5.9	4.4
Allocated share-based compensation expense	(17.0)	(12.1)	(5.4)
Fees and allocations, net:			
Operating and SG&A related (exclusive of depreciation and share-based compensation)	(116.8)	(114.4)	(103.5)
Depreciation	(87.4)	(62.8)	(54.5)
Share-based compensation	(27.7)	(37.4)	(12.7)
Management fee	(109.1)	(78.5)	(42.5)
Total fees and allocations, net	(341.0)	(293.1)	(213.2)
Included in operating income	(363.6)	(312.3)	(228.6)
Interest expense	(564.7)	(600.1)	(1,060.2)
Interest income	1.8	9.2	185.6
Included in net loss	€ (926.5)	€ (903.2)	€(1,103.2)
Property and equipment transfers, net	€ (653.1)	€ (474.6)	€ (158.2)

General. Certain Liberty Global subsidiaries charge fees and allocate costs and expenses to UPC Holding. Depending on the nature of these related-party transactions, the amount of the charges or allocations may be based on (i) our estimated share of the underlying costs, (ii) our estimated share of the underlying costs plus a mark-up or (iii) commercially-negotiated rates. Through June 30, 2014, our related-party operating and SG&A expenses and our related-party fees and allocations generally were based on our company's estimated share of the applicable estimated costs (including personnel-related and other costs associated with the services provided) incurred by the applicable Liberty Global subsidiaries. The estimated amounts charged were reviewed and revised on an annual basis, with any differences between the revised and estimated amounts recorded in the period identified, generally the first quarter of the following year. The revision to reflect the actual costs underlying our related-party fees and allocations for 2013 amounted to an increase of €5.1 million in our billings from a subsidiary of Liberty Global, which was recorded

during the first half of 2014. During the third quarter of 2014, Liberty Global and its subsidiaries began basing the fees charged and amounts allocated on actual costs incurred. As a result, during the third quarter of 2014, we recorded a €14.1 million increase to the fees and allocations charged to our company by a subsidiary of Liberty Global to reflect the impact of this change in methodology as of January 1, 2014. The impact of this change in methodology on our related-party operating and SG&A expenses was not material. Although we believe that the related-party charges and allocations described below are reasonable, no assurance can be given that the related-party costs and expenses reflected in our consolidated statements of operations are reflective of the costs that we would incur on a standalone basis.

In connection with the Corporate Entities Transfer, Liberty Global changed the processes it uses to charge fees and allocate costs and expenses from one subsidiary to another. This methodology, which is intended to ensure that Liberty Global allocates its central and administrative costs to its borrowing groups on a fair and rational basis, impacts the calculation of the "EBITDA" metric specified by our debt agreements (**Covenant EBITDA**). In this regard, the components of related-party fees and allocations that are deducted to arrive at our Covenant EBITDA are based on (i) the amount and nature of costs incurred by the allocating Liberty Global subsidiaries during the period, (ii) the allocation methodologies in effect during the period and (iii) the size of the overall pool of entities that are charged fees and allocated costs, such that changes in any of these factors would likely result in changes to the amount of related-party fees and allocations that will be deducted to arrive at our Covenant EBITDA in future periods. For example, to the extent that a Liberty Global subsidiary borrowing group was to acquire (sell) an operating entity, and assuming no change in the total costs incurred by the allocating entities, the fees charged and the costs allocated to our company would decrease (increase). Prior to the Corporate Entities Transfer, UPC Holding charged fees and allocated costs and expenses from our company to other Liberty Global subsidiaries. As a result of the Corporate Entities Transfer, UPC Holding began receiving charges effective January 1, 2015, for fees and allocated costs and expenses from another Liberty Global subsidiary.

Revenue. Amounts primarily relate to B2B related services and network maintenance services provided to certain non-consolidated affiliates, and prior to the January 31, 2014 sale by Liberty Global of substantially all of the assets of Chellomedia B.V. (**Chellomedia**), programming services provided to Chellomedia.

Programming and other direct costs of services. Amounts represent certain cash settled charges from other Liberty Global subsidiaries and affiliates to UPC Holding for programming-related services and interconnect services provided to our company by certain of Liberty Global's affiliates. In addition, the 2014 amount includes charges for programming and digital interactive services provided by Chellomedia until January 31, 2014 of €2.1 million.

Other operating expenses. Amounts represent certain cash settled charges from other Liberty Global subsidiaries to UPC Holding and primarily consist of aggregate recharges for network-related services and other items provided to our company from LG B.V.

SG&A expenses. Amounts represent certain cash settled charges between Liberty Global subsidiaries and UPC Holding, primarily for information technology-related services and software maintenance services.

Allocated share-based compensation expense. Amounts are allocated to our company by Liberty Global subsidiaries and represent share-based compensation expense associated with the Liberty Global share-based incentive awards held by certain employees of our subsidiaries.

Fees and allocations, net. These amounts represent fees charged to UPC Holding that originate with Liberty Global and certain other Liberty Global subsidiaries, and include charges for management, finance, legal, technology and other corporate and administrative services provided to our subsidiaries. The categories of our fees and allocations, net, are as follows:

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

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

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

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

During the first three quarters of 2014, a subsidiary of Liberty Global allocated technology-based costs to our company and other Liberty Global subsidiaries based on each subsidiaries' estimated proportionate share of these costs. During the fourth quarter of 2014, the approach used to charge technology based fees was changed to a royalty-based method. For 2016, 2015 and 2014, our proportional share of these technology-based costs of €201.7 million, €178.9 million and €138.5 million, respectively, was €14.0 million, €33.3 million and €97.1 million, respectively, more than the actual amount charged under the royalty-based method. Accordingly, these excess amounts have been reflected as deemed contributions of technology-related services in our consolidated statements of owners' deficit. In addition, we recorded an adjustment during the second quarter of 2016 to reduce the amount charged during 2015 under the royalty-based method. This adjustment resulted in (i) a €17.6 million reduction to the management fee category of fees and allocations and (ii) a €13.3 million decrease to owners' deficit that is reflected as a deemed contribution of technology-related services in our consolidated statement of owners' deficit. The fees charged under the royalty-based method are expected to escalate in future periods. Any excess of these charges over our estimated proportionate share of the underlying technology-based costs will be classified as management fees and added back to arrive at Covenant EBITDA.

Interest expense. Amounts primarily include interest accrued on the Shareholder Loan (as defined and described below). Interest expense is accrued and included in other long-term liabilities during the year, and then added to the Shareholder Loan balance at the end of the year.

Interest income. The 2015 and 2014 amounts primarily include interest income related to receivables from certain subsidiaries of Ziggo Services and UPC Ireland and from Liberty Global Operations that, prior to the UPC Transfers, were eliminated in consolidation. These related-party receivables were settled during the first quarter of 2015, as discussed below.

Property and equipment transfers, net. These amounts, which are generally cash settled, represent the net carrying values and net cash received related to (i) customer premises equipment that is centrally procured by a UPC Holding subsidiary and subsequently transferred to other Liberty Global subsidiaries outside of UPC Holding and (ii) used customer premises and network-related equipment acquired from or transferred to other Liberty Global subsidiaries, including LG B.V. During all periods presented, the carrying values of the equipment transferred out of UPC Holding exceed the carrying values of the equipment transferred into UPC Holding. The net cash received in connection with these transfers is reflected as a reduction to capital expenditures within our consolidated statements of cash flows. Certain of these transfers relate to third-party purchases of property and equipment initially made by our company under vendor financing arrangements and, accordingly, these purchases are not reported as capital expenditures.

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

	December 31,			
	2016		2015	
	in millions			
Assets:				
Receivables (a)	€	114.3	€	137.6
Other long-term assets (b)	€	421.2	€	287.0
Liabilities:				
Accounts payable	€	107.5	€	98.5
Accrued liabilities		168.0		117.4
Shareholder Loan (c)		5,969.6		5,645.5
UPC Equipment Note (d)		191.8		179.9
Other long-term liabilities (e)		18.3		14.9
Total	€	6,455.2	€	6,056.2

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(a) Primarily represents (i) €12.1 million and €27.5 million, respectively, of receivables from LG B.V. that arose from our retention of certain third-party liabilities of Liberty Global Services II following the Corporate Entities Transfer and (ii) €78.3 million and €70.0 million, respectively, of receivables due from other Liberty Global subsidiaries related to centrally-procured property and equipment purchased by our company on behalf of these other Liberty Global subsidiaries. These receivables are non-interest bearing and may be cash or loan settled.

(b) Primarily represents (i) €359.1 million and €220.0 million, respectively, of long-term receivables from LG B.V. that arose from our retention of certain third-party liabilities of Liberty Global Services II following the Corporate Entities Transfer and (ii) €61.2 million and €64.0 million (including accrued interest), respectively, related to a note receivable (the **Unitymedia Receivable**) from Unitymedia Hessen to UMI, a subsidiary of Liberty Global that is consolidated by UPC Holding (as further described in (d) below). The Unitymedia Receivable bears interest at EURIBOR plus a margin of 2.75% per annum (subject to adjustment) and matures on December 31, 2025. Accrued interest on the Unitymedia Receivable may be, at the option of UMI, (a) transferred to the loan balance annually on January 1 or (b) repaid on the last day of each month and on the date of principal repayments. During the first quarter of 2015 and in connection with the UPC Transfers, (1) €881.5 million of the outstanding principal under a receivable due from a subsidiary of Ziggo Services (the **Ziggo Services Receivable**) was settled against loans we owed to certain subsidiaries of Ziggo Services and (2) the €634.3 million then-outstanding balance of the UPC Ireland Note Receivable (as defined in (c) below) was transferred to another Liberty Global subsidiary in exchange for a non-cash reduction of the Shareholder Loan (as defined in (c) below). In addition, (I) the remaining outstanding principal and interest of €120.8 million under the Ziggo Services Receivable, (II) a receivable from Liberty Global Operations and (III) a €4.1 million related-party receivable due from Liberty Global Services II were converted to equity during the first quarter of 2015, and the €230.9 million aggregate amount of these related-party receivables is reflected as a non-cash distribution in our consolidated statement of owners' deficit.

(c) UPC Holding has an unsecured shareholder loan (the **Shareholder Loan**) with Liberty Global Europe Financing B.V. (**LGE Financing**), which, as amended, matures in 2030 and is subordinated in right of payment to the prior payment in full of the UPC Holding Senior Notes in the event of (i) a total or partial liquidation, dissolution or winding up of UPC Holding, (ii) a bankruptcy, reorganization, insolvency, receivership or similar proceeding relating to UPC Holding or its property, (iii) an assignment for the benefit of creditors or (iv) any marshaling of UPC Holding's assets or liabilities. The interest rate on the Shareholder Loan is a fixed rate of 9.79% and accrued interest is included in other long-term liabilities until it is transferred to the loan balance at the end of each year. The net increase in the Shareholder Loan balance during 2016 includes (a) cash advances of €3,423.8 million, (b) cash payments of €3,349.6 million, (c) additions of €546.5 million in non-cash accrued interest and (d) a €296.6 million non-cash decrease related to the settlement of related-party charges and allocations. The net decrease in the Shareholder Loan balance during 2015 includes (1) a net €5,901.8 million non-cash decrease related to the UPC Transfers, including (I) a decrease of €5,371.8 million related to the non-cash consideration received for the Ziggo Services Transfer, (II) a decrease of €1,087.7 million related to the non-cash consideration received for the UPC Ireland

Transfer, (III) a decrease of €634.3 million in exchange for the transfer of our right to receive such amount from UPC Ireland pursuant to a promissory note to another Liberty Global subsidiary (the **UPC Ireland Note Receivable**) in exchange for a non-cash reduction of the Shareholder Loan and (IV) an increase of €1,192.0 million related to the non-cash transfer of an amount payable to another Liberty Global subsidiary into the Shareholder Loan, (2) cash advances of €8,123.9 million, (3) cash payments of €6,788.9 million (€1,363.2 million of which was capitalized interest), (4) additions of €568.7 million in non-cash accrued interest, (5) a decrease of €453.4 million related to the non-cash settlement of a related-party receivable, (6) a €172.5 million non-cash increase representing the then fair value of certain derivative instruments that were novated from us to another subsidiary of Liberty Global and (7) a €171.8 million non-cash increase related to the settlement of related-party charges and allocations. The transferred payable was established through the receipt of cash that was subsequently applied to repay a portion of our third-party debt in connection with the Ziggo Services Transfer. The net increase in the Shareholder Loan balance during 2014 includes (A) cash advances of €4,185.0 million, (B) cash payments of €3,522.4 million (none of which was capitalized interest), (C) a €2,450.0 million non-cash decrease related to the consideration received associated with the extraction of VTR GlobalCom SpA (**VTR**), certain of its parent entities and all of its subsidiary entities from UPC Holding in January 2014 (the **VTR Extraction**), (D) a €1,005.3 million non-cash increase related to the repayment of outstanding indebtedness under the then outstanding UPC Facilities R, S and AE (under the UPC Broadband Holding Bank Facility), (E) additions of €878.2 million in non-cash accrued interest and (F) a €38.8 million non-cash decrease related to the settlement of related-party charges and allocations. During 2016, 2015 and 2014, nil, €1,363.2 million and nil of our Shareholder Loan repayments represented payments of interest, respectively.

(d) Represents borrowings under a loan agreement (the **UPC Equipment Note**) between a subsidiary of Liberty Global and our subsidiary, UPC Equipment B.V. (**UPC Equipment**). The UPC Equipment Note bears interest at 9.29% and matures in March 2032. Accrued and unpaid interest on this note may, at the option of UPC Equipment, be (i) payable on the last day of each month and on the date of each full or partial repayment of the outstanding principal, (ii) added to the outstanding principal amount on January 1 of each year or (iii) payable in any other manner as agreed by the respective parties. UPC Equipment and its immediate parent entity (together, the **UPC Leasing Entities**), and UMI were formed for the purpose of acquiring and legally owning certain customer premises equipment assets to be leased to certain of our other subsidiaries. Prior to the Ziggo Services Transfer, the leasing transactions between (a) UMI and the UPC Leasing Entities and (b) Ziggo Services and, to a much lesser extent, certain of our other subsidiaries, created variable interests in UMI for which Ziggo Services was the primary beneficiary. As such, Ziggo Services and UPC Holding were required to consolidate UMI through December 31, 2014. During the first quarter of 2015, we completed the Ziggo Services Transfer and unwound the leasing transactions between (1) Ziggo Services and (2) UMI and the UPC Leasing Entities. As a result of the completion of the Ziggo Services Transfer, our financial statements no longer include Ziggo Services and UMI for periods prior to January 1, 2015. Beginning with the first quarter of 2015, the remaining leasing transactions between UMI, the UPC Leasing Entities and certain of our other subsidiaries create a variable interest in UMI for which we are the primary beneficiary and, accordingly, UPC Holding is required to consolidate UMI effective January 1, 2015. Upon consolidation of the UPC Leasing Entities, we recognized an initial loan balance of €78.6 million. The increase in the aggregate balance of the UPC Equipment Note during 2016 includes (I) the transfer of €14.9 million in non-cash accrued interest to the loan balance, (II) cash payments of €3.1 million and (III) cash advances of €0.1 million. The increase in the aggregate balance of the UPC Equipment Note during 2015 includes (A) cash advances of €184.7 million, (B) cash payments of €89.1 million and (C) the transfer of €5.7 million in non-cash accrued interest to the loan balance.

(e) Primarily includes accrued interest on the UPC Equipment Note. Accrued interest on the Shareholder Loan is included in other long-term liabilities until it is transferred to the loan balance at the end of each year.

During the first quarter of 2015 and in connection with the UPC Transfers, (i) the €953.4 million then-outstanding balance of certain related-party debt that we owed to certain subsidiaries of Ziggo Services was converted to equity and is reflected as a non-cash contribution in our consolidated statement of owners' deficit and (ii) the €881.5 million then-outstanding balance of certain related-party debt that we owed to a subsidiary of Ziggo Services was settled against a portion of the Ziggo Services Receivable, as described above. In addition, in February 2015, we rolled €689.2 million of our commitments under UPC Facility AG of the UPC Broadband Holding Bank Facility to a subsidiary of Ziggo Services in connection with the Ziggo Services Transfer. This transaction is reflected as a non-cash contribution in our consolidated statement of owners' deficit.

During 2016, 2015 and 2014, we recorded aggregate capital charges of €8.1 million, €10.1 million and €5.4 million, respectively, in our consolidated statements of owners' deficit in connection with the exercise of Liberty Global SARs and the vesting of Liberty Global RSUs and PSUs held by employees of our subsidiaries. We and Liberty Global have agreed that these capital charges will be based on the fair value of the underlying Liberty Global shares associated with share-based incentive awards that vest or are

exercised during the period, subject to any reduction that is necessary to ensure that the capital charge does not exceed the amount of share-based compensation expense recorded by our company with respect to Liberty Global share-based incentive awards.

LG B.V. leases certain property and equipment on our behalf and then contributes it to our company. During 2016, 2015 and 2014, LG B.V.'s carrying values in such contributed property and equipment of €17.3 million, €16.0 million and €18.6 million, respectively, have been reflected as decreases to parent's deficit in our consolidated statements of owners' deficit.

(12) Defined Benefit Plans

Certain of our subsidiaries maintain various funded and unfunded defined benefit plans for their employees. The table below provides summary information on our defined benefit plans:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Projected benefit obligation	€ 308.7	€ 301.6	€ 232.4
Fair value of plan assets (a)	€ 274.1	€ 251.3	€ 213.6
Net liability	€ 34.6	€ 50.3	€ 18.8
Net periodic pension cost (b)	€ 8.0	€ 8.2	€ 6.1

(a) The fair value of plan assets is based on Level 1 inputs of the fair value hierarchy (as further described in note 6). Our plan assets comprise investments in debt securities, equity securities, real estate contracts and certain other assets.

(b) The 2015 amount excludes aggregate curtailment gains of €4.6 million, which are included in impairment, restructuring and other operating items, net, in our consolidated statement of operations.

Based on December 31, 2016 exchange rates and information available as of that date, our subsidiaries' contributions to their respective defined benefit plans in 2017 are expected to aggregate €12.5 million.

(13) Accumulated Other Comprehensive Earnings

Accumulated other comprehensive earnings included in our consolidated balance sheets and statements of owners' deficit reflect the aggregate impact of foreign currency translation adjustments and pension-related adjustments and other. The changes in the components of accumulated other comprehensive earnings, net of taxes, are summarized as below. Except as noted below, we were not required to provide income taxes on amounts recorded in other comprehensive earnings for the periods presented in the table below.

	Parent				
	Foreign currency translation adjustments	Pension related adjustments (a)	Accumulated other comprehensive earnings	Non-controlling interests	Total accumulated other comprehensive earnings
			in millions		
Balance at January 1, 2014	€ 494.3	€ 20.8	€ 515.1	€ 0.4	€ 515.5
Other comprehensive earnings	43.4	(14.7)	28.7	0.4	29.1
Balance at December 31, 2014	537.7	6.1	543.8	0.8	544.6
Other comprehensive earnings	222.6	(31.4)	191.2	—	191.2
Balance at December 31, 2015	760.3	(25.3)	735.0	0.8	735.8
Other comprehensive earnings	19.6	8.9	28.5	—	28.5
Balance at December 31, 2016	€ 779.9	€ (16.4)	€ 763.5	€ 0.8	€ 764.3

(a) The pension related adjustments included in other comprehensive earnings are net of income tax benefit (expense) of (€2.2 million), €7.8 million and €3.8 million for the years ended December 31, 2016, 2015 and 2014, respectively.

(14) 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 purchases of customer premises and other equipment and services, non-cancellable operating leases, network and connectivity commitments, programming contracts and other items. The euro equivalents of such commitments as of December 31, 2016 are presented below:

	Payments due during:						
	2017	2018	2019	2020	2021	Thereafter	Total
				in millions			
Purchase commitments	€ 330.0	€ 66.6	€ 41.7	€ 40.8	€ 12.0	€ 55.0	€ 546.1
Programming commitments	80.4	86.2	75.7	79.4	37.3	18.8	377.8
Operating leases	34.0	27.3	24.3	20.1	16.0	77.3	199.0
Network and connectivity commitments	90.7	36.0	19.6	12.8	5.7	12.1	176.9
Other commitments	8.8	7.4	7.0	6.9	6.6	13.2	49.9
Total (a)	€ 543.9	€ 223.5	€ 168.3	€ 160.0	€ 77.6	€ 176.4	€ 1,349.7

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

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 information technology and maintenance services, including €8.8 million associated with related-party purchase obligations.

Programming commitments consist of obligations associated with certain of our programming contracts that are enforceable and legally binding on us as we have agreed to pay minimum fees without regard to (i) the actual number of subscribers to the programming services or (ii) whether we terminate service to a portion of our subscribers or dispose of a portion of our distribution systems. In addition, programming commitments do not include increases in future periods associated with contractual inflation or other price adjustments that are not fixed. Accordingly, the amounts reflected in the above table with respect to these contracts are significantly less than the amounts we expect to pay in these periods under these contracts. Historically, payments to programming vendors have represented a significant portion of our operating costs, and we expect that this will continue to be the case in future periods. In this regard, our total programming and copyright costs aggregated €295.5 million, €264.8 million and €257.6 million during 2016, 2015 and 2014, respectively.

Network and connectivity commitments include commitments associated with (i) network maintenance commitments, (ii) fiber leasing agreements, (iii) satellite carriage services provided to our company, (iv) certain operating costs associated with our leased networks and (v) commitments associated with our mobile virtual network operator (**MVNO**) agreements. The amounts reflected in the above table with respect to certain of our MVNO commitments represent fixed minimum amounts payable under these agreements and, therefore, may be significantly less than the actual amounts we ultimately pay in these periods.

In addition to the commitments set forth in the table above, we have significant commitments under (i) derivative instruments and (ii) defined benefit plans and similar agreements, pursuant to which we expect to make payments in future periods. For information regarding our derivative instruments, including the net cash paid or received in connection with these instruments during 2016, 2015 and 2014, see note 5. For information regarding our defined benefit plans, see note 12.

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.

Rental expense under non-cancellable operating lease arrangements amounted to €67.3 million, €60.9 million and €58.4 million during 2016, 2015 and 2014, respectively. It is expected that in the normal course of business, operating leases that expire generally will be renewed or replaced by similar leases.

We have established various defined contribution benefit plans for our and our subsidiaries' employees. The aggregate expense of our matching contributions under the various defined contribution employee benefit plans was €1.0 million, €1.0 million and €1.1 million during 2016, 2015 and 2014, respectively.

Guarantees and Other Credit Enhancements

In the ordinary course of business, we may provide (i) indemnifications to our lenders, our vendors and certain other parties 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

Financial Transactions Tax. Certain countries in the European Union (**E.U.**), including Austria and Slovakia, are participating in an enhanced cooperation procedure to introduce a financial transactions tax (the **FTT**). Under the draft language of the FTT proposal, a wide range of financial transactions could be taxed at rates of at least 0.01% for derivative transactions based on the notional amount and 0.1% for other covered financial transactions based on the underlying transaction price. Each of the individual countries would be permitted to determine an exact rate, which could be higher than the proposed rates of 0.01% and 0.1%. Any implementation of the FTT could have a global impact because it would apply to all financial transactions where a financial institution is involved (including unregulated entities that engage in certain types of covered activity) and either of the parties (whether the financial institution or its counterparty) is in one of the participating countries. Although there continues to be ongoing discussions in the relevant countries around the FTT, uncertainty remains as to if and when the FTT will be implemented and the breadth of its application. Based on our understanding of the current status of the potential FTT, we do not expect that any implementation of the FTT would occur before 2018. Any imposition of the FTT could increase banking fees and introduce taxes on internal transactions that we currently perform. Due to the uncertainty regarding the FTT, we are currently unable to estimate the financial impact that the FTT could have on our results of operations, cash flows or financial position.

Hungary VAT Matter. In February 2016, our DTH operations in Luxembourg received a second instance decision from the Hungarian tax authorities as a result of an audit with respect to VAT payments that the Hungarian tax authorities conducted for the years 2010 through 2012. The Hungarian tax authorities assessed our DTH operations with an obligation to pay VAT for the years audited of HUF 5,413.2 million (€17.5 million), excluding interest and penalties, which could be significant. We believe that our DTH operations have operated in compliance with all applicable rules, regulations and interpretations thereof, including a binding tax ruling that we received from the Hungarian government in 2010. In October 2016, a Budapest court disagreed with the tax authorities and dismissed the assessment. On February 2, 2017, the Hungarian tax authorities appealed the Budapest court decision to the Hungarian Supreme Court. No portion of this exposure has been accrued by us as the likelihood of loss is not considered to be probable.

Other Regulatory Issues. Video distribution, broadband internet, fixed-line telephony, mobile and content businesses are regulated in each of the countries in which we 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 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.

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.

(15) Segment Reporting

We generally identify our reportable segments as those consolidated subsidiaries that represent 10% or more of our revenue, Segment OCF (as defined below) or total assets. 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 Segment OCF. In addition, we review non-financial measures such as subscriber growth, as appropriate.

Segment OCF is the primary measure used by our chief operating decision maker to evaluate segment operating performance. Segment OCF 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, "**Segment OCF**" is defined as operating income before depreciation and amortization, share-based compensation, related-party fees and allocations, provisions and provision releases related to significant litigation and impairment, restructuring and other operating items. Other operating items include (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 Segment OCF 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 total Segment OCF to our loss before income taxes is presented below.

As of December 31, 2016, our reportable segments are as follows:

- Switzerland/Austria
- Central and Eastern Europe

Our reportable segments derive their revenue primarily from broadband communications services, including video, broadband internet and fixed-line telephony services. Each of our reportable segments also provides B2B and mobile services. At December 31, 2016, we provided broadband communications services in seven European countries and DTH services to customers in the Czech Republic, Hungary, Romania and Slovakia through UPC DTH. In addition to UPC DTH, our Central and Eastern Europe segment includes our broadband communications operations in the Czech Republic, Hungary, Poland, Romania and Slovakia.

Performance Measures of Our Reportable Segments

	Year ended December 31,					
	2016		2015		2014	
	Revenue	Segment OCF	Revenue	Segment OCF	Revenue	Segment OCF
	in millions					
Switzerland/Austria	€ 1,586.4	€ 966.7	€ 1,584.1	€ 937.2	€ 1,390.0	€ 794.8
Central and Eastern Europe	983.4	426.5	960.7	427.1	947.8	438.4
Other	—	(1.7)	—	(1.5)	—	(0.9)
Total	€ 2,569.8	€ 1,391.5	€ 2,544.8	€ 1,362.8	€ 2,337.8	€ 1,232.3

The following table provides a reconciliation of total Segment OCF to loss before income taxes:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Total Segment OCF	€ 1,391.5	€ 1,362.8	€ 1,232.3
Share-based compensation expense	(17.0)	(12.1)	(5.4)
Related-party fees and allocations, net	(341.0)	(293.1)	(213.2)
Depreciation and amortization	(548.4)	(572.1)	(524.9)
Impairment, restructuring and other operating items, net	(5.3)	(5.0)	3.3
Operating income	479.8	480.5	492.1
Interest expense:			
Third-party	(336.3)	(367.6)	(508.0)
Related-party	(564.7)	(600.1)	(1,060.2)
Interest income	2.7	10.6	186.3
Realized and unrealized gains (losses) on derivative instruments, net	(28.9)	(42.3)	103.1
Foreign currency transaction losses, net	(117.8)	(216.0)	(437.1)
Losses on debt modification and extinguishment, net	(70.3)	(183.9)	(42.0)
Other income (expense), net	13.5	3.5	(3.3)
Loss before income taxes	€ (622.0)	€ (915.3)	€ (1,269.1)

Balance Sheet Data of our Reportable Segments

Selected balance sheet data of our reportable segments is set forth below:

	Long-lived assets		Total assets	
	December 31,		December 31,	
	2016	2015	2016	2015
		in millions		
Switzerland/Austria	€ 4,792.1	€ 4,700.9	€ 5,139.0	€ 5,006.0
Central and Eastern Europe	2,145.1	2,087.3	2,219.3	2,149.8
Other	20.9	5.5	1,252.1	1,189.1
Total	€ 6,958.1	€ 6,793.7	€ 8,610.4	€ 8,344.9

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 capital lease arrangements) are presented below and reconciled to the capital expenditure amounts included in our consolidated statements of cash flows. For additional information concerning capital additions financed under vendor financing and capital lease arrangements, see note 7.

	Year ended December 31,		
	2016	2015	2014
		in millions	
Switzerland/Austria	€ 334.6	€ 285.1	€ 246.8
Central and Eastern Europe	299.6	250.7	201.4
Total segment property and equipment additions	634.2	535.8	448.2
Other (a)	16.5	(14.5)	2.0
Total property and equipment additions	650.7	521.3	450.2
Assets acquired under capital-related vendor financing arrangements	(640.0)	(517.8)	(313.1)
Assets contributed by parent company	(17.3)	(16.0)	(18.6)
Assets acquired under capital leases	(12.2)	(1.0)	(0.9)
Changes in current liabilities related to capital expenditures (including related-party amounts)	193.8	153.2	137.4
Total capital expenditures	€ 175.0	€ 139.7	€ 255.0

(a) Primarily relates to inventory build-up of centrally-procured customer premises equipment. This equipment is ultimately transferred to certain of Liberty Global's European operating subsidiaries, including subsidiaries within UPC Holding. See note 11.

Revenue by Major Category

Our revenue by major category is set forth below:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Subscription revenue (a):			
Video	€ 1,202.1	€ 1,200.7	€ 1,123.3
Broadband internet	752.3	742.2	666.4
Fixed-line telephony	220.2	238.6	235.9
Cable subscription revenue	2,174.6	2,181.5	2,025.6
Mobile (b)	30.7	12.4	1.8
Total subscription revenue	2,205.3	2,193.9	2,027.4
B2B revenue (c)	225.0	218.6	193.4
Other revenue (b) (d)	139.5	132.3	117.0
Total	€ 2,569.8	€ 2,544.8	€ 2,337.8

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

(b) Mobile subscription revenue excludes mobile interconnect revenue of €5.0 million, €1.7 million and €0.1 million during 2016, 2015 and 2014, respectively. Mobile interconnect revenue and revenue from mobile handset sales are included in other revenue.

(c) B2B revenue includes revenue from business broadband internet, video, voice, mobile and data services offered to medium to large enterprises and, on a wholesale basis, to other operators. We also provide services to certain small or home office (**SOHO**) subscribers. SOHO subscribers pay a premium price to receive expanded service levels along with video, broadband internet, fixed-line telephony or mobile services that are the same or similar to the mass marketed products offered to our residential subscribers. Revenue from SOHO subscribers, which is included in subscription revenue, aggregated €58.0 million, €49.5 million and €40.6 million during 2016, 2015 and 2014, respectively.

(d) Other revenue includes, among other items, installation, channel carriage fee, late fee, mobile handset sales and interconnect revenue.

Geographic Segments

The revenue of our geographic segments is set forth below:

	Year ended December 31,		
	2016	2015	2014
		in millions	
Switzerland	€ 1,244.6	€ 1,252.5	€ 1,065.1
Poland	353.7	360.0	353.5
Austria	341.8	331.6	324.9
Hungary	250.5	236.4	233.5
The Czech Republic	164.4	160.5	166.3
Romania	153.5	142.4	130.6
Slovakia	53.2	54.1	56.0
Other	8.1	7.3	7.9
Total	€ 2,569.8	€ 2,544.8	€ 2,337.8

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

	December 31,	
	2016	2015
	in millions	
Switzerland	€ 3,846.8	€ 3,789.5
Austria	945.3	911.4
Poland	797.2	822.1
The Czech Republic	501.7	492.2
Hungary	492.5	455.0
Romania	205.3	178.5
Slovakia	103.9	95.0
Other (a)	65.4	50.0
Total	€ 6,958.1	€ 6,793.7

(a) Includes amounts related to (i) the long-lived assets of UPC DTH and (ii) our inventory of centrally-procured customer premises equipment. This centrally-procured customer premises equipment is ultimately transferred to certain of Liberty Global's European operating subsidiaries, including subsidiaries within UPC Holding. See note 11.

(16) Subsequent Event

UPC Holding Refinancing Transaction

In February 2017, UPC Financing entered into a new $2,150.0 million (€2,038.4 million) term loan facility (**UPC Facility AP**). UPC Facility AP was issued at 99.75% of par, matures on April 15, 2025, bears interest at a rate of LIBOR + 2.75% and is subject to a LIBOR floor of 0.0%. The net proceeds from UPC Facility AP, in conjunction with existing cash, were used to repay in full the outstanding principal amount under UPC Facility AN.

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

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

- *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.
- *Results of Operations.* This section provides an analysis of our results of operations for the years ended December 31, 2016, 2015 and 2014.
- *Liquidity and Capital Resources.* This section provides an analysis of our corporate and subsidiary liquidity, consolidated statements of cash flows and contractual commitments.
- *Critical Accounting Policies, Judgments and Estimates.* This section discusses those material accounting policies that involve uncertainties and require significant judgment in their application.

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

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

Forward-Looking Statements

Certain statements in this annual report constitute forward-looking statements. To the extent that statements in this annual report are not recitations of historical fact, such statements constitute forward-looking statements, which, by definition, involve risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements. In particular, statements under *Management's Discussion and Analysis of Financial Condition and Results of Operations* may contain forward-looking statements, including statements regarding our business, product, foreign currency and finance strategies in 2017, our property and equipment additions in 2017 (including with respect to network extensions), subscriber growth and retention rates, competitive, regulatory and economic factors, the timing and impacts of proposed transactions, the maturity of our markets, the anticipated impacts of new legislation (or changes to existing rules and regulations), anticipated changes in our revenue, costs or growth rates, our liquidity, credit risks, foreign currency risks, target leverage levels, our future projected contractual commitments and cash flows and other information and statements that are not historical fact. Where, in any forward-looking statement, we express an expectation or belief as to future results or events, such expectation or belief is expressed in good faith and believed to have a reasonable basis, but there can be no assurance that the expectation or belief will result or be achieved or accomplished. In evaluating these statements, you should consider the risks and uncertainties in the following list, and those described herein, as some but not all of the factors that could cause actual results or events to differ materially from anticipated results or events:

- economic and business conditions and industry trends in the countries in which we operate;
- the competitive environment in the industries in the countries in which we 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 preferences and habits;

- consumer acceptance of our existing service offerings, including our cable television, broadband internet, fixed-line telephony, mobile and business service offerings, and of new technology, programming alternatives and other products and services that we may offer in the future;
- our ability to manage rapid technological changes;
- our ability to maintain or increase the number of subscriptions to our cable television, broadband internet, fixed-line telephony and mobile service offerings and our average revenue per household;
- our ability to provide satisfactory customer service, including support for new and evolving products and services;
- our ability to maintain or increase rates to our subscribers or to pass through increased costs to our subscribers;
- the impact of our future financial performance, or market conditions generally, on the availability, terms and deployment of capital;
- changes in, or failure or inability to comply with, government regulations in the countries in which we operate and adverse outcomes from regulatory proceedings;
- government intervention that requires opening our broadband distribution networks to competitors;
- 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 countries in which we operate;
- changes in laws and government regulations that may impact the availability and cost of capital and the derivative instruments that hedge certain of our financial risks;
- the ability of suppliers and vendors (including our third-party wireless network providers under our 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 the planned network extensions;
- 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; and
- events that are outside of our control, such as political unrest in international markets, terrorist attacks, malicious human acts, natural disasters, pandemics and other similar events.

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

Overview

General

We are an international provider of (i) video, broadband internet and fixed-line telephony services in seven European countries and (ii) mobile services in four European countries. We also provide DTH services to customers in the Czech Republic, Hungary, Romania and Slovakia through UPC DTH.

Operations

At December 31, 2016, we owned and operated networks that passed 13,472,700 homes and served 13,011,100 revenue generating units (**RGUs**), consisting of 6,026,700 video subscribers, 4,127,100 broadband internet subscribers and 2,857,300 fixed-line telephony subscribers. In addition, at December 31, 2016, we served 178,600 mobile subscribers.

The following table provides details of our organic RGU and mobile subscriber changes for the years indicated. The subscriber data provided below excludes the effect of acquisitions (RGUs and mobile subscribers added on the acquisition date) and other non-organic adjustments, but includes post-acquisition date RGU and mobile subscriber additions or losses.

	Year ended December 31,		
	2016	2015	2014
Organic RGU additions (losses):			
Video:			
Basic	(155,800)	(197,400)	(351,400)
Enhanced	150,300	108,800	250,700
DTH	10,400	46,100	4,400
Total video	4,900	(42,500)	(96,300)
Broadband internet	169,800	187,100	242,000
Fixed-line telephony	199,000	219,700	137,200
Total organic RGU additions	373,700	364,300	282,900
Organic postpaid mobile additions	91,100	56,700	6,600

Video services. We provide video services in all of our residential markets and, for most of our customers, we have enhanced our video offerings with various products that enable such customers to control when they watch their programming. These products range from digital video recorders to multimedia home gateway systems capable of distributing video, voice and data content throughout the home and to multiple devices.

Broadband internet services. In all of our broadband communications markets, we offer multiple tiers of broadband internet service with available maximum download speeds as high as 500 Mbps or more depending on location. We continue to invest in new technologies that allow us to increase the internet speeds we offer to our customers.

Fixed-line telephony services. We offer fixed-line telephony services in all of our broadband communications markets, primarily using voice-over-internet-protocol or "**VoIP**" technology.

Mobile services. We offer voice and data mobile services through MVNO networks in most of our broadband communications markets.

B2B services. All of our operations also provide B2B services, including voice, broadband internet, data, video, wireless and cloud services.

Strategy and management focus

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

Competition and other external factors

We are experiencing significant competition from incumbent telecommunications operators, DTH operators and/or other providers in all of our broadband communications markets. This significant competition, together with macroeconomic factors, has adversely impacted our revenue, RGUs and/or average monthly subscription revenue per average cable RGU or mobile subscriber, as applicable (**ARPU**). For additional information regarding the revenue impact of changes in the RGUs and ARPU of our 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. On June 23, 2016, the United Kingdom (**U.K.**) held a referendum in which U.K. citizens voted in favor of, on an advisory basis, an exit from the E.U., commonly referred to as "**Brexit**." The terms of any withdrawal are subject to a negotiation period that could last at least two years after the British government formally initiates a withdrawal process pursuant to Article 50 of the Treaty on Europe. The British government has indicated that it plans to commence negotiations to determine the terms of the U.K.'s withdrawal from the E.U. by the end of March 2017. A withdrawal could, among other outcomes, disrupt the free movement of goods, services, people and capital between the U.K. and the E.U., undermine bilateral cooperation in key geographic areas and significantly disrupt trade between the U.K. and the E.U. or other nations as the U.K. pursues independent trade relations. The initial impact of the announcement of Brexit caused significant volatility in global capital markets.

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

- changes in foreign currency exchange rates and disruptions in the capital markets;
- legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws and directives to replace or replicate, or where previously implemented by enactment of U.K. laws or regulations, to retain, amend or repeal;
- uncertainty as to the terms of the U.K.'s withdrawal from, and future relationship with, the E.U. in terms of the impact on the free movement of our services, capital and employees;
- global economic uncertainty, which may cause our customers to reevaluate what they are willing to spend on our products and services; and
- various geopolitical forces may impact the global economy and our business, including, for example, other E.U. member states proposing referendums to, or electing to, exit the E.U.

In addition, high levels of sovereign debt in the U.S. and several countries in which we operate, combined with weak growth and high unemployment, could potentially lead to fiscal reforms (including austerity measures), tax increases, sovereign debt restructurings, currency instability, increased counterparty credit risk, high levels of volatility and disruptions in the credit and equity markets, as well as other outcomes that might adversely impact our company. The occurrence of any of these events, especially within the eurozone countries given our significant exposure to the euro, could have an adverse impact on, among other matters, our liquidity and cash flows.

Results of Operations

The comparability of our operating results during 2016, 2015 and 2014 is affected by acquisitions. In the following discussion, we quantify the estimated impact of acquisitions 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 months following the acquisition date such that changes from those operating results in subsequent periods are considered to be organic changes. Accordingly, in the following discussion, (i) variances attributed to an acquired entity during the first 12 months following the acquisition date represent differences between the estimated acquisition impact and the actual results and (ii) the calculation of our organic growth percentages includes the organic growth of an acquired entity relative to our estimate of the acquisition impact of such entity.

Changes in foreign currency exchange rates have a significant impact on our reported operating results as most of our operating segments have functional currencies other than the euro. Our primary exposure to FX risk during the three months ended December 31, 2016 was to the Swiss franc and other local currencies in Europe as 84.6% of our euro revenue during the three months ended December 31, 2016 was derived from subsidiaries whose functional currency is other than the euro. 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.

Discussion and Analysis of our Reportable Segments

General

Our reportable segments derive their revenue primarily from broadband communications services, including video, broadband internet and fixed-line telephony services. Each of our reportable segments also provides B2B and mobile services. For detailed information regarding the composition of our reportable segments, see note 15 to our consolidated financial statements.

The tables presented below in this section provide a separate analysis of each of the line items that comprise Segment OCF, as further discussed in note 15 to our consolidated financial statements as well as an analysis of Segment OCF by reportable segment for (i) 2016, as compared to 2015, and (ii) 2015, as compared to 2014. These tables present (a) the amounts reported by each of our reportable segments for the current and comparative periods, (b) the euro change and percentage change from period to period and (c) the organic percentage change from period to period (percentage change after removing FX and the estimated impact of acquisitions). The comparisons that exclude FX assume that exchange rates remained constant at the prior year rate during the comparative periods that are included in each table. We also provide a table showing the Segment OCF margins of our reportable segments for 2016, 2015 and 2014 at the end of this section.

The revenue of our reportable segments includes revenue earned from (i) subscribers to our broadband communications and other fixed-line and DTH services (collectively referred to herein as "**cable subscription revenue**") and our mobile services and (ii) B2B services, interconnect fees, mobile handset sales, channel carriage fees, installation fees, late fees and advertising revenue. Consistent with the presentation of our revenue categories in note 15 to our consolidated financial statements, we use the term "subscription revenue" in the following discussion to refer to amounts received from subscribers for ongoing services, excluding installation fees and late fees. In the following tables, mobile subscription revenue excludes the related interconnect revenue.

All of our revenue is derived from jurisdictions that administer VAT or similar revenue-based taxes. Any increases in these taxes could have an adverse impact on our ability to maintain or increase our revenue to the extent that we are unable to pass such tax increases on to our customers. In the case of revenue-based taxes for which we are the ultimate taxpayer, we will also experience increases in our operating expenses and corresponding declines in our Segment OCF and Segment OCF margins to the extent of any such tax increases.

We pay interconnection fees to other telephony providers when calls or text messages from our subscribers terminate on another network, and we receive similar fees from such providers when calls or text messages from their customers terminate on our networks or networks that we access through MVNO or other arrangements. The amounts we charge and incur with respect to fixed-line telephony and mobile interconnection fees are subject to regulatory oversight in many of our markets. To

the extent that regulatory authorities introduce fixed-line or mobile termination rate changes we would experience prospective changes in our interconnect revenue and/or costs. The ultimate impact of any such changes in termination rates on our Segment OCF would be dependent on the call or text messaging patterns that are subject to the changed termination rates.

Revenue of our Reportable Segments

Revenue — 2016 compared to 2015

	Year ended December 31,		Increase		Organic increase
	2016	2015	€	%	%
	in millions				
Switzerland/Austria	€ 1,586.4	€ 1,584.1	€ 2.3	0.1	1.7
Central and Eastern Europe	983.4	960.7	22.7	2.4	3.8
Total	€ 2,569.8	€ 2,544.8	€ 25.0	1.0	2.5

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

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

Switzerland/Austria. The increase in Switzerland/Austria's revenue during 2016, as compared to 2015, includes (i) an organic increase of €26.4 million or 1.7%, (ii) the impact of an acquisition and (iii) the impact of FX, as set forth below:

	Subscription revenue	Non-subscription revenue	Total
		in millions	
Increase (decrease) in cable subscription revenue due to change in:			
Average number of RGUs (a)	€ (5.8)	€ —	€ (5.8)
ARPU (b)	8.5	—	8.5
Total increase in cable subscription revenue	2.7	—	2.7
Increase in mobile subscription revenue (c)	15.1	—	15.1
Total increase in subscription revenue	17.8	—	17.8
Increase in B2B revenue	—	4.1	4.1
Increase in other revenue (d)	—	4.5	4.5
Total organic increase	17.8	8.6	26.4
Impact of an acquisition	—	1.5	1.5
Impact of FX	(21.6)	(4.0)	(25.6)
Total	€ (3.8)	€ 6.1	€ 2.3

(a) The decrease in cable subscription revenue related to a change in the average number of RGUs is primarily attributable to declines in the average numbers of basic video RGUs and, to a much lesser extent, enhanced video RGUs in Switzerland that were mostly offset by increases in the average numbers of fixed-line telephony and broadband internet RGUs.

(b) The increase in cable subscription revenue related to a change in ARPU is attributable to the net effect of (i) a net increase due to (a) higher ARPU from video and broadband internet services and (b) lower ARPU from fixed-line telephony services and (ii) a slight adverse change in RGU mix, as an adverse change in Austria was mostly offset by an improvement in Switzerland.

(c) The increase in mobile subscription revenue is due to the net effect of (i) an increase in the average number of mobile subscribers and (ii) lower ARPU primarily due to a decline of €1.4 million in mobile services revenue due to the September 2015 introduction of a Split-contract Program in Switzerland.

(d) The increase in other revenue is due to the net effect of (i) an increase of €6.8 million in mobile handset sales, which typically generate relatively low or no margins, including an increase of €1.5 million associated with the September 2015 introduction of a Split-contract Program in Switzerland, (ii) an increase in mobile interconnect revenue and (iii) a net decrease resulting from individually insignificant changes in other non-subscription revenue categories.

Central and Eastern Europe. The increase in Central and Eastern Europe's revenue during 2016, as compared to 2015, includes (i) an organic increase of €36.2 million or 3.8%, (ii) the impact of an acquisition and (iii) the impact of FX, as set forth below:

	Subscription revenue	Non-subscription revenue	Total
		in millions	
Increase (decrease) in cable subscription revenue due to change in:			
Average number of RGUs (a)	€ 44.3	€ —	€ 44.3
ARPU (b)	(20.2)	—	(20.2)
Total increase in cable subscription revenue	24.1	—	24.1
Increase in mobile subscription revenue	3.7	—	3.7
Total increase in subscription revenue	27.8	—	27.8
Increase in B2B revenue	—	3.9	3.9
Increase in other revenue	—	4.5	4.5
Total organic increase	27.8	8.4	36.2
Impact of an acquisition	2.8	0.2	3.0
Impact of FX	(15.4)	(1.1)	(16.5)
Total	€ 15.2	€ 7.5	€ 22.7

(a) The increase in cable subscription revenue related to a change in the average number of RGUs is primarily attributable to the net effect of (i) increases in the average numbers of fixed-line telephony, broadband internet and enhanced video RGUs in Romania, Hungary, Poland and Slovakia, (ii) a decline in the average number of basic video RGUs in Hungary, Poland, Romania and Slovakia, (iii) increases in the average numbers of basic video and broadband internet RGUs in the Czech Republic, (iv) an increase in the average number of DTH RGUs and (v) declines in the average numbers of fixed-line telephony and enhanced video RGUs in the Czech Republic.

(b) The decrease in cable subscription revenue related to a change in ARPU is attributable to (i) a net decrease due to (a) lower ARPU from fixed-line telephony and broadband internet services and (b) higher ARPU from video services, primarily in Poland, and (ii) an adverse change in RGU mix, as adverse changes in Romania and the Czech Republic were largely offset by an improvement in Hungary.

Revenue — 2015 compared to 2014

	Year ended December 31,		Increase		Organic increase
	2015	2014	€	%	%
	in millions				
Switzerland/Austria	€ 1,584.1	€ 1,390.0	€ 194.1	14.0	2.8
Central and Eastern Europe	960.7	947.8	12.9	1.4	1.3
Total	€ 2,544.8	€ 2,337.8	€ 207.0	8.9	2.2

Switzerland/Austria. The increase in Switzerland/Austria's revenue during 2015, as compared to 2014, includes (i) an organic increase of €39.4 million or 2.8%, (ii) the impact of an acquisition and (iii) the impact of FX, as set forth below:

	Subscription revenue	Non-subscription revenue	Total
		in millions	
Increase in cable subscription revenue due to change in:			
Average number of RGUs (a)	€ 5.6	€ —	€ 5.6
ARPU (b)	12.9	—	12.9
Total increase in cable subscription revenue	18.5	—	18.5
Increase in mobile subscription revenue (c)	7.7	—	7.7
Total increase in subscription revenue	26.2	—	26.2
Increase in B2B revenue (d)	—	7.0	7.0
Increase in other revenue (e)	—	6.2	6.2
Total organic increase	26.2	13.2	39.4
Impact of an acquisition	4.3	(0.3)	4.0
Impact of FX	127.0	23.7	150.7
Total	€ 157.5	€ 36.6	€ 194.1

(a) The increase in cable subscription revenue related to a change in the average number of RGUs is attributable to increases in the average numbers of broadband internet, fixed-line telephony and enhanced video RGUs that were primarily offset by a decline in the average number of basic video RGUs.

(b) The increase in cable subscription revenue related to a change in ARPU is due to an increase in both Switzerland and Austria. The increase in ARPU in Switzerland is attributable to (i) an improvement in RGU mix and (ii) a net increase due to (a) higher ARPU from video services and (b) lower ARPU from fixed-line telephony and broadband internet services. The increase in ARPU in Austria is attributable to the net effect of (1) a net increase due to (I) higher ARPU from video and broadband internet services and (II) lower ARPU from fixed-line telephony services and (2) an adverse change in RGU mix.

(c) The increase in mobile subscription revenue is primarily due to an increase in the average number of mobile subscribers in Switzerland. Switzerland's mobile services were launched during the second quarter of 2014.

(d) The increase in B2B revenue is primarily due to a net increase in Switzerland from (i) higher revenue from voice and data services and (ii) lower revenue from construction services and equipment sales.

(e) The increase in other revenue is due to the net effect of (i) an increase in mobile handset sales, which typically generate relatively low margins, (ii) a decrease in revenue from Austria's non-cable subscriber base and (iii) a net increase resulting from individually insignificant changes in other non-subscription revenue categories.

Central and Eastern Europe. The increase in Central and Eastern Europe's revenue during 2015, as compared to 2014, includes (i) an organic increase of €12.2 million or 1.3% and (ii) the impact of FX, as set forth below:

	Subscription revenue	Non-subscription revenue	Total
		in millions	
Increase (decrease) in cable subscription revenue due to change in:			
Average number of RGUs (a)	€ 28.4	€ —	€ 28.4
ARPU (b)	(21.6)	—	(21.6)
Total increase in cable subscription revenue	6.8	—	6.8
Increase in mobile subscription revenue	1.3	—	1.3
Total increase in subscription revenue	8.1	—	8.1
Increase in B2B revenue	—	3.2	3.2
Increase in other revenue	—	0.9	0.9
Total organic increase	8.1	4.1	12.2
Impact of FX	0.9	(0.2)	0.7
Total	€ 9.0	€ 3.9	€ 12.9

(a) The increase in cable subscription revenue related to a change in the average number of RGUs is attributable to the net effect of (i) increases in the average numbers of enhanced video, broadband internet and fixed-line telephony RGUs in Romania, Poland, Hungary and Slovakia, (ii) a decline in the average number of basic video RGUs in Poland, Hungary, Romania and Slovakia, (iii) an increase in the average number of DTH RGUs, (iv) declines in the average numbers of fixed-line telephony and enhanced video RGUs in the Czech Republic and (v) increases in the average numbers of basic video and broadband internet RGUs in the Czech Republic.

(b) The decrease in cable subscription revenue related to a change in ARPU is attributable to the net effect of (i) a net decrease due to (a) lower ARPU from fixed-line telephony services, (b) lower ARPU from broadband internet services, primarily in Poland, and (c) higher ARPU from video services, primarily in Poland and Romania, and (ii) an improvement in RGU mix. In addition, the decline in ARPU includes the impact of a January 1, 2015 change in how VAT is calculated for UPC DTH's operations in Hungary, the Czech Republic and Slovakia, which reduced UPC DTH's revenue by €12.3 million.

Programming and Other Direct Costs of Services of our Reportable Segments

Programming and other direct costs of services — 2016 compared to 2015

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

	Year ended December 31,		Increase		Organic increase
	2016	2015	€	%	%
	in millions				
Switzerland/Austria	€ 221.6	€ 213.5	€ 8.1	3.8	5.4
Central and Eastern Europe	230.1	211.0	19.1	9.1	10.5
Total	€ 451.7	€ 424.5	€ 27.2	6.4	8.0

Our programming and other direct costs of services increased €27.2 million or 6.4% during 2016, as compared to 2015. This increase includes €1.2 million attributable to the impact of acquisitions. Excluding the effects of the acquisitions and FX, our programming and other direct costs of services increased €33.9 million or 8.0%. This increase includes the following factors:

- An increase in mobile access and interconnect costs of €17.9 million or 24.0%, primarily due to (i) higher mobile usage in Switzerland/Austria and (ii) an increase of €3.5 million related to the settlement of an operational contingency during the third quarter of 2015;

- An increase in mobile handset costs of €6.6 million, primarily due to higher mobile handset sales volume, attributable to increases in the number of handsets sold in Switzerland/Austria; and

- An increase in programming and copyright costs of €6.2 million or 2.1%, primarily due to the net effect of (i) higher costs for certain premium and/or basic content, including costs of €3.6 million associated with a new Europe-wide programming contract that was entered into in June 2016 with retroactive impact to January 1, 2016, (ii) growth in the number of enhanced video subscribers, primarily in Hungary, Romania and Poland and (iii) an increase of €1.9 million resulting from adjustments related to the settlement or reassessment of operational contingencies that was recorded in Switzerland/Austria in the first quarter of 2015.

Programming and other direct costs of services — 2015 compared to 2014

	Year ended December 31,		Increase		Organic increase
	2015	2014	€	%	%
	in millions				
Switzerland/Austria	€ 213.5	€ 185.8	€ 27.7	14.9	3.9
Central and Eastern Europe	211.0	190.1	20.9	11.0	11.0
Total	€ 424.5	€ 375.9	€ 48.6	12.9	7.5

Our programming and other direct costs of services increased €48.6 million or 12.9% during 2015, as compared to 2014. This increase includes €1.0 million attributable to the impact of an acquisition. Excluding the effects of the acquisition and FX, our programming and other direct costs of services increased €28.3 million or 7.5%. This increase includes the following factors:

- An increase in programming and copyright costs of €20.6 million or 7.9%, predominately due to higher costs for certain premium content and growth in the numbers of enhanced video subscribers in Hungary, Poland and Romania. The increase in programming and copyright costs also includes a €5.9 million net adverse impact of certain nonrecurring adjustments related to the settlement or reassessment of operational contingencies. These nonrecurring adjustments include (i) a €1.9 million benefit in Switzerland/Austria that was recorded during the first quarter of 2015, (ii) a €5.3 million benefit in Poland that was recorded during the first quarter of 2014 and (iii) a €2.5 million benefit in Switzerland/Austria that was recorded during the third quarter of 2014;

- An increase in mobile handset costs of €3.9 million, due to increases in mobile handset sales to third-party retailers in Hungary and Switzerland/Austria; and

- An increase in mobile access and interconnect costs of €3.5 million or 6.1%, primarily due to the net effect of (i) increases in fixed-line telephony call volumes in Switzerland/Austria and Poland and (ii) a decrease of €3.1 million in Switzerland/Austria related to the settlement of an operational contingency during the third quarter of 2015.

Other Operating Expenses of our Reportable Segments

Other Operating Expenses — 2016 compared to 2015

General. 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 reportable segments as share-based compensation expense is not included in the performance measures of our reportable segments. Share-based compensation expense is discussed under *Discussion and Analysis of our Consolidated Operating Results* below. We are subject to inflationary pressures with respect to our labor and certain other costs and foreign currency exchange risk with respect to non-functional currency expenses. Any cost increases that we are not able to pass on to our subscribers through rate increases would result in increased pressure on our operating margins.

	Year ended December 31,		Increase (decrease)		Organic increase (decrease)
	2016	2015	€	%	%
	in millions				
Switzerland/Austria	€ 203.2	€ 227.7	€ (24.5)	(10.8)	(9.6)
Central and Eastern Europe	176.2	175.5	0.7	0.4	1.3
Other	0.1	0.1	—	N.M.	N.M.
Total other operating expenses excluding share-based compensation expense	379.5	403.3	(23.8)	(5.9)	(4.9)
Share-based compensation expense	—	0.1	(0.1)	N.M.	
Total	€ 379.5	€ 403.4	€ (23.9)	(5.9)	

N.M. — Not Meaningful.

Our other operating expenses (exclusive of share-based compensation expense) decreased €23.8 million or 5.9% during 2016, as compared to 2015. This decrease includes an increase of €1.0 million attributable to the impact of acquisitions. Excluding the effects of acquisitions and FX, our other operating expenses decreased €19.6 million or 4.9%. This decrease includes the following factors:

- A decrease in personnel costs of €17.1 million or 12.4%, primarily due to decreased staffing levels in Switzerland/Austria, Hungary, Poland and Romania. The decreases in Hungary, Poland and Romania are primarily attributable to the outsourcing of certain maintenance contracts;

- An increase in network-related expenses of €6.4 million or 4.2%, primarily due to (i) higher network maintenance costs, as increases in Hungary, Poland and Romania were only partially offset by decreases in Switzerland/Austria and (ii) higher duct and pole rental fees, primarily in Romania;

- A decrease in bad debt and collection expenses of €3.0 million or 13.1%, primarily related to declines in Hungary and Switzerland/Austria that were only partially offset by increases in Poland;

- A decrease in vehicle expense of €2.3 million or 36.8%, primarily related to lower costs for company vehicles in Switzerland/Austria, Hungary, Poland and Romania due largely to fewer vehicles and the impact of the conversion of certain operating leases to capital leases; and

- A decrease in outsourced labor and professional fees of €1.4 million or 4.6%, primarily due to the net effect of (i) a decrease in call center costs in Switzerland/Austria and (ii) higher consulting costs in Switzerland/Austria.

Other Operating Expenses — 2015 compared to 2014

	Year ended December 31,		Increase (decrease)		Organic decrease
	2015	2014	€	%	%
	in millions				
Switzerland/Austria	€ 227.7	€ 220.6	€ 7.1	3.2	(6.1)
Central and Eastern Europe	175.5	186.0	(10.5)	(5.6)	(5.7)
Other	0.1	—	0.1	N.M.	N.M.
Total other operating expenses excluding share-based compensation expense	403.3	406.6	(3.3)	(0.8)	(5.9)
Share-based compensation expense	0.1	—	0.1	N.M.	
Total	€ 403.4	€ 406.6	€ (3.2)	(0.8)	

N.M. — Not Meaningful.

Our other operating expenses (exclusive of share-based compensation expense) decreased €3.3 million or 0.8% during 2015, as compared to 2014. Excluding the effects of FX, our other operating expenses decreased €23.9 million or 5.9%. This decrease includes the following factors:

- A decrease in personnel costs of €10.7 million or 7.7%, largely due to decreased staffing levels in Switzerland/Austria associated with the integration of our businesses in Switzerland/Austria;

- A decrease in network-related expenses of €5.5 million or 3.5%, largely due to decreased maintenance costs in Switzerland/Austria; and

- A decrease in bad debt and collection expense of €3.7 million or 15.2%, primarily due to the net effect of (i) decreases in Poland and Switzerland/Austria and (ii) increases in Romania and the Czech Republic.

SG&A Expenses of our Reportable Segments

SG&A expenses — 2016 compared to 2015

General. 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 reportable segments as share-based compensation expense is not included in the performance measures of our reportable segments. Share-based compensation expense is discussed under *Discussion and Analysis of Our Consolidated Operating Results* below. As noted under *Operating Expenses of our Reportable Segments* above, we are subject to inflationary pressures with respect to our labor and certain other costs and foreign currency exchange risk with respect to non-functional currency expenses.

	Year ended December 31,		Increase (decrease)		Organic increase (decrease)
	2016	2015	€	%	%
	in millions				
Switzerland/Austria	€ 194.9	€ 205.7	€ (10.8)	(5.3)	(4.2)
Central and Eastern Europe	150.6	147.1	3.5	2.4	3.8
Other	1.6	1.4	0.2	14.3	14.3
Total SG&A expenses excluding share-based compensation expense	347.1	354.2	(7.1)	(2.0)	(0.8)
Share-based compensation expense	17.0	12.0	5.0	41.7	
Total	€ 364.1	€ 366.2	€ (2.1)	(0.6)	

Our SG&A expenses (exclusive of share-based compensation expense) decreased €7.1 million or 2.0% during 2016, as compared to 2015. This decrease includes €0.5 million attributable to the impact of acquisitions. Excluding the effects of acquisitions and FX, SG&A expenses decreased €2.7 million or 0.8%. This decrease includes the following factors:

- An increase in personnel costs of €6.8 million or 4.1%, primarily due to increased staffing levels in Switzerland/Austria, Poland, Romania and Hungary;
- A decrease in external sales and marketing costs of €5.1 million or 5.0%, primarily due to lower costs associated with advertising campaigns in Switzerland/Austria; and
- A net decrease resulting from individually insignificant changes in other SG&A expense categories.

SG&A expenses — 2015 compared to 2014

	Year ended December 31,		Increase		Organic increase (decrease)
	2015	2014	€	%	%
	in millions				
Switzerland/Austria	€ 205.7	€ 188.8	€ 16.9	9.0	(1.1)
Central and Eastern Europe	147.1	133.3	13.8	10.4	10.3
Other	1.4	0.9	0.5	55.6	55.6
Total SG&A expenses excluding share-based compensation expense	354.2	323.0	31.2	9.7	3.7
Share-based compensation expense	12.0	5.4	6.6	122.2	
Total	€ 366.2	€ 328.4	€ 37.8	11.5	

Our SG&A expenses (exclusive of share-based compensation expense) increased €31.2 million or 9.7% during 2015, as compared to 2014. This increase includes €0.1 million attributable to the impact of an acquisition. Excluding the effects of the acquisition and FX, SG&A expenses increased €12.1 million or 3.7%. This increase includes the following factors:

- An increase in personnel costs of €4.5 million or 3.0%, primarily due to increased staffing levels in Switzerland/Austria and Poland;

- A decrease in outsourced labor and professional fees of €1.6 million or 7.5%, primarily due to lower consulting costs related to integration activities in Switzerland/Austria;

- An increase in information technology-related expenses of €1.2 million or 17.5%, primarily due to higher software and other information technology-related maintenance costs in Switzerland/Austria;

- An increase in external sales and marketing costs of €0.7 million or 0.8%, largely due to higher costs associated with advertising campaigns, primarily related to the net impact of increases in Hungary, Romania and the Czech Republic that were only partially offset by a decrease in Switzerland/Austria; and

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

Segment OCF of our Reportable Segments

Segment OCF is the primary measure used by our chief operating decision maker to evaluate segment operating performance. For the definition of this performance measure and for a reconciliation of total Segment OCF to our loss before income taxes, see note 15 to our consolidated financial statements.

Segment OCF — 2016 compared to 2015

	Year ended December 31,		Increase (decrease)		Organic increase (decrease)
	2016	2015	€	%	%
	in millions				
Switzerland/Austria	€ 966.7	€ 937.2	€ 29.5	3.1	4.8
Central and Eastern Europe	426.5	427.1	(0.6)	(0.1)	1.4
Other	(1.7)	(1.5)	(0.2)	(13.3)	(13.3)
Total	€ 1,391.5	€ 1,362.8	€ 28.7	2.1	3.7

Segment OCF — 2015 compared to 2014

	Year ended December 31,		Increase (decrease)		Organic increase (decrease)
	2015	2014	€	%	%
	in millions				
Switzerland/Austria	€ 937.2	€ 794.8	€ 142.4	17.9	6.0
Central and Eastern Europe	427.1	438.4	(11.3)	(2.6)	(2.7)
Other	(1.5)	(0.9)	(0.6)	(66.7)	(66.7)
Total	€ 1,362.8	€ 1,232.3	€ 130.5	10.6	2.8

Segment OCF Margin — 2016, 2015 and 2014

The following table sets forth the Segment OCF margins (Segment OCF divided by revenue) of each of our reportable segments:

	Year ended December 31,		
	2016	2015	2014
	%		
Switzerland/Austria	60.9	59.2	57.2
Central and Eastern Europe	43.3	44.4	46.3
Total, including other	54.1	53.6	52.7

For discussion of the factors contributing to the changes in the Segment OCF margins of our reportable segments, see the above analyses of the revenue, operating expenses and SG&A expenses of our reportable segments.

Discussion and Analysis of our Consolidated Operating Results

General

For more detailed explanations of the changes in our revenue, operating expenses and SG&A expenses, including the impacts of nonrecurring items, see the *Discussion and Analysis of our Reportable Segments* above.

2016 compared to 2015

Revenue

Our revenue by major category is set forth below:

	Year ended December 31,		Increase (decrease)		Organic increase (decrease)
	2016	2015	€	%	%
	in millions				
Subscription revenue (a):					
Video	€ 1,202.1	€ 1,200.7	€ 1.4	0.1	1.8
Broadband internet	752.3	742.2	10.1	1.4	2.7
Fixed-line telephony	220.2	238.6	(18.4)	(7.7)	(6.0)
Cable subscription revenue	2,174.6	2,181.5	(6.9)	(0.3)	1.2
Mobile (b)	30.7	12.4	18.3	147.6	151.9
Total subscription revenue	2,205.3	2,193.9	11.4	0.5	2.1
B2B revenue (c)	225.0	218.6	6.4	2.9	3.6
Other revenue (b) (d)	139.5	132.3	7.2	5.4	6.8
Total revenue	€ 2,569.8	€ 2,544.8	€ 25.0	1.0	2.5

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

(b) Mobile subscription revenue excludes mobile interconnect revenue of €5.0 million and €1.7 million during 2016 and 2015, respectively. Mobile interconnect revenue and revenue from mobile handset sales are included in other revenue.

(c) B2B revenue includes revenue from business broadband internet, video, voice, mobile and data services offered to medium to large enterprises and, on a wholesale basis, to other operators. We also provide services to certain SOHO subscribers. SOHO subscribers pay a premium price to receive expanded service levels along with video, broadband internet, fixed-line telephony or mobile services that are the same or similar to the mass marketed products offered to our residential subscribers. Revenue from SOHO subscribers, which is included in subscription revenue, aggregated €58.0 million and €49.5 million during 2016 and 2015, respectively. On an organic basis, our total B2B revenue, including revenue from SOHO subscribers, increased 6.3% during 2016 as compared to 2015. A portion of the increase in our SOHO revenue is attributable to the conversion of our residential subscribers to SOHO subscribers.

(d) Other revenue includes, among other items, installation, channel carriage fee, late fee, mobile handset sales and interconnect revenue.

Total revenue. Our consolidated revenue increased €25.0 million during 2016, as compared to 2015. This increase includes €4.5 million attributable to the impact of acquisitions. Excluding the effects of acquisitions and FX, our consolidated revenue increased €62.6 million or 2.5%.

Subscription revenue. The details of the change in our consolidated subscription revenue for 2016, as compared to 2015, is as follows (in millions):

Increase (decrease) in cable subscription revenue due to change in:		
Average number of RGUs	€	72.3
ARPU		(45.5)
Total increase in cable subscription revenue		26.8
Increase in mobile subscription revenue		18.8
Total increase in subscription revenue		45.6
Impact of acquisitions		2.8
Impact of FX		(37.0)
Total	€	11.4

Excluding the effects of acquisitions and FX, our consolidated cable subscription revenue increased €26.8 million or 1.2% during 2016, as compared to 2015. This increase in subscription revenue is attributable to the net effect of (i) an increase in subscription revenue from video services of €21.1 million or 1.8%, attributable to the net effect of (a) higher ARPU from video services and (b) a decline in the average number of video RGUs, (ii) an increase in subscription revenue from broadband internet services of €20.0 million or 2.7%, attributable to the net effect of (1) an increase in the average number of broadband internet RGUs and (2) lower ARPU from broadband internet services and (iii) a decrease in subscription revenue from fixed-line telephony services of €14.3 million or 6.0%, attributable to the net effect of (I) lower ARPU from fixed-line telephony services and (II) an increase in the average number of fixed-line telephony RGUs.

Excluding the effects of acquisitions and FX, our consolidated mobile subscription revenue increased €18.8 million or 151.9% during 2016, as compared to 2015. This increase is primarily due to increases in Switzerland and Hungary.

B2B revenue. Excluding the effects of acquisitions and FX, our consolidated B2B revenue increased €8.0 million or 3.6% during 2016, as compared to 2015. This increase is primarily due to increases in Switzerland, Czech Republic and Romania.

Other revenue. Excluding the effects of acquisitions and FX, our consolidated other revenue increased €9.0 million or 6.8% during 2016, as compared to 2015. This increase is primarily attributable to an increase in mobile handset sales, including an increase associated with the continued growth of the Split-contract Program in Switzerland.

For additional information concerning the changes in our subscription, B2B and other revenue, see *Discussion and Analysis of our Reportable Segments — Revenue — 2016 compared to 2015* above. For information regarding the competitive environment in certain of our markets, see *Overview* above.

Programming and other direct costs of services

Our programming and other direct costs of services increased €27.2 million during 2016, as compared to 2015. This increase includes €1.2 million attributable to the impact of acquisitions. Excluding the effects of acquisitions and FX, our programming and other direct costs of services increased €33.9 million or 8.0% during 2016, as compared to 2015. For additional information regarding the changes in our programming and other direct costs of services, see *Discussion and Analysis of our Reportable Segments — Programming and Other Direct Costs of Services of our Reportable Segments — 2016 compared to 2015* above.

Other operating expenses

Our other operating expenses decreased €23.9 million during 2016, as compared to 2015. This decrease includes €1.0 million attributable to the impact of acquisitions. Our other operating expenses include share-based compensation expense, which was insignificant during 2016 and 2015. Excluding the effects of acquisitions, FX and share-based compensation expense, our other operating expenses decreased €19.6 million or 4.9% during 2016, as compared to 2015. For additional information regarding the changes in our other operating expenses, see *Discussion and Analysis of our Reportable Segments — Other Operating Expenses of our Reportable Segments — 2016 compared to 2015* above.

SG&A expenses

Our SG&A expenses decreased €2.1 million during 2016, as compared to 2015. This decrease includes €0.5 million attributable to the impact of acquisitions. Our SG&A expenses include share-based compensation expense, which increased €5.0 million during 2016. For additional information, see the discussion in the following paragraph. Excluding the effects of acquisitions, FX and share-based compensation expense, our SG&A expenses decreased €2.7 million or 0.8% during 2016, as compared to 2015. For additional information regarding the changes in our SG&A expenses, see *Discussion and Analysis of our Reportable Segments — SG&A Expenses of our Reportable Segments — 2016 compared to 2015* above.

Share-based compensation expense (included in other operating and SG&A expenses)

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

	Year ended December 31,	
	2016	2015
	in millions	
Performance-based incentive awards	€ 7.6	€ 4.8
Other share-based incentive awards	9.4	7.3
Total	€ 17.0	€ 12.1
Included in:		
Other operating expense	€ —	€ 0.1
SG&A expense	17.0	12.0
Total	€ 17.0	€ 12.1

Related-party fees and allocations, net

We recorded related-party fees and allocations, net, of €341.0 million during 2016, as compared to €293.1 million during 2015. These amounts represent fees charged to UPC Holding that originate with Liberty Global and certain other Liberty Global subsidiaries, and include charges for management, finance, legal, technology and other corporate and administrative services provided to our subsidiaries. For additional information, see note 11 to our consolidated financial statements.

Depreciation and amortization expense

Our depreciation and amortization expense decreased €23.7 million during 2016, as compared to 2015. Excluding the effects of FX, depreciation and amortization expense decreased €14.0 million or 2.6%. This decrease is primarily due to the net effect of (i) a decrease associated with certain assets becoming fully depreciated, primarily in Switzerland/Austria and (ii) an increase associated with property and equipment additions related to the installation of customer premises equipment, the expansion and upgrade of our networks and other capital initiatives.

Impairment, restructuring and other operating items, net

Our impairment, restructuring and other operating items, net, was a charge of €5.3 million and €5.0 million during 2016 and 2015, respectively. The 2016 amount is primarily related to restructuring charges in Hungary, the Czech Republic and Slovakia. The 2015 amount is primarily related to restructuring charges associated with reorganization and integration activities in Switzerland/Austria.

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

For additional information, see *Critical Accounting Policies, Judgments and Estimates — Impairment of Property and Equipment and Intangible Assets*, below.

Interest expense – third-party

Our third-party interest expense decreased €31.3 million during 2016, as compared to 2015. This decrease is primarily attributable to (i) a lower average outstanding debt balance and (ii) a lower weighted average interest rate mainly related the refinancing transactions completed during the first quarter of 2015. For additional information regarding our outstanding indebtedness, see note 8 to our consolidated financial statements.

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

Interest expense – related-party

Our related-party interest expense primarily relates to the interest expense on the Shareholder Loan. Our related-party interest expense decreased €35.4 million during 2016, as compared to 2015. This decrease is primarily due to a decrease in the average outstanding balance of the Shareholder Loan, mainly related to the refinancing transactions completed during the first quarter of 2015. For additional information, see note 11 to our consolidated financial statements.

Realized and unrealized gains (losses) on derivative instruments, net

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

	Year ended December 31,	
	2016	2015
	in millions	
Cross-currency and interest rate derivative contracts (a)	€ (22.7)	€ (41.3)
Foreign currency forward contracts	(5.3)	(1.8)
Other	(0.9)	0.8
Total	€ (28.9)	€ (42.3)

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(a) The loss during 2016 is primarily attributable to the net effect of (i) gains associated with increases in the market interest rates in the Swiss franc and Polish zloty markets, (ii) gains associated with an increase in the value of the U.S. dollar relative to the euro, (iii) losses associated with an increase in the market interest rates in the U.S. dollar market, (iv) gains associated with a decrease in the value of the Polish zloty relative to the euro and (v) losses associated with an increase in the value of the Swiss franc relative to the euro. In addition, the loss during 2016 includes a net loss of €18.5 million resulting from changes in our credit risk valuation adjustments. The loss during 2015 is primarily attributable to the net effect of (a) losses associated with an increase in the value of the Swiss franc relative to the euro, (b) gains associated with increases in the value of the U.S. dollar and Hungarian forint relative to the euro, (c) losses associated with decreases in market interest rates in the Swiss franc market and (d) gains associated with decreases in the market interest rates in the U.S. dollar market. In addition, the loss during 2015 includes a net gain of €26.6 million resulting from changes in our credit risk valuation adjustments.

For additional information regarding our derivative instruments, see notes 5 and 6 to our consolidated financial statements.

Foreign currency transaction losses, net

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

	Year ended December 31,	
	2016	2015
	in millions	
U.S. dollar denominated debt issued by euro functional currency entities	€ (80.9)	€ (164.9)
Intercompany payables and receivables denominated in a currency other than the entity's functional currency (a)	(40.1)	(74.4)
Cash and restricted cash denominated in a currency other than the entity's functional currency	7.1	30.0
Other	(3.9)	(6.7)
Total	€ (117.8)	€ (216.0)

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

Losses on debt modification and extinguishment, net

We recognized a loss on debt modification and extinguishment, net, of €70.3 million during 2016. The loss during 2016 is attributable to (i) the payment of €52.3 million of redemption premium, (ii) the write-off of €14.8 million of deferred financing costs and (iii) the write-off of €3.2 million of unamortized discount.

We recognized a loss on debt modification and extinguishment, net, of €183.9 million during 2015. The loss during 2015 is attributable to (i) the payment of €149.2 million of redemption premium, (ii) the write-off of €30.5 million of deferred financing costs and (iii) the write-off of €4.2 million of unamortized discount.

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

Income tax expense

We recognized income tax expense of €57.3 million and €85.5 million during 2016 and 2015, respectively.

The income tax expense during 2016 and 2015 differs from the expected income tax benefit of €155.5 million and €228.8 million, respectively, (based on the Dutch 25.0% income tax rate) primarily due to the negative impact of (i) a net increase in valuation allowances and (ii) certain permanent differences between the financial and tax accounting treatment of interest and other items.

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

Net loss

During 2016 and 2015, we reported net losses of €679.3 million and €1,000.8 million, respectively, including (i) operating income of €479.8 million and €480.5 million, respectively, (ii) net non-operating expense of €1,101.8 million and €1,395.8 million, respectively, and (iii) income tax expense of €57.3 million and €85.5 million, respectively.

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

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

Net earnings attributable to noncontrolling interests

Net earnings attributable to noncontrolling interests increased €1.0 million during 2016, as compared to 2015. This increase is primarily attributable to the results of operations of Austria.

2015 compared to 2014

Revenue

Our revenue by major category is set forth below:

	Year ended December 31,		Increase		Organic increase (decrease)
	2015	2014	€	%	%
		in millions			
Subscription revenue (a):					
Video	€ 1,200.7	€ 1,123.3	€ 77.4	6.9	0.5
Broadband internet	742.2	666.4	75.8	11.4	5.0
Fixed-line telephony	238.6	235.9	2.7	1.1	(5.9)
Cable subscription revenue	2,181.5	2,025.6	155.9	7.7	1.2
Mobile (b)	12.4	1.8	10.6	588.9	502.6
Total subscription revenue	2,193.9	2,027.4	166.5	8.2	1.7
B2B revenue (c)	218.6	193.4	25.2	13.0	5.3
Other revenue (b) (d)	132.3	117.0	15.3	13.1	5.9
Total revenue	€ 2,544.8	€ 2,337.8	€ 207.0	8.9	2.2

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

(b) Mobile subscription revenue excludes mobile interconnect revenue of €1.7 million and €0.1 million during 2015 and 2014, respectively. Mobile interconnect revenue and revenue from mobile handset sales are included in other revenue.

(c) B2B revenue includes revenue from business broadband internet, video, voice, mobile and data services offered to medium to large enterprises and, on a wholesale basis, to other operators. We also provide services to certain SOHO subscribers. SOHO subscribers pay a premium price to receive expanded service levels along with video, broadband internet, fixed-line telephony or mobile services that are the same or similar to the mass marketed products offered to our residential subscribers. Revenue from SOHO subscribers, which is included in cable subscription revenue, aggregated €49.5 million and €40.6 million during 2015 and 2014, respectively. On an organic basis, our total B2B revenue, including revenue from SOHO subscribers, increased 7.6% during 2015 as compared to 2014.

(d) Other revenue includes, among other items, installation, channel carriage fee, late fee, mobile handset sales and interconnect revenue.

Total revenue. Our consolidated revenue increased €207.0 million during 2015, as compared to 2014. This increase includes €4.0 million attributable to the impact of an acquisition. Excluding the effects of the acquisition and FX, our consolidated revenue increased €51.6 million or 2.2%.

Subscription revenue. The details of the change in our consolidated subscription revenue for 2015, as compared to 2014, is as follows (in millions):

Increase (decrease) in cable subscription revenue due to change in:		
Average number of RGUs	€	34.0
ARPU		(8.7)
Total increase in cable subscription revenue		25.3
Increase in mobile subscription revenue		9.0
Total increase in subscription revenue		34.3
Impact of an acquisition		4.3
Impact of FX		127.9
Total	€	166.5

Excluding the effects of an acquisition and FX, our consolidated cable subscription revenue increased €25.3 million or 1.2% during 2015, as compared to 2014. This increase in subscription revenue is attributable to the net effect of (i) an increase in subscription revenue from broadband internet services of €33.2 million or 5.0%, attributable to the net effect of (a) an increase in the average number of broadband internet RGUs and (b) lower ARPU from broadband internet services, (ii) a decrease in subscription revenue from fixed-line telephony services of €13.8 million or 5.9%, attributable to the net effect of (1) lower ARPU from fixed-line telephony services and (2) an increase in the average number of fixed-line telephony RGUs and (iii) an increase in subscription revenue from video services of of €5.9 million or 0.5%, attributable to the net effect of (I) higher ARPU from video services and (II) a decrease in the average number of video RGUs.

Excluding the effects of an acquisition and FX, our consolidated mobile subscription revenue increased €9.0 million or 502.6% during 2015, as compared to 2014. This increase is primarily due to increases in Switzerland and Hungary.

B2B revenue. Excluding the effects of an acquisition and FX, our consolidated B2B revenue increased €10.2 million or 5.3% during 2015, as compared to 2014. This increase is primarily due to the net effect of (i) increases in Switzerland and Poland and (ii) a decrease in Hungary.

Other revenue. Excluding the effects of an acquisition and FX, our consolidated other revenue increased €7.1 million or 5.9% during 2015, as compared to 2014. This increase is primarily attributable to the net effect of (i) an increase in mobile handset sales, primarily in Hungary and Switzerland, (ii) a decrease in revenue from Austria's non-cable subscriber base, (iii) a decrease in installation revenue and (iv) a decrease in fixed-line interconnect revenue.

For additional information concerning the changes in our subscription, B2B and other revenue, see *Discussion and Analysis of our Reportable Segments — Revenue — 2015 compared to 2014* above.

Programming and other direct costs of services

Our programming and other direct costs of services increased €48.6 million during 2015, as compared to 2014. This increase is net of a €1.0 million attributable to the impact of an acquisition. Excluding the effects of acquisitions and FX, our programming and other direct costs of services increased €28.3 million or 7.5% during 2015, as compared to 2014. For additional information regarding the changes in our programming and other direct costs of services, see *Discussion and Analysis of our Reportable Segments — Programming and Other Direct Costs of Services of our Reportable Segments — 2015 compared to 2014* above.

Other operating expenses

Our other operating expenses decreased €3.2 million during 2015, as compared to 2014. Our other operating expenses include share-based compensation expense, which was insignificant during 2015 and 2014. Excluding the effects of FX and share-based compensation expense, our other operating expenses decreased €23.9 million or 5.9% during 2015, as compared to 2014. For additional information regarding the changes in our other operating expenses, see *Discussion and Analysis of our Reportable Segments — Other Operating Expenses of our Reportable Segments — 2015 compared to 2014* above.

SG&A expenses

Our SG&A expenses increased €37.8 million during 2015, as compared to 2014. This increase includes €0.1 million attributable to the impact of an acquisition. Our SG&A expenses include share-based compensation expense, which increased €6.6 million during 2015. For additional information, see the discussion in the following paragraph. Excluding the effects of the acquisition, FX and share-based compensation expense, our SG&A expenses increased €12.1 million or 3.7% during 2015, as compared to 2014. For additional information regarding the changes in our SG&A expenses, see *Discussion and Analysis of our Reportable Segments — SG&A Expenses of our Reportable Segments — 2015 compared to 2014* above.

Share-based compensation expense (included in other operating and SG&A expenses)

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

	Year ended December 31,	
	2015	**2014**
	in millions	
Liberty Global shares:		
Performance-based incentive awards	€ 4.8	€ 2.7
Other share-based incentive awards	7.3	2.6
Total Liberty Global shares	12.1	5.3
Other	—	0.1
Total	€ 12.1	€ 5.4
Included in:		
Other operating expense	€ 0.1	€ —
SG&A expense	12.0	5.4
Total	€ 12.1	€ 5.4

Related-party fees and allocations, net

We recorded related-party fees and allocations, net, of €293.1 million during 2015, as compared to €213.2 million during 2014. These amounts represent fees charged to UPC Holding that originate with Liberty Global and certain other Liberty Global subsidiaries, and include charges for management, finance, legal, technology and other corporate and administrative services provided to our subsidiaries. For additional information, see note 11 to our consolidated financial statements.

Depreciation and amortization expense

Our depreciation and amortization expense increased €47.2 million during 2015, as compared to 2014. Excluding the effects of FX, depreciation and amortization expense increased €13.4 million or 2.6%. This increase is primarily due to the net effect of (i) an increase associated with property and equipment additions related to the installation of customer premises equipment, the expansion and upgrade of our networks and other capital initiatives, (ii) a decrease associated with certain assets becoming fully depreciated, primarily in Switzerland/Austria, Poland, Slovakia and the Czech Republic and (iii) a decrease associated with fully amortized customer relationships, primarily in Switzerland/Austria.

Impairment, restructuring and other operating items, net

Our impairment, restructuring and other operating items, net, was a charge (credit) of €5.0 million and (€3.3 million) during 2015 and 2014, respectively. The 2015 amount is primarily related to restructuring charges associated with reorganization and integration activities in Switzerland/Austria.

If, among other factors, (i) our enterprise value or Liberty Global's equity values were to decline significantly or (ii) the adverse impacts of economic, competitive, regulatory or other factors were to cause our results of operations or cash flows to be worse than anticipated, we could conclude in future periods that impairment charges are required in order to reduce the carrying values of our goodwill, and to a lesser extent, other long-lived assets. Any such impairment charges could be significant. For additional information, see *Critical Accounting Policies, Judgments and Estimates — Impairment of Property and Equipment and Intangible Assets*, below.

Interest expense – third-party

Our third-party interest expense decreased €140.4 million during 2015, as compared to 2014. This decrease is primarily attributable to lower average outstanding debt balances, mainly related to the refinancing transactions completed during the first quarter of 2015. For additional information regarding our outstanding indebtedness, see note 8 to our consolidated financial statements.

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

Interest expense – related-party

Our related-party interest expense primarily relates to the interest expense on the Shareholder Loan and, during 2014, interest expense on certain other related-party loans that were settled during the first quarter of 2015. Our related-party interest expense decreased €460.1 million during 2015, as compared to 2014. This decrease is primarily due to a decrease in the average outstanding balance of the Shareholder Loan, mainly related to the refinancing transactions completed during the first quarter of 2015. For additional information, see note 11 to our consolidated financial statements.

Realized and unrealized gains (losses) on derivative instruments, net

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

	Year ended December 31,	
	2015	2014
	in millions	
Cross-currency and interest rate derivative contracts (a)	€ (41.3)	€ 92.6
Foreign currency forward contracts	(1.8)	10.5
Other	0.8	—
Total	€ (42.3)	€ 103.1

(a) The loss during 2015 is primarily attributable to the net effect of (i) losses associated with an increase in the value of the Swiss franc relative to the euro, (ii) gains associated with increases in the value of the U.S. dollar and Hungarian forint relative to the euro, (iii) losses associated with decreases in market interest rates in the Swiss franc market and (iv) gains associated with decreases in the market interest rates in the U.S. dollar market. In addition, the loss during 2015 includes a net gain of €26.6 million resulting from changes in our credit risk valuation adjustments. The gain during 2014 is primarily attributable to the net effect of (a) gains associated with increases in market interest rates in the Swiss franc and euro markets, (b) losses associated with increases in market interest rates in the U.S. dollar market, (c) gains associated with decreases in the values of the Chilean Peso, Czech koruna, Swiss franc, Polish zloty and Hungarian forint relative to the euro and (d) losses associated with increases in the values of the euro and Swiss franc relative to the U.S. dollar. In addition, the gain during 2014 includes a net loss of €47.7 million resulting from changes in our credit risk valuation adjustments.

For additional information regarding our derivative instruments, see notes 5 and 6 to our consolidated financial statements.

Foreign currency transaction losses, net

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

	Year ended December 31,	
	2015	2014
	in millions	
U.S. dollar denominated debt issued by euro functional currency entities	€ (164.9)	€ (137.8)
Intercompany payables and receivables denominated in a currency other than the entity's functional currency (a)	(74.4)	(300.7)
Cash and restricted cash denominated in a currency other than the entity's functional currency	30.0	4.4
Other	(6.7)	(3.0)
Total	€ (216.0)	€ (437.1)

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

Losses on debt modification and extinguishment, net

We recognized a loss on debt modification and extinguishment, net, of €183.9 million during 2015. The loss during 2015 is attributable to (i) the payment of €149.2 million of redemption premium, (ii) the write-off of €30.5 million of deferred financing costs and (iii) the write-off of €4.2 million of unamortized discount.

We recognized a loss on debt modification and extinguishment, net, of €42.0 million during 2014. The loss during 2014 is attributable to (i) the write-off of €16.0 million of unamortized discount, (ii) the payment of €14.3 million of redemption premium and (iii) the write-off of €11.7 million of deferred financing costs.

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

Income tax expense

We recognized income tax expense of €85.5 million and €89.9 million during 2015 and 2014, respectively.

The income tax expense during 2015 and 2014 differs from the expected income tax benefit of €228.8 million and €317.3 million, respectively, (based on the Dutch 25.0% income tax rate) primarily due to the negative impact of (i) a net increase in valuation allowances and (ii) certain permanent differences between the financial and tax accounting treatment of interest and other items.

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

Net loss

During 2015 and 2014, we reported net losses of €1,000.8 million and €1,359.0 million, respectively, including (i) operating income of €480.5 million and €492.1 million, respectively, (ii) net non-operating expense of €1,395.8 million and €1,761.2 million, respectively, and (iii) income tax expense of €85.5 million and €89.9 million, respectively.

Net earnings attributable to noncontrolling interests

Net earnings attributable to noncontrolling interests increased €2.5 million during 2015, as compared to 2014. This increase is primarily attributable to the results of operations of UMI, which we began consolidating on January 1, 2015.

Liquidity and Capital Resources

Sources and Uses of Cash

As a holding company, UPC Holding's primary assets are its investments in consolidated subsidiaries. UPC Holding's primary subsidiary is UPC Broadband Holding, which owns all of the operating subsidiaries that are consolidated by UPC Holding. Although our consolidated operating subsidiaries generate cash from operating activities, the terms of the instruments governing the indebtedness of UPC Broadband Holding may restrict our ability to access the liquidity of these subsidiaries. These subsidiaries accounted for substantially all of our €26.8 million of consolidated cash and cash equivalents at December 31, 2016. 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.

Liquidity of UPC Holding

As UPC Holding typically does not hold significant amounts of cash and cash equivalents at the parent level, UPC Holding's primary source of liquidity is proceeds received from UPC Broadband Holding (and indirectly from UPC Broadband Holding's subsidiaries) in the form of loans or distributions. As noted above, various factors may limit the ability of UPC Holding's direct and indirect subsidiaries to loan or distribute cash to UPC Holding. From time to time, UPC Holding may also supplement its sources of liquidity with net proceeds received in connection with the issuance of debt instruments and/or loans or contributions from LGE Financing (and ultimately Liberty Global and other Liberty Global subsidiaries). No assurance can be given that any external funding would be available on favorable terms, or at all.

UPC Holding's corporate liquidity requirements include (i) corporate general and administrative expenses and (ii) interest payments on the UPC Holding Senior Notes. From time to time, UPC Holding may also require cash in connection with (a) the repayment of third-party and related-party debt (including the repurchase or exchange of outstanding debt securities in the open market or privately-negotiated transactions and net repayments to LGE Financing pursuant to the Shareholder Loan, as described in note 11 to our consolidated financial statements), (b) the funding of loans or distributions to LGE Financing (and ultimately

Liberty Global and other Liberty Global subsidiaries), (c) the satisfaction of contingent liabilities, (d) acquisitions, (e) other investment opportunities or (f) income tax payments.

Liquidity of Subsidiaries

In addition to cash and cash equivalents, the primary sources of liquidity of our subsidiaries are cash provided by operations and, in the case of UPC Broadband Holding, borrowing availability under the UPC Broadband Holding Bank Facility. For the details of the borrowing availability under the UPC Broadband Holding Bank Facility at December 31, 2016, see note 8 to our consolidated financial statements. Our subsidiaries' liquidity generally is used to fund property and equipment additions, debt service requirements and payments required by UPC Holding's derivative instruments. From time to time, our subsidiaries may also require liquidity in connection with (i) acquisitions and other investment opportunities, (ii) loans to UPC Holding or other Liberty Global subsidiaries, (iii) capital distributions to UPC Holding or (iv) the satisfaction of contingencies. No assurance can be given that any external funding would be available to our subsidiaries on favorable terms, or at all.

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

Capitalization

At December 31, 2016, the outstanding principal amount of our consolidated third-party debt, together with our capital lease obligations, aggregated €6,464.0 million, including €740.8 million that is classified as current in our consolidated balance sheet and €5,711.6 million that is not due until 2021 or thereafter. For additional information regarding our current debt maturities, see note 8 to our consolidated financial statements.

When it is cost effective, we generally seek to match the denomination of the borrowings of our subsidiaries with the functional currency of the operations that are supporting the respective borrowings. As further discussed in note 5 to our consolidated financial statements, we also use derivative instruments to mitigate foreign currency and interest rate risk associated with our debt instruments.

Our ability to service or refinance our debt and to maintain compliance with the leverage covenants in the credit agreements and indentures of UPC Holding and UPC Broadband Holding is dependent primarily on our ability to maintain or increase the Covenant 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 leverage covenants contained in UPC Holding and UPC Broadband Holding's debt instruments. For example, if the Covenant EBITDA of UPC Broadband Holding were to decline, we could be required to partially repay or limit our borrowings under the UPC Broadband Holding Bank Facility in order to maintain compliance with applicable covenants. No assurance can be given that we would have sufficient sources of liquidity, or that any external funding would be available on favorable terms, or at all, to fund any such required repayment.

At December 31, 2016, UPC Holding and UPC Broadband Holding were in compliance with their respective debt covenants. In addition, we do not anticipate any instances of non-compliance with respect to any of our debt covenants that would have a material adverse impact on our liquidity during the next 12 months.

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

With the exception of the UPC Holding Senior Notes, all of our consolidated third-party debt and capital lease obligations had been borrowed or incurred by our subsidiaries at December 31, 2016.

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

Consolidated Statements of Cash Flows

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

Consolidated Statements of Cash Flows — 2016 compared to 2015

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

	Year ended December 31,		
	2016	**2015**	**Change**
		in millions	
Net cash provided (used) by operating activities	€ 759.1	€ (808.7)	€ 1,567.8
Net cash used by investing activities	(183.4)	(217.5)	34.1
Net cash provided (used) by financing activities	(693.7)	1,085.4	(1,779.1)
Effect of exchange rate changes on cash	5.8	28.5	(22.7)
Net increase (decrease) in cash and cash equivalents	€ (112.2)	€ 87.7	€ (199.9)

Operating Activities. The change in net cash provided (used) by our operating activities is primarily attributable to the net effect of (i) an increase in cash due to lower cash payments for related-party interest, (ii) an increase in cash due to lower cash payments related to derivative instruments, (iii) an increase in cash provided by our operating cash flow and related working capital changes and (iv) a decrease in cash due to higher cash payments for taxes.

Investing Activities. The decrease in net cash used by our investing activities is primarily attributable to the net effect of (i) a decrease in cash used of €64.5 million associated with net repayments from (advances to) related parties and (ii) an increase in cash used of €35.3 million associated with higher capital expenditures.

The capital expenditures that we report in our consolidated statements of cash flows do not include (i) amounts that are financed under capital-related vendor financing or capital lease arrangements or (ii) purchased assets transferred to our company by another entity under the common control of Liberty Global in exchange for non-cash increases to the Shareholder Loan or non-cash contributions from our parent (non-cash related-party capital additions). Instead, these amounts are reflected as non-cash additions to our property and equipment when the underlying assets are delivered, and in the case of capital-related vendor financing and capital lease arrangements and non-cash related-party capital additions that are settled through increases to the Shareholder Loan, as repayments of debt when the principal is repaid. In this discussion, we refer to (a) our capital expenditures as reported in our consolidated statements of cash flows, which exclude non-cash related-party capital additions and amounts financed under capital-related vendor financing or capital lease arrangements, and (b) our total property and equipment additions, which include our capital expenditures on an accrual basis, non-cash related-party capital additions and amounts financed under capital-related vendor financing or capital lease arrangements. For additional information, see notes 7 and 8 to our consolidated financial statements. For further details on property and equipment additions, including a reconciliation of our consolidated property and equipment additions to our consolidated capital expenditures as reported in our consolidated statements of cash flows, see note 15 to our consolidated financial statements.

Our segment property and equipment additions increased during 2016, as compared to 2015, primarily due to (i) an increase in expenditures for new build and upgrade projects to expand service, (ii) an increase in expenditures for the purchase and installation of customer premises equipment and (iii) an increase in expenditures for support capital, such as information technology upgrades and general support systems. During 2016 and 2015, our segment property and equipment additions represented 24.7% and 21.1% of our revenue, respectively.

We expect the percentage of revenue represented by our aggregate 2017 segment property and equipment additions to range from 22% to 24%. The actual amount of our 2017 segment property and equipment additions may vary from expected amounts for a variety of reasons, including (i) changes in (a) the competitive or regulatory environment, (b) business plans, (c) our

expected future operating results or (d) foreign currency exchange rates and (ii) the availability of sufficient capital. Accordingly, no assurance can be given that our actual property and equipment additions will not vary materially from our expectations.

Financing Activities. The change in net cash provided (used) by our financing activities is primarily attributable to the net effect of (i) a decrease in cash of €3,893.3 million due to lower net borrowings of related-party debt, (ii) an increase in cash of €2,077.2 million due to lower net repayments of third-party debt and capital lease obligations, (iii) an increase in cash of €116.4 million due to lower payments for financing costs and debt premiums, (iv) a decrease in cash of €51.5 million related to changes in cash collateral and (v) a decrease in cash of €25.4 million due to higher cash payments related to derivative instruments.

Consolidated Statements of Cash Flows — 2015 compared to 2014

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

	Year ended December 31,		
	2015	2014	Change
		in millions	
Net cash provided (used) by operating activities	€ (808.7)	€ 336.7	€ (1,145.4)
Net cash provided (used) by investing activities	(217.5)	154.8	(372.3)
Net cash provided (used) by financing activities	1,085.4	(903.1)	1,988.5
Effect of exchange rate changes on cash	28.5	1.2	27.3
Net increase (decrease) in cash and cash equivalents	€ 87.7	€ (410.4)	€ 498.1

Operating Activities. The change in net cash provided (used) by our operating activities is primarily attributable to the net effect of (i) a decrease in cash due to higher cash payments for related-party interest, (ii) an increase in cash due to lower cash payments for third-party interest, (iii) an increase in cash due to lower cash payments related to derivative instruments, (iv) an increase in cash provided by our operating cash flow and related working capital changes, (v) an increase in the reported net cash provided by operating activities due to FX and (vi) a decrease in cash due to higher cash payments for taxes.

Investing Activities. The change in net cash provided (used) by our investing activities is primarily due to the net effect of (i) a decrease in cash of €323.3 million associated with the sale of a related-party loan receivable during the first quarter of 2014, (ii) a decrease in cash of €194.8 million associated with net advances to (repayments from) related parties and affiliates, (iii) an increase in cash of €115.3 million associated with lower capital expenditures and (iv) an increase in cash of €28.6 million associated with lower cash paid in connection with acquisitions.

Our property and equipment additions increased during 2015, as compared to 2014, primarily due to the net effect of (i) an increase in expenditures for new build and upgrade projects to expand service, (ii) an increase due to FX, (iii) an increase in expenditures for support capital, such as information technology upgrades and general support systems and (iv) a decrease in expenditures for the purchase and installation of customer premises equipment. During 2015 and 2014, our segment property and equipment additions represented 21.1% and 19.2% of our revenue, respectively.

Financing Activities. The change in net cash provided (used) by our financing activities is primarily attributable to the net effect of (i) an increase in cash of €2,944.0 million due to higher net borrowings of related-party debt, (ii) a decrease in cash of €1,427.2 million due to higher net repayments of third-party debt, (iii) an increase in cash of €418.4 million related to a return of an advance to a subsidiary of Liberty Global during 2014, (iv) an increase in cash of €324.5 million related to the net change in deemed distributions and contributions, (v) a decrease in cash of €210.5 million due to higher cash payments related to derivative instruments, (vi) a decrease in cash of €161.3 million due to higher payments for financing costs and debt premiums and (vii) an increase in cash of €102.8 million related to changes in cash collateral.

Contractual Commitments

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

	Payments due during:						
	2017	2018	2019	2020	2021	Thereafter	Total
				in millions			
Debt (excluding interest):							
Third-party	€ 736.7	€ —	€ —	€ —	€ —	€ 5,695.6	€ 6,432.3
Related-party	—	—	—	—	—	6,161.4	6,161.4
Capital leases (excluding interest)	4.2	4.4	3.9	3.2	3.0	13.0	31.7
Purchase commitments	330.0	66.6	41.7	40.8	12.0	55.0	546.1
Programming commitments	80.4	86.2	75.7	79.4	37.3	18.8	377.8
Operating leases	34.0	27.3	24.3	20.1	16.0	77.3	199.0
Network and connectivity commitments	90.7	36.0	19.6	12.8	5.7	12.1	176.9
Other commitments	8.8	7.4	7.0	6.9	6.6	13.2	49.9
Total (a)	€ 1,284.8	€ 227.9	€ 172.2	€ 163.2	€ 80.6	€ 12,046.4	€13,975.1
Projected cash interest payments on third-party debt and capital lease obligations (b)	€ 327.8	€ 289.7	€ 287.1	€ 287.5	€ 287.2	€ 766.6	€ 2,245.9

(a) The commitments included in this table do not reflect any liabilities that are included in our December 31, 2016 consolidated balance sheet other than debt and capital lease obligations. Our liability for uncertain tax positions in the various jurisdictions in which we operate (€9.8 million at December 31, 2016) 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 December 31, 2016. These amounts are presented for illustrative purposes only and will likely differ from the actual cash payments required in future periods. In addition, the amounts presented do not include the impact of our interest rate derivative contracts, deferred financing costs, original issue premiums or discounts. Amounts associated with related-party debt are excluded from the table.

For information concerning our debt and capital lease obligations, see note 8 to our consolidated financial statements. For information concerning our commitments, see note 14 to our consolidated financial statements.

In addition to the commitments set forth in the table above, we have significant commitments under (i) derivative instruments and (ii) defined benefit plans and similar agreements, pursuant to which we expect to make payments in future periods. For information regarding projected cash flows associated with these derivative instruments, see *Projected Cash Flows Associated with Derivative Instruments* below. For information regarding our derivative instruments, including the net cash paid or received in connection with these instruments during 2016, 2015 and 2014, see note 5 to our consolidated financial statements. For information concerning our defined benefit plans, see note 12 to our consolidated financial statements.

Projected Cash Flows Associated with Derivative Instruments

The following table provides information regarding the projected cash flows associated with our derivative instruments at December 31, 2016. The euro equivalents presented below are based on interest rates and exchange rates that were in effect as of December 31, 2016. These amounts are presented for illustrative purposes only and will likely differ from the actual cash payments required in future periods. For additional information regarding our derivative instruments, including our counterparty credit risk, see note 5 to our consolidated financial statements.

	Payments (receipts) due during:						
	2017	**2018**	**2019**	**2020**	**2021**	**Thereafter**	**Total**
				in millions			
Projected derivative cash payments (receipts), net:							
Interest-related (a)	€ (6.0)	€ 54.5	€ 25.9	€ 14.1	€ 18.2	€ (27.7)	€ 79.0
Principal-related (b)	29.4	—	—	153.2	(44.6)	(330.3)	(192.3)
Other	4.2	—	—	—	—	—	4.2
Total	€ 27.6	€ 54.5	€ 25.9	€ 167.3	€ (26.4)	€ (358.0)	€ (109.1)

(a) Includes (i) the cash flows of our interest rate cap, collar 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.

Critical Accounting Policies, Judgments and Estimates

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

- Impairment of property and equipment and intangible assets (including goodwill);
- Costs associated with construction and installation activities;
- Useful lives of long-lived assets;
- Fair value measurements; and
- Income tax accounting.

For additional information concerning our significant accounting policies, see note 3 to our consolidated financial statements.

Impairment of Property and Equipment and Intangible Assets

Carrying Value. The aggregate carrying value of our property and equipment and intangible assets (including goodwill) that were held for use comprised 81% of our total assets at December 31, 2016.

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

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

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

During the three years ended December 31, 2016, we recorded no impairments of our property and equipment and intangible assets (including goodwill).

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

Costs Associated with Construction and Installation Activities

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

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

Useful Lives of Long-Lived Assets

We depreciate our property and equipment on a straight-line basis over the estimated useful lives of the assets. The determination of the useful lives of property and equipment requires significant management judgment, based on factors such as the estimated physical lives of the assets, technological changes, changes in anticipated use, legal and economic factors, rebuild and equipment swap-out plans, and other factors. Our intangible assets with finite lives primarily consist of customer relationships. Customer relationship intangible assets are amortized on a straight-line basis over the estimated weighted average life of the customer relationships. The determination of the estimated useful life of customer relationship intangible assets requires significant management judgment and is primarily based on historical and forecasted subscriber disconnect rates, adjusted when necessary for risk associated with demand, competition, technological changes and other economic factors. We regularly review whether changes to estimated useful lives are required in order to accurately reflect the economic use of our property and equipment and intangible assets with finite lives. Any changes to estimated useful lives are reflected prospectively. Our depreciation and amortization expense during 2016, 2015 and 2014 was €548.4 million, €572.1 million and €524.9 million, respectively. A 10% increase in the aggregate amount of our depreciation and amortization expense during 2016 would have resulted in a €54.8 million or 11.4% decrease in our 2016 operating income.

Fair Value Measurements

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

Recurring Valuations. We perform recurring fair value measurements with respect to our derivative instruments and fair value method investments, each of which are carried at fair value. We use cash flow valuation models to determine the fair values of our interest rate and foreign currency derivative instruments. We use quoted market prices when available and, when not available, we use a combination of an income approach (discounted cash flows) and a market approach (market multiples of similar businesses) to determine the fair value of our fair value method investments. For a detailed discussion of the inputs we use to determine the fair value of our derivative instruments and fair value method investments, see note 6 to our consolidated

financial statements. See also note 5 to our consolidated financial statements for information concerning our derivative instruments.

Changes in the fair values of our derivative instruments have had, and we believe will continue to have, a significant and volatile impact on our results of operations. During 2016, 2015 and 2014, we recognized net gains (losses) of (€28.9 million), (€42.3 million) and €103.1 million, respectively, attributable to changes in the fair values of our derivative instruments.

As further described in note 6 to our consolidated financial statements, actual amounts received or paid upon the settlement or disposition of our derivative instruments may differ materially from the recorded fair values at December 31, 2016.

Nonrecurring Valuations. Our nonrecurring valuations are primarily associated with (i) the application of acquisition accounting and (ii) impairment assessments, both of which require that we make fair value determinations as of the applicable valuation date. In making these determinations, we are required to make estimates and assumptions that affect the recorded amounts, including, but not limited to, expected future cash flows, market comparables and discount rates, remaining useful lives of long-lived assets, replacement or reproduction costs of property and equipment and the amounts to be recovered in future periods from acquired net operating losses and other deferred tax assets. To assist us in making these fair value determinations, we may engage third-party valuation specialists. Our estimates in this area impact, among other items, the amount of depreciation and amortization, impairment charges and income tax expense or benefit that we report. Our estimates of fair value are based upon assumptions we believe to be reasonable, but which are inherently uncertain. A significant portion of our long-lived assets were initially recorded through the application of acquisition accounting and all of our long-lived assets are subject to impairment assessments. For additional information, see notes 4, 6 and 7 to our consolidated financial statements.

Income Tax Accounting

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

Net deferred tax assets are reduced by a valuation allowance if we believe it more-likely-than-not such net deferred tax assets will not be realized. Establishing or reducing a tax valuation allowance requires us to make assessments about the timing of future events, including the probability of expected future taxable income and available tax planning strategies. At December 31, 2016, the aggregate valuation allowance provided against deferred tax assets was €2,507.0 million. The actual amount of deferred income tax benefits realized in future periods will likely differ from the net deferred tax assets reflected in our December 31, 2016 consolidated balance sheet due to, among other factors, possible future changes in income tax law or interpretations thereof in the jurisdictions in which we operate and differences between estimated and actual future taxable income. Any such factors could have a material effect on our current and deferred tax positions as reported in our consolidated financial statements. A high degree of judgment is required to assess the impact of possible future outcomes on our current and deferred tax positions.

Tax laws in jurisdictions in which we have a presence are subject to varied interpretation, and many tax positions we take are subject to significant uncertainty regarding whether the position will be ultimately sustained after review by the relevant tax authority. We recognize the financial statement effects of a tax position when it is more-likely-than-not, based on technical merits, that the position will be sustained upon examination. The determination of whether the tax position meets the more-likely-than-not threshold requires a facts-based judgment using all information available. In a number of cases, we have concluded that the more-likely-than-not threshold is not met, and accordingly, the amount of tax benefit recognized in our consolidated financial statements is different than the amount taken or expected to be taken in our tax returns. As of December 31, 2016, the amount of unrecognized tax benefits for financial reporting purposes, but taken or expected to be taken in our tax returns, was €18.5 million, of which €12.5 million would have a favorable impact on our effective income tax rate if ultimately recognized, after considering amounts that we would expect to be offset by valuation allowances.

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

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

Management and Principal Shareholder

Through December 31, 2016, the managing director of UPC Holding was Liberty Global Europe Management B.V., which is an indirect subsidiary of Liberty Global. Effective January 1, 2017, the managing director of UPC Holding is Liberty Global Management B.V., which is also an indirect subsidiary of Liberty Global. The address for the managing director is Boeing Avenue 53, 1119 PE Schiphol-Rijk, the Netherlands. The managing director is authorized to conduct the day to day business of the issuer and its subsidiaries within the governance of Liberty Global and its subsidiaries.