United States
Securities and Exchange Commission
Washington, D.C. 20549

Form 10-K

(Mark One)
☑ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2019

OR

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

For the transition period from to

Commission file number 001-35042

Nielsen Holdings plc

(Exact name of registrant as specified in its charter)

England and Wales
(State of incorporation)

98-1225347
(I.R.S. Employer Identification No.)

85 Broad Street
New York, New York 10004
(646) 654-5000

Nielsen House
John Smith Drive
Oxford
Oxfordshire, OX4 2WB
United Kingdom
+1 (646) 654-5000

(Address, including zip code, and telephone number, including area code, of the registrant’s principal executive offices)

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

<table>
<thead>
<tr>
<th>Title of each class</th>
<th>Trading Symbol(s)</th>
<th>Name of each exchange on which registered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary shares, par value €0.07 per share</td>
<td>NLSN</td>
<td>New York Stock Exchange</td>
</tr>
</tbody>
</table>

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

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

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

Large accelerated filer ☑ Accelerated filer ☐
Non-accelerated filer ☐ Smaller reporting company ☐
Emerging Growth Company ☐

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

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

The aggregate market value of the registrant’s voting and non-voting common equity held by non-affiliates as of June 30, 2019, the last day of business of our most recently completed second fiscal quarter, was $8,033 million, based on the closing sale price of the registrant’s common stock as reported on the New York Stock Exchange on such date of $20.60 per share.

There were 356,368,888 shares of the registrant’s Common Stock outstanding as of January 31, 2020.

Documents Incorporated by Reference

Portions of the definitive Proxy Statement of the registrant to be filed pursuant to Regulation 14A of the general rules and regulations under the Securities Exchange Act of 1934, as amended, for the 2020 annual meeting of shareholders of the registrant are incorporated by reference into Part III of this Annual Report on Form 10-K.
# Table of Contents

## PART I
- Item 1. Business .......................................................................................................................... 3
- Item 1A. Risk Factors .................................................................................................................. 17
- Item 1B. Unresolved Staff Comments ...................................................................................... 29
- Item 2. Properties ....................................................................................................................... 29
- Item 3. Legal Proceedings .......................................................................................................... 30
- Item 4. Mine Safety Disclosures ............................................................................................... 30

## PART II
- Item 5. Market for Registrant’s Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities ........................................................................ 31
- Item 6. Selected Financial Data .................................................................................................. 33
- Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations .................................................................................................................. 34
- Item 7A. Quantitative and Qualitative Disclosures About Market Risk .................................. 60
- Item 8. Financial Statements and Supplementary Data ............................................................ 62
- Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure .................................................................................................................... 131
- Item 9A. Controls and Procedures ............................................................................................ 131
- Item 9B. Other Information ....................................................................................................... 131

## PART III
- Item 10. Directors, Executive Officers and Corporate Governance .......................................... 132
- Item 11. Executive Compensation ............................................................................................. 132
- Item 13. Certain Relationships and Related Transactions, and Director Independence ........ 132
- Item 14. Principal Accounting Fees and Services ................................................................. 132

## PART IV
- Item 15. Exhibits, Financial Statement Schedules ................................................................. 133
- Item 16. Form 10-K Summary ................................................................................................. 133
- Signatures .................................................................................................................................. 142
The terms “Company,” “Nielsen,” “we,” “our” or “us,” as used herein, refer to Nielsen Holdings plc (formerly known as Nielsen N.V.) and our consolidated subsidiaries unless otherwise stated or indicated by context. The term “TNC B.V.,” as used herein, refers to The Nielsen Company B.V., the principal subsidiary of Nielsen.

CAUTIONARY STATEMENT REGARDING FORWARD LOOKING STATEMENTS

This Annual Report on Form 10-K includes forward-looking statements. These forward-looking statements generally can be identified by the use of words such as “anticipate,” “expect,” “plan,” “could,” “may,” “will,” “believe,” “estimate,” “forecast,” “project,” “intend,” and other words of similar meaning. Such statements are not guarantees of future performance, events or results and involve potential risks and uncertainties. These forward-looking statements are based on our current plans and expectations and are subject to a number of known and unknown uncertainties and risks, many of which are beyond our control, which could significantly affect current plans and expectations and our future financial position and results of operations. These factors include, but are not limited to the factors discussed in Item 1A. Risk Factors of this Form 10-K.

We caution you that the factors discussed in Item 1A. Risk Factors may not contain all of the material factors that are important to you. In addition, in light of these risks and uncertainties, the matters referred to in the forward-looking statements contained in this Annual Report on Form 10-K may not in fact occur or may prove to be materially different from the expectations expressed or implied by these forward-looking statements. We undertake no obligation to publicly update or revise any forward-looking statement as a result of new information, future events or otherwise, except as otherwise required by law.
Item 1. Business.

Background and Business Overview

We are a leading global measurement and data analytics company. We provide clients with a comprehensive understanding of what consumers watch and what they buy and how those choices intersect. We deliver critical media and marketing information, analytics and manufacturer and retailer expertise about what and where consumers buy and what consumers read, watch and listen to (consumer interaction across the television, radio, print, online, digital, mobile viewing and listening platforms) on a local and global basis. Our measurement and analytical services help our clients maintain and strengthen their market positions and identify opportunities for profitable growth. We have a presence in more than 100 countries and our services cover more than 90 percent of the globe’s GDP and population. We have significant investments in resources and associates all over the world, including in many emerging markets, and hold leading market positions in many of our services and geographies. Based on the strength of the Nielsen brand, our scale and the breadth and depth of our solutions, we believe we are the global leader in measuring and analyzing consumer behavior in the segments in which we operate.

Our Company was founded in 1923 by Arthur C. Nielsen, Sr., who invented an approach to measuring competitive sales results that made the concept of “market share” a practical management tool. For nearly a century, we have advanced the practice of market research and media audience measurement to provide our clients a better understanding of their consumers. In January 2011, our Company consummated an initial public offering of our common stock and our shares started trading on the New York Stock Exchange under the symbol “NLSN”. On August 31, 2015, Nielsen N.V., a Dutch public company listed on the New York Stock Exchange, merged with Nielsen Holdings plc, by way of a cross-border merger under the European Cross-Border Merger Directive, with Nielsen Holdings plc being the surviving company (the “Merger”). The Merger effectively changed the place of incorporation of Nielsen’s publicly traded parent holding company from the Netherlands to England and Wales, with no changes made to the business being conducted by Nielsen prior to the Merger.

Prior to February 2019, we were aligned into two reporting segments: what consumers buy (“Buy”) and what consumers read, watch and listen to (“Watch”). In February 2019, we realigned our business segments from Buy and Watch to Nielsen Global Connect (“Connect”) and Nielsen Global Media (“Media”). Each segment operates as a complete unit—from the conception of a product, through the collection of the data, into the technology and operations, all the way to the data being sold and delivered to the client. Our Connect and Media segments are built on a foundation of proprietary data assets that are designed to yield essential insights for our clients to successfully measure, analyze and grow their businesses. Our segments each consist of two categories: Measure and Predict / Activate in Connect and Audience Measurement and Plan / Optimize in Media. These categories are based on our core measurement platforms in both Connect and Media, while Predict / Activate and Plan / Optimize are designed to build on our measurement capabilities to enhance client decision-making. These changes better align our external view to our go-forward internal view. Our reportable segments are stated on the new basis and such changes were applied retrospectively. The impact of these changes did not have a material impact on our consolidated financial statements or segment results.

We help our clients enhance their interactions with consumers and make critical business decisions that we believe positively affect their sales and profitability. Our data and analytics solutions, which have been developed through substantial investment over many decades, are deeply embedded into our clients’ workflow. Our long-term client relationships are made up largely of multi-year contracts and high contract renewal rates. The average length of relationship with our top ten clients, which include NBC Universal/ Comcast Corporation, The Coca-Cola Company, Nestle S.A., The Procter & Gamble Company and CBS, is more than 30 years. Typically, before the start of each year, more than 70% of our annual revenue has been committed under contracts in our combined Connect and Media segments.

Our Connect segment provides measurement services, which include our core tracking and scan data (primarily transactional measurement data and consumer behavior information), and analytical services to businesses in the consumer packaged goods (“CPG”) industry. According to Deloitte, the aggregate retail revenue of the Top 250 global retailers approached $4.5 trillion in 2017. Our Connect services also enable our clients to better manage their brands, uncover new sources of demand, manage their supply chain issues, launch and grow new services, analyze their sales, drive merchandising efficiency and effectiveness in-store and improve their marketing mix and establish more effective consumer relationships. Our data is used by our clients to measure their market share, tracking billions of sales transactions per month in retail outlets around the world. Our extensive database of retail and consumer information, combined with our advanced analytical capabilities, helps generate strategic insights that influence our clients’ key business decisions. Our broad coverage focuses not only on this modern class of global retailer but also the thousands of traditional trade retailers that have significant presence in emerging markets. Within our Connect segment, we have two primary geographic groups, developed and emerging markets. Developed markets primarily include the United States (“U.S.”), Canada, Western Europe, Japan, South Korea and Australia while emerging markets primarily include Africa, Latin America, Eastern Europe, Russia, China, India and Southeast Asia. Our Connect segment represented approximately 47% of our consolidated revenues in 2019.
Our Media segment provides viewership and listening data and analytics primarily to the media and advertising industries for television, radio, digital and mobile viewing and listening platforms. Our Media data is used by our media clients to understand their audiences, establish the value of their advertising inventory and maximize the value of their content, and by our advertising clients to plan and optimize their spending. Only Nielsen provides a fair playing field for the business of media. Our unbiased metrics create the shared understanding of the industry required for markets to function. We are the One Media Truth. According to ZenithOptimedia, a leading global media services agency, total global spending on advertising, including Linear TV, print, radio, out-of-home, cinema, and digital (i.e, search, online video, social media, and mobile platforms) is projected to reach $670 billion by 2020. Our Media data is used by our media clients to understand their audiences, establish the value of their advertising inventory and maximize the value of their content and by our advertising clients to plan, transact, and optimize their media spending. In our Media segment, our ratings are the primary metrics used to determine the value of programming and advertising in the U.S. television advertising marketplace. According to eMarketer, U.S. TV ad spending is expected to be $70 billion in 2019. Including the U.S., our technology is used to measure television viewing in 34 countries. We also measure markets that account for approximately 70% of global TV ad spend and offer measurement and analytic services in 57 countries, including the U.S., where we are the market leader. Our ratings are also the primary metrics used to determine the value of programming and advertising in the U.S. radio advertising marketplace. According to eMarketer, U.S. Radio ad spend is expected to be $13.9 billion in 2019. Lastly, our ratings are used by 23 of the top 25 Global Advertisers for digital campaigns to help determine the value of advertising in the premium Digital Video Marketplace. According to eMarketer, U.S. Digital ad revenues rose to approximately $129 billion in 2019. Our Media segment represented approximately 53% of our consolidated revenue in 2019.

On November 3, 2019, our Board of Directors completed its strategic review and approved a plan to spin-off Connect, creating two independent, publicly traded companies. As independent, publicly traded companies, each business will be smaller and less diversified with a narrower business focus and may be more vulnerable to changing market conditions. The proposed spin-off is subject to certain conditions, including, among others, the receipt of final Board of Directors approval, receipt of an opinion from counsel and/or ruling regarding the U.S. federal income tax treatment of the distribution, the effectiveness of a Form 10 registration statement to be filed with the Securities and Exchange Commission, the approval of the Company’s shareholders and works council consultations.

Services and Solutions

What Consumers Buy

Our Connect segment provides retail transactional measurement data, consumer behavior information and analytics primarily to businesses in the CPG industry. Within our Connect segment, in 2019, 62% of revenues came from Developed markets and 38% came from Emerging markets. For the year ended December 31, 2019, revenues from our Connect segment represented approximately 47% of our consolidated revenues. This segment has historically generated stable revenue streams that are characterized by multi-year contracts and high contract renewal rates. At the beginning of each year, approximately 60% of the segment’s revenue base for the upcoming year is typically committed under existing agreements. Our top five segment clients represented approximately 16% of our segment revenues for the year ended December 31, 2019 and the average length of relationship with these same clients is over 30 years. No single client accounted for 5% or more of our Connect segment revenues in 2019.

Our retail and manufacturing clients face a business environment that is constantly evolving. New channels are emerging and innovative, nimble competitors are taking advantage of new consumer trends to capture market share. Consumers have better access to information on products and pricing than ever before. Assets that were previously barriers to entry and sources of competitive advantage like scale, global reach and an estate of physical stores can turn into liabilities that hamper the ability to compete with new models.

The advancements in technology that underpin these changes also hold opportunities. There has been a proliferation in the amount of data to help understand consumers better, reach them in a more personal way and make smarter, more actionable decisions. Harnessing this complex and varied amount of data demands new approaches and connectivity. Our clients need to:

- know their consumers and shoppers even better
- move faster
- align their teams and vendors
- win in omni-channel
- make smarter decisions and investments
To help our clients meet these challenges, we launched Nielsen Connect, to connect the most comprehensive measurement of consumer behavior with built-in analytics that feed an ecosystem of applications to drive activation. We believe that Nielsen Connect will help our clients move quickly from understanding what is happening in their markets and why to knowing what next steps will improve performance. Nielsen Connect will be:

- **Open**: The system makes it easy to integrate data from any source and equally easy to extract data to be used in other systems. The system also supports a Connected Partner Program - an ecosystem of companies serving CPG/retail and incorporating Nielsen data in their solutions which makes it easy for clients to connect their network of partners.

- **Simple**: Intuitive design and alerts makes the system simple to use while focusing on the user’s key performance indicators. Analytics are presented to the user in a way that is easy to interpret.

- **Flexible**: Utilities in the platform allow clients to enrich data, produce customized views and plug in their own tools and applications.

- **Actionable**: Supporting an ecosystem of applications from Nielsen and partners so that clients can focus on execution. Guided workflows make collaboration across teams (and suppliers) quicker and smoother.

For our clients this means:

- One version of the truth across the enterprise through integrated data
- Teams that are connected and informed of the actions of other teams
- Access to analytics that are at the center of everyday decisions
- A cost-efficient approach that delivers **profitable** growth

**Retail Measurement Services**

We are a global leader in retail measurement services. Our retail sales data provides market share, competitive sales volumes, and insights into such activities as distribution, pricing, merchandising and promotion. By combining this detailed information with our in-house expertise (including world class data science methodologies and granular product and location reference data) and professional consultative services, we produce valuable insights that help our clients improve their manufacturing, marketing, distribution and sales decisions and grow their market share.

Depending on the sophistication of each country’s retailer systems, we collect retail sales information from stores using electronic point-of-sale technology and/or teams of local field auditors. Stores within our worldwide retail network include grocery, drug, convenience, discount, some wholesalers, specialty and eCommerce retailers, who, through various cooperation arrangements, share their sales data with us. The electronic retail sales information collected by stores through checkout scanners is transmitted directly to us. In certain emerging markets where electronic retail sales information is unavailable, we utilize field auditors to collect information through in-store inventory and price checks. For eCommerce retailers where electronic retail sales information is unavailable, we are increasingly using consumer sourced data to collect information by leveraging proven expertise developed in our Consumer Panel business. For all information we collect, our stringent quality control systems validate and confirm the source data. The data is then processed into databases that clients access using our proprietary software that allows them to query the information, conduct customized analysis and generate reports and alerts.

**Consumer Panel Measurement**

We maintain consumer panels around the world that help our clients understand consumer purchasing dynamics at the household level. Among other things, this information offers insight into shopper behavior such as trial and repeat purchase for new products, brand or retailer loyalty, and customer segmentation. In addition, our panel data augments our retail measurement information, providing blinded but detailed household demographics and can provide data in circumstances where we do not collect data from certain retailers.

Our consumer panels collect data from more than 250,000 household panelists across 24 countries, using a combination of in-home scanners and a mobile application to record purchases from each shopping trip. In the U.S., for example, a demographically balanced set of approximately 100,000 households participate in the panel. Data received from household panels undergo a quality control process including UPC verification and validation, before being processed into databases and reports. Clients may access these databases to perform analyses.
**Analytical Services**

Utilizing our foundation of consumer purchasing information, we provide a wide and growing selection of consumer intelligence and analytical services that help clients make smarter business decisions throughout their product development and marketing cycles. We draw actionable insights from our retail and consumer panel measurement data sets, our online behavioral information, as well as a variety of other proprietary data sets.

Using our comprehensive and granular data, along with advanced modeling techniques and propriety AI, Nielsen provides our clients with the analysis that can identify trends, provide real-time insights and even predict the future. We answer our clients most pressing questions - including what innovative products to build, where to place, how to price and when to promote. With these answers, we help clients influence purchase decisions that shoppers make whether it be pre-store, in-store or online, and provide insights on how to market effectively along a shopper’s path to purchase. We also help clients drive profitable brand and store growth using demand-driven strategies that close the gap between consumer demand and sales.

**What Consumers Watch**

Our Media segment provides viewship and listening data and analytics primarily to the media and advertising industries across the television, radio, print, online, digital and mobile viewing and listening platforms. For the year ended December 31, 2019, revenues from our Media segment represented approximately 53% of our consolidated revenues. This segment has historically generated stable revenue streams that are characterized by multi-year contracts and high contract renewal rates. At the beginning of each year, approximately 80% of the segment’s revenue base for the upcoming year is committed under existing agreements. Our top five clients represented approximately 20% of segment revenues for the year ended December 31, 2019 and the average length of relationship with these same clients is more than 30 years. No customer accounted for 5% or more of our Media segment revenues in 2019.

We have aligned our Media solutions across the key activities of Content Discovery, Planning, Activation, and Audience and Outcomes Measurement.

**Content Discovery**

Gracenote, a Nielsen company, is a leading entertainment data and technology provider. At its core, Gracenote helps connect people with the digital entertainment they love. Its deep descriptive metadata across music, video and sports helps power advanced navigation, search and discovery experiences for media companies, consumer electronics manufacturers, automakers, cable and satellite TV operators and OTT services.

Gracenote’s best-in-class metadata, services and technologies let customers make media more accessible to and discoverable by audiences across all platforms, products and services. Applying a balance of AI-powered techniques and human editors, Gracenote creates, collects, normalizes and intelligently organizes the world’s entertainment data across TV shows, movies, celebrities, sports, teams, athletes, artists, albums and tracks. Its global entertainment data portfolio features descriptions of more than 100 million music tracks, TV listings across 87 countries plus factual data and imagery for tens of millions of video programs, as well as statistics for 4,500 sport leagues and competitions. Additionally, Gracenote powers the infotainment experience in more than 120 million automobiles around the world.

**Planning**

Nielsen has a portfolio of solutions that enable clients to create optimized media plans to reach their desired audiences.

Nielsen Ad Intel provides competitive advertising intelligence across traditional and digital media in 35 markets around the globe and can provide information for more than 80 markets globally. By providing ad campaign brand details, audience exposure and estimated advertising spend data, we furnish clients with unique insights for competitive brand and advertising creative activity, for shifts in advertising spend among media types, channels and brands, and for advertising sales lead generation. In the U.S., Ad Intel determines the commercial minutes for the national television currency. Internationally, clients utilize Ad Intel’s ad spend as a secondary measure to the television currency. Furthermore, Ad Intel’s brand schedules form the basis for many other Nielsen products and services.
Nielsen Media Impact is an omni-channel planning system, providing insights about target audiences across platforms and devices, to optimize media plans to achieve advertising campaign objectives. Nielsen Media Impact is a tool for understanding how various media can be used together most effectively in a media plan to achieve reach, frequency and brand or sales impact. With Media Impact, clients can identify the most effective channels for messaging to consumers, optimize channel mix with reach and impact, quantify impact by media channel and leverage impact data to improve tactical planning. In the U.S., Nielsen Media Impact is fueled by Total Media Fusion, a granular, comprehensive data set of audiences and media behaviors across TV, digital, radio, print, digital place based and cinema, designed specifically for media planning and analytics. Nielsen Media Impact is a tool for media agencies, advertisers and media owners and is currently available in 11 international markets, with more planned for 2020. Local Nielsen Media Impact, a local planning system, is available in 44 markets within the U.S. with additional U.S. markets planned for 2020. Local Nielsen Media Impact utilizes Local Media Fusion, a respondent level data set of audiences and media behaviors across TV and radio at the local market level.

In addition to the services described above, we also provide qualitative information about consumers, including their lifestyles, shopping patterns, and use of media in local markets and across the U.S. We market these services to customers of our syndicated radio and television ratings services who wish to demonstrate the target ability and value of their audience. We also market our quantitative and qualitative audience and consumer information to customers outside of our traditional base, including newspapers; advertising agencies; the advertising sales organizations of local cable television companies; national cable and broadcast television networks; out-of-home media sales organizations; sports teams and leagues; marketers and advertisers.

Qualitative media insights applications include marketing, cross-platform, prospecting, planning/buying, sales, news, promotions, programming and editorial. Beyond demonstrating audience targeting, value and media planning, qualitative information provides advertiser insights into the areas of promotions, marketing, brand management, multiculturalism, product development, shopper insights and sponsorship.

We currently provide syndicated local qualitative measurement in 208 U.S. markets, as well as Puerto Rico.

**Activation**

We offer over 25,000 syndicated segments representing different demographics, psychographics, media consumption and buying behavior along with thousands of additional custom segments. From top funnel insights, describing demographics, economic and job related parameters, to mid funnel insights describing content that viewers have expressed interest in, such as TV shows watched, restaurants dined at, stores shopped, etc. to insights on expressed intent. These audiences describe individuals with high propensity of exhibiting future behaviors such as purchasing a specific car model, a financial product, airline tickets, and more.

We enable these segments in a vast array of buying platforms currently connected to Nielsen’s Data Management Platform. The Nielsen Marketing Cloud is Nielsen’s platform for the custom creation of audiences and activation of those audiences for campaign delivery. The Nielsen Marketing Cloud empowers brands, agencies and media companies to connect more deeply with customers by combining Nielsen’s world-class data, analytics, media planning, marketing activation and data management platform (DMP) capabilities in a single cloud platform.

Our clients can connect directly to our Nielsen Marketing Cloud to identify desired syndicated targeting or created custom targets using their own first party data, unlocking the unique target combinations and using our insights as analytics and ROI tools. Nielsen Marketing Cloud clients gain exclusive access to granular Nielsen data, which powers audience insights at a much higher degree of detail than is available anywhere else.

**Audience Measurement**

**Television Audience Measurement**

We are the global leader in television audience measurement. In the U.S., which is by far the world’s largest market for television programming, broadcasters and cable networks use our television audience ratings as the primary currency to establish the value of their airtime and more effectively schedule and promote their programming. Advertisers use this information to plan television advertising campaigns, evaluate the effectiveness of their commercial messages and negotiate advertising rates.
We provide two principal television ratings services in the U.S.: measurement of national television audiences and measurement of local television audience’s local television markets. We use various methods to collect the data from households including set-top-box data and electronic meters, which provide minute-by-minute viewing information for next day consumption by our clients. These households with electronic meters are meticulously identified using the U.S. Census as a model in order to properly and accurately model our national and local ratings. These methods enable us to collect not only television device viewing data but also the demographics of the audience (i.e., who in the household is watching), from which we calculate statistically reliable and accurate estimates of total television viewership. We have made significant investments over decades to build an infrastructure that can accurately and efficiently track television audience viewing, a process that has become increasingly complex as the industry has converted to digital transmission and integrated new technologies allowing for developments such as time-shifted viewing.

Our measurement techniques are constantly evolving to account for new television viewing behavior, increased fragmentation and new media technologies. For example, to help advertisers and programmers understand time-shifted viewing behavior, we created the Average Commercial Minute (ACM) ratings, which is a measure of how many people watch commercials during live and time-shifted viewing, through 3 days (“C3”), 7 days (“C7”), and up to 35 days (“C35”). The C3 and C7 ratings are the primary metrics for buying and selling advertising on national broadcast television.

Our technology is used to measure television viewing in 34 countries outside the U.S., including Sweden, Mexico, South Korea, Thailand, New Zealand, Australia, Indonesia, Italy and Poland. The international television audience measurement industry operates on a different model than in the U.S. In many international markets, a joint industry committee of broadcasters in each individual country selects a single official audience measurement provider, which is designated the “currency” through an organized bidding process that is typically revisited every several years. We have strong relationships in these countries and see a significant opportunity to expand our presence into additional countries around the world.

Audio Audience Measurement

We provide independent measurement and consumer research primarily servicing radio, advertisers and advertising agencies in the audio industry. We estimate the size and composition of radio audiences in local markets and of audiences to network radio programming and commercials in the U.S. We refer to our local and network radio audience ratings services, collectively, as our “syndicated radio ratings services.” We provide our syndicated radio ratings services in local markets in the U.S. to radio broadcasters, advertising agencies, and advertisers. Our national services estimate the size and demographic composition of national radio audiences and the size and composition of audiences of network radio programs and commercials. Broadcasters use our data primarily to price and sell advertising time, and advertising agencies and advertisers use our data in purchasing advertising time.

We have developed our electronic Portable People MeterTM (“PPM®”) technology, which we deploy across many of our customer offerings and have licensed to other media information services companies to use in their media audience ratings services in countries outside of the U.S. We have commercialized our PPM ratings service in 48 of the largest radio markets in the U.S. Nielsen's PPM technology is also used commercially for National TV Out-of-Home, as well as integrated into Local TV measurement in 2019 in 44 local markets.

Digital Audience Measurement

We are a global provider of digital media and market research, audience analytics and social media measurement. We employ a variety of measurement offerings in the various markets in which we operate to provide digital publishers, internet and media companies, marketers and retailers with metrics to better understand the behavior of online audiences. Through a combination of patented panel and census data collection methods, we measure and study the internet surfing, online buying, and video viewing (including television content) of digital audiences. In addition to measuring overall internet usage, Nielsen is the only company that has a Media Ratings Council (“MRC”) accredited age and gender people measurement across its U.S. Digital Ad Ratings and U.S. Digital in TV Ratings Services; Digital Content Ratings leverages the same privacy-protected MRC-accredited methodology as Nielsen Digital Ad Ratings. Nielsen’s Digital Ad Ratings are now in 35 countries, with Israel being the latest market to launch.

Since 2010, Nielsen has been providing innovative census measurement in cooperation with third party data enrichment providers such as Facebook. Digital Ad Ratings provides age and gender audience demographics, with key metrics such as reach, frequency, GRPs and on-target percentage. Our digital content metrics are consistent with TV and cover audience metrics such as reach and average audience, views, time spent and frequency.

Mobile Measurement

We provide independent measurement and consumer research for telecom and media companies in the mobile telecommunications industry. Clients, principally mobile carriers and device manufacturers, rely upon our data to make consumer marketing, competitive strategy and resource allocation decisions. In the U.S., our metrics are a leading indicator for mobile behaviors and attitudes, customer satisfaction, device share, service network quality, revenue share, and other key performance indicators. We also benchmark the end-to-end consumer experience to pinpoint problem areas in the service chain, track key performance metrics for mobile devices and identify key market opportunities.
To address the rapid growth of mobile internet consumption, we have deployed a combination of panel and census based measurement to capture internet, video and other media on mobile, smartphone, and tablet devices. In the U.S., Nielsen has deployed our mobile software development kit (SDK) to offer a comprehensive mobile advertising and content measurement for our media clients. In addition, our census demographic measurement uses the world's largest mobile advertising and content measurement for our media clients. We offer mobile measurement and analytic services in 35 countries worldwide, including the U.S., where we are a leader in the market for mobile audience measurement, and are focused on expanding our presence in other markets.

**Nielsen Total Audience Measurement**

Consumer choice is driving how content is viewed, and it is fundamentally changing the business of TV, advertising, and measurement. We are connecting all of our video measurement capabilities together in a comprehensive solution covering clients “total audience” for content and campaigns across all consumer access points. We are also providing the industry’s first comparable metrics, which provides true comparability across TV & Digital. These metrics have been developed to enable more flexible business models that support both linear and dynamic models of delivering ads and content in which the industry can choose on how best to leverage to transact billions of advertising transactions against. Total Content Ratings combines the total audience for a program or content across platforms and ad loads, including Subscription Video on Demand (“SVOD”). Total Ad Ratings includes ratings for ads across TV and digital platforms, coupling Digital Ad Ratings data with Nielsen TV Ratings data to deliver accurate reporting of audiences across screens.

**Advanced Video Advertising**

At a time when linear TV viewership is experiencing seismic shifts, Nielsen intends to bring a complete addressable advanced video advertising platform to market, enabling real time targeted ad replacement in live linear TV across connected, enabled Smart TVs. Nielsen is currently in the beta phase of its Addressable TV Ad platform roll-out. This is a first step towards unlocking the potential of linear addressable TV advertising with programmer clients who will help us gather valuable feedback to allow for continued developments and enhancements of the solution, and prepare for commercial launch in the second half of 2020.

We believe Nielsen’s Addressable TV Ad platform will provide benefits across the entire media chain, from ad detection and replacement, to campaign and inventory management and ad decisioning and forecasting tools aimed at yield optimization. The Nielsen Addressable TV Ad platform is intended to be integrated across all Smart TV brands and into all existing broadcast infrastructures and agency workflows to unlock the full value of linear.

By unlocking addressable inventory, we believe media sellers will enable maximum delivery of ROI to advertisers across both linear and addressable TV impressions. Programmers should be able to establish whether certain addressable ad loads are open to single or multiple advertisers, and manage campaign pacing. Our open and flexible approach is intended to also allow brands and agencies to ingest various third-party data sets to create target audiences, upload ad creative and manage ad budgets, pricing, pacing and frequency capping through the platform.

**Nielsen Brand Effect**

Nielsen Digital Brand Effect allows the entire digital media ecosystem, including advertisers, agencies and media owners, to collaborate to validate and optimize advertising spend in real time. We use brand lift metrics to quantify the effectiveness of advertising and determine “resonance” or the extent to which a specific campaign has shifted consumer perception against its primary marketing objective, including awareness, attitudes, favorability, intent and preference. Additionally, our Expanded View module provides in-depth creative diagnostics to understand the “why” behind the “what.” These services provide clients with a holistic assessment of their digital marketing and strategic insight into how to improve it.

**Nielsen Social Content Ratings**

Nielsen Social Content Ratings® (“SCR”) is the leading provider of social engagement and video performance measurement for TV networks, agencies and advertisers. With social media transforming the traditional TV viewing experience, SCR provides the most complete view of consumer trends and habits, helping the industry measure, understand and act on social TV. In addition to measuring Facebook, Instagram and Twitter interactions around series, specials and televised sports events, SCR also includes always-on measurement of social conversations about sports. With this solution, clients can leverage fully syndicated metrics for benchmarking and social performance insights across networks, programs, teams, and leagues. Metrics are available via a syndicated dashboard in the US, Italy, Australia, and Mexico. Measurement includes all televised programming from the most popular broadcast and cable networks, original programming from SVOD providers and TV insights related to consumer brands and theatrically released movies. In 2019, SCR introduced View Count metrics, expanded measurement of Instagram talent accounts and became the industry's exclusive provider of social performance insights for sports around televised games and outside the linear window.
NCSolutions & Nielsen Buyer Insights

Nielsen has the most comprehensive Advertising Effectiveness Measurement in the industry. We have pioneered the transition of demographic only insights to purchase behavior enhanced metrics. Through these industry leading ventures, Nielsen delivers the broadest and deepest coverage of ROI and Media Planning across various industries, including, but not limited to, CPG, Restaurant, Retail, Travel and Pharmacy. Nielsen delivers on the deepest granular insights down to the merchant and UPC level (where applicable) against single source matched, demographically accurate viewership data. NCSolutions ("NCS"), our joint venture with Catalina Marketing Corporation ("Catalina"), and Nielsen Buyer Insights product suites are utilized by every major media company in the U.S. for Upfronts, research, industry events and everyday negotiations.

NCS measures the effectiveness of advertising across all media. NCS helps advertisers and agencies define their customer once and find them everywhere. NCS enables the CPG industry to activate on their best customers based on actual prior purchases data and match that to the very same shopper's media exposure, then measure the sales impact of the campaign. NCS has conducted several thousand studies for 200 advertisers and 450+ brands to optimize ad performance and drive revenue growth and increase return on ad spend. In December 2018, Catalina and certain of its affiliates (the “Catalina debtors”) commenced a “prepackaged” case under chapter 11 of the U.S. Bankruptcy Code with the U.S. Bankruptcy Court for the District of Delaware. On January 30, 2019, the Bankruptcy Court confirmed the joint chapter 11 plan of the Catalina debtors. On February 15, 2019, the Catalina debtors emerged from bankruptcy following the amendment of the NCS Joint Venture agreement, which amendment reaffirms both parents’ commitment to NCS and also enhances both parents’ flexibility in going to market with effectiveness products and services.

Outcomes Measurement

Nielsen’s outcome measurement solutions deliver the ROI metrics marketers need to improve strategic planning decisions and optimize tactics with data driven insights. Working across industries like CPG, Retail, Automotive, Travel, Financial Services, and more, Nielsen delivers the broadest and deepest coverage of ROI in the industry with unmatched speed, data access and channel coverage.

Nielsen Marketing Mix Modeling enables companies of all sizes to understand past trends, predict the future effect of marketing tactics on sales and optimize budget allocation across channels, brands and regions.

Nielsen Attribution collects person-level performance data from addressable marketing channels and devices. Advanced analytic models measure the influence of every addressable channel and granular tactic on multiple success metrics and key audience segments. With some models updated as often as daily, marketers use near real-time data to optimize marketing tactics and media spend allocation while campaigns are still in-flight.

Nielsen Campaign Lift makes a direct connection between the media people consume and the products they buy. We offer the only solution on the market that uses credit and debit sales data, loyalty card data and/or store data to measure campaign performance. Campaign Lift allows marketers to measure how exposure to advertising impacts consumer purchase behavior, including average spend, trip frequency and more, to maximize the revenue outcome of advertising initiatives.

Competitive Advantages

We are faced with a number of competitors in the markets in which we operate. Some of our competitors in each market may have substantially greater financial, marketing and other resources than we do and may benefit from other competitive advantages. See “Competitive Landscape” and “Risk Factors.” We face increasing competition, which could adversely affect our business, financial condition, results of operations and cash flow. Notwithstanding the challenges presented by the competitive landscape, we believe that we have several competitive advantages, including the following:

**Global Scale and Brand.** We provide a breadth of information and insights about consumers covering approximately 90 percent of all population and GDP globally. In our Connect segment, we track billions of sales transactions per month in retail outlets in more than 100 countries around the world. We also have approximately 250,000 household panelists across 25 countries. In our Media segment, our ratings are the primary metrics used to determine the value of programming and advertising in the U.S. television advertising marketplace. According to eMarketer, U.S. TV ad spend is expected to be $70 billion in 2019. We believe our footprint, independence, credibility and leading market positions will continue to contribute to our long-term growth and strong operating margins as the number and role of multinational companies expand. Our scale is supported by our global brand, which is defined by the original Nielsen code created by our founder, Arthur C. Nielsen, Sr.: impartiality, thoroughness, accuracy, integrity, economy, price, delivery and service.
**Strong, Diversified Client Relationships.** Many of the world’s largest brands rely on us as their information and analytics provider to create value for their business. We maintain long-standing relationships and multi-year contracts with high renewal rates due to the value of the services and solutions we provide. In our Connect segment, our clients include the largest CPG and merchandising companies in the world such as The Coca-Cola Company, Nestle S.A., and The Procter & Gamble Company, as well as leading retail chains such as Carrefour, Tesco, and Walmart. In our Media segment, our client base includes leading broadcast, radio, cable and internet companies such as CBS, Discover Inc., Disney/ABC/Fox, Facebook, Google, Microsoft, NBC Universal/Comcast, Fox Corporation, Time Warner, Univision and Yahoo!, leading advertising agencies such as WPP, IPG, Omnicom, and Publicis; leading telecom companies such as AT&T, Verizon, and Sprint; and leading automotive companies such as Ford, Toyota and Renault. The average length of relationship with our top 10 clients across both our Connect and Media segments is more than 30 years. In addition, due to our growing presence in emerging markets, we have cultivated strong relationships with local market leaders that can benefit from our services as they expand globally. Our strong client relationships provide both a foundation for recurring revenues as well as a platform for growth.

**Enhanced Data Assets and Measurement Science.** Our extensive portfolio of transactional and consumer behavioral data across our Connect and Media segments enables us to provide critical information to our clients. For decades, we have employed advanced measurement methodologies that yield statistically accurate information about consumer behavior while having due regard for their privacy. Our particular expertise in panel measurement includes a proven methodology to create statistically accurate research insights that are statistically representative of designated audiences. This expertise is a distinct advantage as we extrapolate more precise insights from emerging large-scale census databases to provide greater granularity and segmentation for our clients. We continue to enhance our core competency in measurement science by improving research approaches and investing in new methodologies. We have also invested significantly in our data architecture to enable the integration of distinct large-scale census data sets including those owned by third parties. We believe that our expertise, established standards and increasingly granular and comprehensive data assets provide us with a distinct advantage as we deliver more precise insights to our clients.

**Innovation.** We have focused on innovation to deepen our capabilities, expand in new and emerging forms of measurement, enhance our analytical offerings and capitalize on industry trends across our Connect and Media businesses.

In Media, we are investing in our total audience measurement framework, connecting all of our video, audio, and text measurement capabilities across digital and television platforms for both ad campaigns (Total Ad Ratings) and content (Total Content Ratings) across all consumer access points. These measurement offerings allow content providers and advertisers to understand their true reach across and among all platforms using a combination of Nielsen’s gold standard panels and census-based measurement. We have also taken a “total” approach to Ad Intel by partnering with a global data provider to add digital data into the service alongside TV, radio and print. We are working with our clients to help maximize the value of the data we give to them by allowing them to evaluate new distribution options (e.g., the Apple TV, Roku, Game Console breakout) as well as understanding the true impact and audiences of their content when sent to SVOD. The continued expansion of our Nielsen campaign ratings service provides “reach” metrics for TV and digital campaign ratings, and can offer advertisers and media companies a unique measurement of unduplicated audiences for their advertising and programming across television and online viewing.

Nielsen is also incorporating large census-level data into all of its services and products. We have been using Return Path Data in different areas of Nielsen over the last five years, for example, in Digital Ad Ratings and Digital Content Ratings along with our marketing effectiveness/ROI services. Nielsen has incorporated Return Path Data for Local Television in 164 local markets, as well as the inclusion of PPM in 44 markets. This resulted in the retirement of the use of paper diaries for TV audience measurement in 2018. In 2019 Nielsen completed a multi-year effort to transform local TV measurement in all 208 markets. Due to the significant deficiencies in this data, Nielsen’s Data Science teams have created a number of statistical models to correct for all of the limitations of this data, including how to calibrate and validate against it which enables us to continue to produce quality person’s based ratings for the marketplace.

On the planning side, Nielsen Media Impact, a state of the art cross media planning system that integrates reach and effectiveness data, which provides the analytics capability tied to our total audience measurement data to enable buyers and sellers to more effectively transact on advertising sales. It helps agencies, media owners, and advertisers to better plan, activate and optimize the value of their media investments. It is also the first solution in the industry that has created the first currency-quality, respondent level planning dataset and software solution that is configurable from top to bottom for clients that want proprietary solutions.

Nielsen is the premier global provider of analytics and insights in sport sponsorships. Nielsen Sports America provides critical data about the value of sponsorships to help clients make better, smarter business decisions.

While technology is changing the path to purchase and generating massive volumes of data to sift through, Nielsen is helping our clients navigate this changing landscape and answer critical questions through Nielsen Connect. Nielsen Connect is an open, cloud-based platform which allows clients to quickly determine what’s happened to their business, the reason behind sales and share changes and then what they should do next through analytic apps that support everyday decisions around innovation, distribution, price, promotion and media. Retail and manufacturer clients will both have access to Nielsen Connect enabling a high degree of collaboration. We have also further enhanced our information and analytics delivery platform, Nielsen Answers On Demand, to enable the management of consumer loyalty programs for retail clients.
Nielsen is also on a path to measure the “Total Consumer,” which means offline and online purchases, all outlets, retail, and out of home consumption. Nielsen’s e-commerce measurement solution is a combination of Nielsen retail data cooperators; multiple consumer-sourced data sets and demand related analytics that will provide the industry a leading measure of e-commerce channel performance for both retailers and manufacturers. These data sources, married with Nielsen’s best in class data science will enable an integrated, calibrated and projectable measurement solution. The retail data cooperators are across a spectrum of channels ranging from pure play, club, mass, specialty, drug, and food. This solution will provide an integrated view of consumer insights, in addition to the market measurement, through consumer level purchase data.

**Scalable Operating Model.** Our global presence and operating model allow us to scale our services and solutions rapidly and efficiently. We have a long track record of establishing leading services that can be quickly expanded across clients, markets and geographies. Our global operations and technology organization enables us to achieve faster, higher quality outcomes for clients in a cost-efficient manner. Our flexible architecture allows us to incorporate leading third-party technologies as well as data from external sources, and enables our clients to use our technology and solutions on their own technology platforms. In addition, we work with leading technology partners such as Microsoft, IBM, Tata Consultancy Services and other technology providers, which allows for greater quality in client offerings and efficiency in our global operations.

**Industry Trends**

We believe companies, including our clients, require an increasing amount of data and analytics to set strategy and direct operations. This has resulted in a large market for business information and insight which we believe will continue to grow. Our clients are media, advertising and CPG companies in the large and growing markets. We believe that significant economic, technological, demographic and competitive trends facing consumers and our clients will provide a competitive advantage to our business and enable us to capture a greater share of our significant market opportunity. We may not be able to realize these opportunities if these trends do not continue or if we are otherwise unable to execute our strategies. See “Risk Factors – We may be unable to adapt to significant technological changes which could adversely affect our business” and “Risk Factors – Our international operations are exposed to risks which could impede growth in the future.”

**Emerging markets present significant expansion opportunities.** Brand marketers are focused on attracting new consumers in emerging countries as a result of the fast-paced population growth of the middle class in these regions. In addition, the retail trade in these markets is quickly evolving from small, local formats toward larger, more modern formats with electronic points of sale, a similar evolution to what occurred in developed markets over the last several decades. We provide established measurement methodologies to help give CPG companies, retailers and media companies an accurate understanding of local consumers to allow them to harness growing consumer buying power in markets like Brazil, India and China.

**Demographic shifts and changes in spending behavior are altering the consumer landscape.** Consumer demographics and related trends are constantly evolving globally, leading to changes in consumer preferences and the relative size and buying power of major consumer groups. Shifts in population size, age, racial composition, family size and relative wealth are causing marketers continuously to re-evaluate and reprioritize their consumer marketing strategies. We track and interpret consumer demographics that help enable our clients to engage more effectively with their existing consumers as well as forge new relationships with emerging segments of the population.

**The media landscape is dynamic and changing.** Consumers are rapidly changing their media consumption patterns. The growing availability of the internet, and the proliferation of new formats and channels such as mobile devices, social networks and other forms of user-generated media have led to an increasingly fragmented consumer base that is more difficult to measure and analyze. In addition, simultaneous usage of more than one screen is becoming a regular aspect of daily consumer media consumption. We have effectively measured and tracked media consumption through numerous cycles in the industry’s evolution – from broadcast to cable, from analog to digital, from offline to online and from live to time-shifted, from in-home to out-of-home, and Video On Demand/Subscription Video On Demand. We believe our distinct ability to provide independent audience measurement and metrics across television, radio, online and mobile platforms helps clients better understand, adapt to and profit from the continued transformation of the global media landscape.

**Consumers are more connected, informed and in control.** More than three-quarters of the world’s homes have access to television and there are approximately 3.5 billion internet users around the globe. Advances in technology have given consumers a greater level of control of when, where and how they consume information and interact with media and brands. They can compare products and prices instantaneously and have new avenues to learn about, engage with and purchase products and services. These shifts in behavior create significant complexities for our clients. Our broad portfolio of measurement and analytical services enables our clients to engage consumers with more impact and efficiency, influence consumer purchasing decisions and actively participate in and shape conversations about their brands.
Increasing amounts of consumer information are leading to new marketing approaches. The advent of the internet and other digital platforms has created rapid growth in consumer data that is expected to intensify as more entertainment and commerce are delivered across these platforms. As a result, companies are looking for real-time access to more granular levels of data to understand growth opportunities more quickly and more precisely. This presents a significant opportunity for us to work with companies to effectively manage, integrate and analyze large amounts of information and extract meaningful insights that allow marketers to generate profitable growth.

Consumers are looking for greater value. When it comes to the products consumers choose to buy, the consideration set has grown. Access to information and technology have transformed the way brands can build trust with and appeal to consumers, as exemplified by the rise in omnichannel shopping and the demand for personalized shopper experiences. Today, consumers desire products that meet very specific needs. This increased focus on product attributes is causing manufacturers, retailers and media companies to re-evaluate brand positioning, value propositions and factors that drive loyalty. We believe companies will increasingly look to our broad range of consumer purchasing insights and analytics to more precisely and effectively measure consumer behavior and target their products and marketing offers to meet the right combination of needs.

The Rise of Online Brand Loyalists. The growth of online commerce has driven the need for fast-moving consumer goods to reshape consumers’ actual online experience around their online behavior. The real promise in digital retail is the chance to go “beyond the self” to build brand loyalty with consumers. It is the first time that brands and retailers can fulfill consumers’ needs for convenience and an overall good experience along the entire path to purchase, including clear, helpful product information, ensuring there is a place for customer reviews by product, easy checkout, simple returns, and quick responses to consumer feedback. Getting the experience right and building those relationships with consumers will be vital to securing subscriptions and automatic fulfillment, which will very soon become the norm.

Clients are Under Pressure to Reduce Costs and Move Faster. Global CPGs are challenged to achieve growth in certain markets with growing fragmentation in consumer demand, more competition from smaller and local players and increased commodity pricing. In addition, the growth of discount retailers, eCommerce players and subscription models is creating competitive pressure for CPGs and retailers. These factors have led clients to seek efficiencies in their business including reducing costs via zero-based budgeting to offset revenue pressure. We believe clients are looking for decisions to be made in much shorter periods of time and the pace at which market share data and the linked explanatory analytics are delivered needs to increase. We see a growing opportunity to provide clients with fast and nimble data solutions to drive smarter decision-making.

Our Growth Strategy

We believe we are well-positioned for growth worldwide and have a multi-faceted strategy that builds upon our brand, strong client relationships and integral role in measuring and analyzing the global consumer. Our growth strategy is also subject to certain risks. For example, we may be unable to adapt to significant technological changes such as changes in the technology used to collect and process data or in methods of television viewing. In addition, consolidation in our customers’ industries may reduce the aggregate demand for our services. See “Risk Factors.”

Continue to grow in emerging markets

Emerging markets (measured in our Connect segment) comprised approximately 38% of our 2019 Connect segment revenues (18% of our 2019 consolidated revenues) and we believe represent a significant long-term opportunity for us given the growth of the middle class and the rapid evolution and modernization of the retail trade in these regions. Key elements of our strategy include:

- Continuing to grow our existing services in local markets while simultaneously introducing into emerging markets new services drawn from our global portfolio;
- Partnering with existing clients as they expand their businesses into emerging markets and providing the high-quality measurement and insights to which they are accustomed; and
- Building relationships with local companies that are expanding beyond their home markets by capitalizing on the global credibility and integrity of the Nielsen brand.
Continue to develop innovative services

We intend to continue evolving our service portfolio to provide our clients with comprehensive and advanced solutions. The key elements of our strategy are as follows: Open, Connected, Useful, and Personal:

- Open
  - Expanding third party data partnerships to provide broader coverage and deeper granularity
  - Making Nielsen market data available to authorized users via Application Programming Interface
  - Enabling third party development of apps that leverage Nielsen data across our Nielsen Marketing Cloud and Nielsen Connect

- Connected
  - Integrating Nielsen data and tools into client workflows and tech stacks
  - Enabling the inclusion of client datasets

- Useful
  - Moving from custom/manual analytics and canned reports toward “always on” analytics that enable clients to make decisions closer to real time
  - Ensuring that our tools are intuitive and effective in executing the client’s work
  - Becoming a leader in software usability

- Personal
  - Designing solutions that solve for specific client personas and use cases
  - Connecting Nielsen and third party datasets to provide a 360 degree view of the consumer
  - Delivering capabilities that enable our clients to personalize their own products and services

These strategies are directly reflected in the Nielsen Total Audience, Nielsen Marketing Cloud and Nielsen Connect.

Continue to attract new clients and expand existing relationships

We believe that substantial opportunities exist to both attract new clients and to increase our revenue from existing clients. Building on our deep knowledge and the embedded position of our Connect and Media segments, we expect to sell new and innovative solutions to our new and existing clients, increasing our importance to their decision making processes.

Continue to pursue strategic acquisitions to complement our leadership positions

We have increased our capabilities through investments and acquisitions in the areas of retail measurement, U.S. and international audience measurement, and advertising effectiveness for digital and social media campaigns. Going forward, we will consider select acquisitions of complementary businesses that enhance our product and geographic portfolio and can benefit from our scale, scope and status as a global leader.

Technology Infrastructure

We operate with an extensive data and technology infrastructure utilizing six primary data centers in four countries around the world. We also use Amazon Web Services from Amazon and Azure from Microsoft for cloud based infrastructure. Our global database has unlimited capacity and we are currently housing approximately 1.4 petabytes of information, with our Connect segment processing approximately 125 billion purchasing data points each month in 2019, our Media segment processing approximately 200 billion tuning and viewing records (across panel and census data) each month in 2019 and our Nielsen Marketing Cloud platform processing 5 trillion events each month in 2017. Our technology infrastructure plays an instrumental role in meeting service commitments to global clients and allows us to quickly scale our services across practice areas and geographies. Our technology platform utilizes an open approach that facilitates integration of distinct data sets, interoperability with client data and technology, and partnerships with leading technology companies such as Tata Consulting Services and other technology providers.
Intellectual Property

Our patents, trademarks, trade secrets, copyrights and all of our other intellectual property are important assets that afford protection to our business. Our success depends to a degree upon our ability to protect and preserve certain proprietary aspects of our technology and our brand. To ensure that objective, we control access to our proprietary technology. Our employees and consultants enter into confidentiality, non-disclosure and invention assignment agreements with us. We protect our rights to proprietary technology and confidential information in our business arrangements with third parties through confidentiality and other intellectual property and business agreements.

We hold a number of third-party patent and intellectual property license agreements that afford us rights to third-party patents, technology and other intellectual property. Such license agreements most often do not preclude either party from licensing our patents and technology to others. Such licenses may involve one-time payments or ongoing royalty obligations, and we cannot ensure that future license agreements can or will be obtained or renewed on acceptable terms, or at all.

Employees

As of December 31, 2019, we employed approximately 46,000 people worldwide. Approximately 15% of our employees are covered under collective bargaining agreements and an additional 12% are covered under works council agreements in Europe. We may become subject to additional agreements or experience labor disruptions which may result in higher operating costs over time. We actively invest in our employee relations and believe they are solid. We are committed to treating employees in a way that respects and protects their human rights everywhere we operate around the world.

Competitive Landscape

There is no single competitor that offers all of the services we offer in all of the markets in which we offer them. We have many competitors worldwide that offer some of the services we provide in selected markets. While we maintain leading positions in many markets in which we operate, our future success will depend on our ability to enhance and expand our suite of services, provide reliable and accurate measurement solutions and related information, drive innovation that anticipates and responds to emerging client needs, strengthen and expand our geographic footprint, and protect consumer privacy. See “Risk Factors – We face increasing competition, which could adversely affect our business, financial condition, results of operations and cash flow.” We believe our global presence and integrated portfolio of services are key assets in our ability to effectively compete in the marketplace. A summary of the competitive landscape for each of our segments is included below:

What Consumers Buy

While we do not have one global competitor in our Connect segment, we face numerous competitors in various areas of our service in different markets throughout the world. Competition includes companies specializing in marketing research, in-house research departments of manufacturers and advertising agencies, retailers that sell information directly or through brokers, information management and software companies, and consulting and accounting firms. In retail measurement, our principal competitor in the U.S. is Information Resources, Inc., which is also present in some European and Asia/Pacific markets. Our retail measurement service also faces competition in individual markets from local companies. Our consumer panel services and analytics services have many direct and/or indirect competitors in all markets around the world including in selected cases, GfK, Ipsos, Kantar and local companies in individual countries.

What Consumers Watch

While we do not have one global competitor in our Media segment, we face numerous competitors in various areas of our operations in different markets throughout the world. We are the clear market leader in U.S. television audience measurement; however, there are many emerging players and technologies that will increase competitive pressure. Numerous companies such as, comScore are attempting to provide alternative forms of television audience measurement using, inter alia, set-top box data and panel-based measurement. Our principal competitor in television audience measurement outside the U.S. is Kantar, with companies such as GfK and Ipsos also providing competition in select individual countries.

Our primary competitor in the digital audience and campaign measurement solutions in the U.S. is comScore. Globally (including the U.S.), we face competition from additional companies that provide analytics services such as Oracle, Google Analytics, and Adobe Analytics. In 2016 one of our former competitors, Rentrak merged into a wholly-owned subsidiary of comScore and the combined companies focus on cross platform measurement. We are the market leader in U.S. audio audience measurement. Our principal competitors globally are Kantar and GFK, and in the U.S. our principal competitor is Eastlan. Kantar developed technologies similar to our PPM ratings service outside the U.S. Additionally Triton, is a U.S.-based digital competitor which has developed a streaming Audio measurement service that uses server log technology.
Regulation

Our operations are subject to and affected by data protection laws in many countries. These laws pertain primarily to personal data (i.e., information relating to an identified or identifiable individual), constrain whether and how we collect personal data, how that data may be used and stored, and whether, to whom and where that data may be transferred. What constitutes “personal data” varies from country to country and region to region and continues to evolve. Data collection methods that may not always be obvious to the data subject, like the use of cookies online, or that present a higher risk of abuse, such as collecting data directly from children, tend also to be more highly regulated, and products that rely on these technologies may require re-engineering to comply with new laws. In addition, these data transfer constraints can impact multinational access to a central database and cross-border data transfers.

Some of the personal data we collect may be considered “sensitive” by the laws of many jurisdictions because they may include certain demographic information and consumption preferences. Sensitive personal data typically are more highly regulated than non-sensitive data. Generally, this means that for sensitive data, the data subject’s consent should be more explicit and fully informed and security measures surrounding the storage of the data should be more rigorous. The greater constraints that apply to the collection and use of sensitive personal data increase the administrative and operational burdens and costs of panel recruitment and management.

Despite these challenges, our commitment to privacy and data protection issues can offer us a competitive advantage. Because we recognize the importance of privacy to our panelists, our customers, consumers in general, and regulators, we devote dedicated resources to enhancing our privacy and security practices in our product development plans and other areas of operation, and participate in privacy policy organizations and “think tanks.” We do this to improve both our practices and the perception of Nielsen as a leader in this area.

Global Responsibility and Sustainability

Through responsible, sustainable business practices and our commitment to giving back, we care for the communities and markets where we live and operate our business. Our Global Responsibility and Sustainability strategy includes all environmental, social and governance (ESG) issues that affect our business, operations, supply chain, and all internal and external stakeholders.

The Board of Directors’ Nomination and Corporate Governance Committee oversees these issues. In addition to our Global Responsibility and Sustainability team, we also manage relevant risks and opportunities through various internal engagement channels, including Global Citizenship and Sustainability Council, our Human Resources Sustainability Council and our Technology and Operations Sustainability Council. As part of our commitment to ongoing stakeholder engagement, Nielsen conducts a non-financial materiality assessment once every two years. This process is a critical part of our ESG strategy management to identify the ESG issues that are most critical to our stakeholders and business, as well as understand their impact on our economic, environmental and social value.

Available Information

We file our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, proxy and information statements and any amendments to these reports and statements with the Securities and Exchange Commission (“SEC”). The SEC maintains a website that contains reports, proxy and information statements and other information at http://www.sec.gov. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to these reports are made available free of charge on our website at http://www.nielsen.com as soon as reasonably practicable after we electronically file such reports with, or furnish them to, the SEC. Information on our website is not incorporated by reference herein and is not a part of this report.

From time to time, Nielsen may use its website and social media outlets as channels of distribution of material company information. Financial and other material information regarding the company is routinely posted and accessible on our website at http://www.nielsen.com/investors, our Twitter account at http://twitter.com/NielsenIR and our iPad App, NielsenIR, available on the App Store.
Item 1A. Risk Factors

The risks described below are not the only risks facing us. Any of the following risks could materially and adversely affect our business, financial condition or results of operations. Additional risks and uncertainties not currently known to us or those we currently view to be immaterial may also materially and adversely affect our business, financial condition or results of operations.

Risks Related to Our Proposed Separation

The proposed separation of Nielsen Global Connect is contingent upon the satisfaction of a number of conditions, will require significant time and attention of our management, and may not be completed in accordance with the expected plans or anticipated timeline, or not at all, and will involve significant time, expense and distraction, which could adversely affect our business.

On November 3, 2019, our Board of Directors completed its strategic review and approved a plan to separate into two independent, publicly traded companies by means of a proposed spin-off of our Global Connect business (the “Spin-Off”). In the Spin-Off, we will distribute shares of a company holding our Global Connect business to our shareholders.

The Spin-Off is subject to certain conditions, including, among others, the receipt of final Board of Directors approval, the receipt of a Private Letter Ruling from the Internal Revenue Service and an opinion from our outside tax advisors regarding the U.S. federal income tax treatment of the distribution to Nielsen as well as to its shareholders, the effectiveness of a Form 10 registration statement to be filed with the Securities and Exchange Commission, the approval of the Company’s shareholders, the absence of any legal restraint or prohibition preventing the consummation of the Spin-Off, and the satisfaction or waiver of certain other conditions. These conditions, among other factors, could delay or prevent the completion of the Spin-Off on the terms or the timeline that we announced, if at all.

Unanticipated developments, including changes in the competitive conditions of our markets, possible delays in obtaining various tax rulings or opinions, negotiating challenges, the uncertainty of financial markets, changes in the law and challenges in executing the Spin-Off could delay or prevent the completion of the Spin-Off, or cause the Spin-Off to occur on terms or conditions that are different or less favorable than expected. Any changes to the Spin-Off or delay in completing the Spin-Off could cause us not to realize some or all of the expected benefits, or realize them on a different timeline than expected. Further, our Board of Directors could decide, either because of a failure of conditions or because of market or other factors, to abandon the Spin-Off. No assurance can be given as to whether and when the Spin-Off will occur.

We will continue to incur significant expenses in connection with the Spin-Off, and expect that the process of completing the Spin-Off will be time consuming and involve significant additional costs and expenses, which may not yield a discernible benefit if the Spin-Off is not completed. Executing the Spin-Off will require significant amounts of management’s time and effort which may divert management’s attention from other aspects of our business operations and other initiatives. We may also experience increased difficulties in attracting, retaining and motivating key employees during the pendency of the Spin-Off and following its completion, which could harm our businesses. We may experience negative reactions from the financial markets if we do not complete the Spin-Off in a reasonable time period. In addition, if the Spin-Off is not completed, we will still be required to pay certain costs and expenses incurred in connection therewith, such as legal, accounting and other professional fees. Any of the above factors could cause the Spin-Off (or the failure to execute the Spin-Off) to have a material adverse effect on our business, our financial condition and the price of our shares.

The Spin-Off may not achieve the anticipated benefits and will expose us to additional risks.

Even if the proposed Spin-Off is completed, we may not realize some or all of the anticipated strategic, financial, operational or other benefits from the Spin-Off. We cannot predict with certainty when the benefits expected from the Spin-Off will occur or the extent to which they will be achieved. If the Spin-Off is completed, our operational and financial profile will change and we will face new risks. As independent, publicly traded companies, Nielsen and our Global Connect business will each be smaller, less-diversified companies and may be more vulnerable to changing market conditions. There is no assurance that, following the Spin-Off, the separate companies will be successful. The announcement or completion of the Spin-Off may cause disruptions with our customers, partners, suppliers and employees, which may negatively impact these relationships or our operations. The Spin-Off may cause some investors to sell Nielsen shares or of one or both of the resulting companies following the Spin-Off, creating greater volatility in the trading of the shares and potentially causing their market prices to decline. We expect the trading price of our shares immediately following the Spin-Off to be significantly lower than immediately preceding the Spin-Off, as the trading price of our shares will no longer reflect the value of the Global Connect business. Further, there can be no assurance that the combined value of the shares of the two resulting companies will be equal to or greater than what the value of our shares would have been had the proposed Spin-Off not occurred.
Risks Related to Our Business

We may be unable to adapt to significant technological changes, which could adversely affect our business.

We operate in businesses that require sophisticated data collection, processing systems, software and other technology. Some of the technologies supporting the industries we serve are changing rapidly. We have been and will be required to adapt to changing technologies and industry standards, either by developing and marketing new services investing in new services or by enhancing our existing services to meet client demand.

Moreover, accelerating technology turn-over in businesses, the introduction of new services embodying new technologies and the emergence of new industry standards could render existing services technologically or commercially obsolete. Our continued success will depend on our ability to adapt to changing technologies, manage and process ever-increasing amounts of data and information and improve the performance, features and reliability of our existing services in response to changing client and industry demands. We may experience difficulties that could delay or prevent the successful design, development, testing, introduction or marketing of our services. New services, or enhancements to existing services, may not adequately meet the requirements of current and prospective clients or achieve any degree of significant market acceptance.

Traditional methods of television viewing continue to change as a result of fragmentation of channels and digital and other new television and video technologies; devices such as video-on-demand, digital video recorders, game consoles, tablets, other mobile devices; and the increasing prevalence of alternative distribution systems, such as Internet viewing/OTT (“over-the-top”) delivery. In addition, consumption of consumer packaged goods is growing in new and different channels such as discount stores and e-commerce. Traditional methods of shopping are evolving and the emergence and growth of Omni-Channel ecommerce as well as direct to consumer continues to grow. This fragmentation requires us to develop new methodologies to procure, cleanse, enrich, and connect data at the individual level.

If we are unable to continue to successfully adapt our media and consumer measurement systems to new viewing and consumption habits, our business, financial position and results of operations could be adversely affected.

Consolidation in the industries in which our clients operate could put pressure on the pricing of our services, thereby leading to decreased earnings and cash flows.

Consolidation in the industries in which our clients operate could reduce aggregate demand for our services in the future and could limit the amounts we earn for our services. When companies merge, the services they previously purchased separately are often purchased by the combined entity in the aggregate in a lesser quantity than before, leading to volume and price compression and loss of revenue. While we are attempting to mitigate the revenue impact of any consolidation by expanding our range of services, there can be no assurance as to the degree to which we will be able to do so as industry consolidation continues, which could adversely affect our business, financial position and results of operations. In addition, retailer consolidation might put pressure on our cost of data acquisition.

Client procurement strategies could put additional pressure on the pricing of our services, thereby leading to decreased earnings and cash flows.

Certain of our clients may seek price concessions from us. This puts pressure on the pricing of our services, which could limit the amounts we earn. While we attempt to mitigate the revenue impact of any pricing pressure through effective negotiations and by providing services to individual businesses within particular groups, there can be no assurance as to the degree to which we will be able to do so, which could adversely affect our business, financial position and results of operations.

Adverse economic conditions, a reduction in client spending particularly in the consumer packaged goods and retailing industries, a deterioration in the credit markets or a delay in client payments could have a material adverse effect on our business, results of operations and financial position.

Adverse economic conditions could affect markets both in the U.S. and internationally, impacting the demand for our customers’ products and services. Those reduced demands could adversely affect the ability of some of our customers to meet their current obligations to us, hinder their ability to incur new obligations until the economy and their businesses strengthen or cause them to reduce or cease using our services. The inability of our customers to pay us for our services and/or decisions by current or future customers to forego or defer purchases may adversely impact our business, financial condition, results of operations, profitability and cash flows and may present risks for an extended period of time. We cannot predict the impact of economic slowdowns on our future financial performance.

To the extent that the businesses we service, especially our clients in the consumer packaged goods, media, entertainment, telecommunications and technology industries, are subject to the financial pressures of, for example, increased costs or reduced demand for their products, the demand for our services, or the prices our clients are willing to pay for those services, may decline.

We expect that revenues generated from our measurement and analytical services will continue to represent a substantial portion of our overall revenue for the foreseeable future. During challenging economic times, clients, typically advertisers, within our Media segment may
reduce their discretionary advertising expenditures and may be less likely to purchase our analytical services, which would have an adverse effect on our revenue.

Clients within our Media segment derive a significant amount of their revenue from the sale or purchase of advertising. During challenging economic times, advertisers may reduce advertising expenditures and advertising agencies and other media may be less likely to purchase our media information services, which would have an adverse effect on our revenue.

**Our substantial indebtedness could adversely affect our business, results of operations, and financial health.**

We have and will continue to have a significant amount of indebtedness. As of December 31, 2019, we had total indebtedness of $8,309 million.

- Our substantial indebtedness could have important consequences. For example, it could:
  - increase our vulnerability to general adverse economic and industry conditions;
  - require us to dedicate a substantial portion of our cash flow from operations to interest and principal payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures, service development efforts, dividends, share repurchases and other general corporate purposes;
  - limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
  - expose us to the risk of increased interest rates as certain of our borrowings are at variable rates of interest;
  - restrict us from making strategic acquisitions or cause us to make non-strategic divestitures;
  - limit our ability to obtain additional financing for working capital, capital expenditures, service development, debt service requirements, dividends, share repurchases, acquisitions and general corporate or other purposes;
  - limit our ability to adjust to changing market conditions;
  - place us at a competitive disadvantage compared to our competitors that have less debt; and
  - potentially limit our ability to service future dividends and/or stock repurchases due to covenant restrictions.

In addition, the indentures governing our outstanding notes and our secured credit facility contain financial and other restrictive covenants that could limit the ability of our operating subsidiaries to engage in activities that may be in our best interests, including by limiting the ability to make acquisitions, pay dividends or repurchase shares. Moreover, the failure to comply with any of those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all of our debt. See Note 12 to our consolidated financial statements – “Long Term Debt and Other Financing Arrangements,” for a description of our debt arrangements and related covenants.

Despite our current indebtedness levels, we and our subsidiaries may still be able to incur substantially more debt. If new debt is added to our and our subsidiaries’ current debt levels, the related risks that we and they now face could intensify.

*We require a significant amount of cash as well as continued access to the capital markets to service our indebtedness, fund capital expenditures and meet our other liquidity needs. Our ability to generate cash and our access to the capital markets depend on many factors beyond our control.*

Our ability to make payments on our indebtedness (both interest and principal) and to fund planned capital expenditures and other liquidity needs will depend on our ability to generate cash in the future and our ability to refinance our indebtedness. This, to a certain extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

We may not be able to generate sufficient cash flow from operations to pay our indebtedness or to fund our other liquidity needs. We may need to refinance all or a portion of our indebtedness on or before maturity. We may not be able to refinance any of our indebtedness, including our senior secured credit facilities, on commercially reasonable terms or at all. See Note 12 to our consolidated financial statements – “Long-term Debt and Other Financing Arrangements,” for a description of our debt arrangements and related maturities.
A substantial portion of our indebtedness is at variable rates, and we are exposed to the risk of increased interest rates.

Our cash interest expense for the years ended December 31, 2019, 2018 and 2017 was $386 million, $380 million and $352 million, respectively. On December 31, 2019, we had $3,952 million of floating-rate debt under our senior secured credit facilities of which $2,050 million was subject to effective floating-fixed interest rate swaps. A one percent increase in interest rates applied to our floating rate indebtedness would therefore increase annual interest expense by approximately $19 million ($40 million without giving effect to any of our interest rate swaps). We periodically review our fixed/floating debt mix, and the volume, rates and duration of our interest rate hedging portfolio are subject to changes, which could adversely affect our results of operations.

The success of our business depends on our ability to recruit sample participants to participate in our research samples.

Our business uses scanners and diaries to gather consumer data from sample households as well as meters (e.g., Set Meters, People Meters, Active/Passive Meters, PPM’s) and other technologies to gather television and audio audience measurement data from sample households. It is increasingly difficult and costly to obtain consent from households to participate in the surveys, and increased focus by consumers on privacy could result in a greater reluctance to participate in research, which could impact our continued ability to recruit participants. Further, it is increasingly difficult and costly to ensure that the selected sample of households mirrors the behaviors and characteristics of the entire population and covers all of the demographic segments requested by our clients. Political changes and trends such as populism, economic nationalism, immigration and sentiment towards multinational companies have made recruiting a sample that mirrors the entire population more difficult. In addition, if the 2020 U.S. Census is not reliable due to underfunding, under participation, new technologies being used, or otherwise, the data we rely on for our panels and statistical breakdowns in the U.S. may not be accurate. Additionally, as consumers adopt modes of telecommunication other than traditional telephone service, such as mobile, cable and internet calling, it may become more difficult for our services to reach and recruit participants for consumer purchasing and audience measurement services. If we are unsuccessful in our efforts to recruit appropriate participants, maintain the integrity of our panels, maintain adequate participation levels or properly model the sample data, our clients may lose confidence in our ratings services and we could lose the support of the relevant industry groups. If this were to happen, our consumer purchasing and audience measurement services may be materially and adversely affected.

Data protection laws and self-regulatory codes may restrict our activities and increase our costs.

Various statutes and rules regulate conduct in areas such as privacy and data protection which may affect our collection, use, storage and transfer of information both abroad and in the U.S. The definitions of “personally identifiable information” and “personal data” continue to evolve and broaden, and new laws and regulations are being enacted (for example, recently passed data protection laws in Brazil and California, U.S., and proposed laws in India and Indonesia), so that this area remains in a state of flux. Changes in these laws (including newly released interpretations of these laws by courts and regulatory bodies) may limit our data access, use and disclosure, and may require increased expenditures by us or may dictate that we may not offer certain types of services. In addition, some of our products and services are subject to self-regulatory programs relating to digital advertising. Compliance with these laws and self-regulatory codes may require us to make certain investments or may dictate that we not offer certain types of services or only offer such services after making necessary modifications. Failure to comply with these laws and self-regulatory codes may result in, among other things, civil and criminal liability, negative publicity, restrictions on further use of data and/or liability under contractual warranties.

The European Union’s General Data Protection Regulation (“GDPR”), took effect in May 2018 and imposed new and more stringent requirements regarding the handling of personal data of persons in the EU. Failure to meet the GDPR requirements could result in penalties of up to 4% of worldwide revenue. Many jurisdictions considering new data protection laws are looking to GDPR as a starting point.

The California Consumer Privacy Act of 2018 (“CCPA”) took effect on January 1, 2020, and imposed new and more stringent requirements regarding the handling of personal data of persons in California. Because Nielsen does not typically segregate products and services on a state-by-state basis, Nielsen must generally adopt the requirements of CCPA across its US business operations. Failure to meet CCPA requirements could result in penalties of up to $7,500 per violation. CCPA also provides individuals with a limited private right of action in the case of certain breaches of personal data.

The proposed EU “ePrivacy” Regulation, if adopted, is expected to have potentially significant impacts for the online/mobile advertising industry as a whole. Nielsen is continuing to monitor the development of the ePrivacy Regulation and industry response and will determine whether to take further action, as needed, following its final adoption. Nielsen is working with industry groups on the implementation of a transparency and consent framework mechanism that would facilitate users providing and companies passing consent to the advertising supply chain in case of a strict interpretation of the GDPR consent requirements by authorities and to address possible ePrivacy requirements.
We are exposed to risks related to cybersecurity and protection of confidential information.

In the ordinary course of our business, we rely extensively on our people, technology and business operations as well as trusted strategic partners and vendors to provide us with access to data and technology as well as related professional services. We use several third-party service providers, including cloud providers, to access, store, transmit and process sensitive data. We receive, store and transmit large volumes of proprietary information and data that may contain personal information of our customers, employees, consumers and suppliers or sensitive client data entrusted to us. Our sensitive data may include our or a client’s intellectual property, financial information and business operations data.

An actual or perceived security or privacy breach may affect us in many ways, including:

- risk of loss of Nielsen and/or client proprietary data or data protected by law, statute or regulation;
- loss of control of how Nielsen and/or client proprietary data or data protected by law, statute or regulation is re-purposed, shared or disseminated;
- expose us to potential litigation;
- expose us to liability;
- harm our reputation;
- loss of confidence in security and accuracy of products;
- deter customers from using our products or services;
- deter retailers from sharing their sales data;
- make it more difficult and expensive to effectively recruit panelists and survey respondents;
- loss of investor confidence;
- official sanctions or statutory penalties; and
- significant increases in cyber security costs.

Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations or stock price.

Owing to new and emerging technology risks, hackers or unauthorized users who successfully breach our network security, could misappropriate or misuse our proprietary information or cause interruptions in our services. Given the relatively fast pace of changes in new and emerging technology risks, we may not be able to effectively anticipate and/or respond in a timely manner to all foreseeable and/or unforeseeable cyber security risks and events, thereby resulting in a potentially significant loss of client and investor confidence.

Notwithstanding our due diligence for new hires and employee training initiatives, we are at risk for employee malfeasance, inadvertent employee errors and other “insider risks” that may breach one or more of our information security provisions or policies. Our response in remediation of these data breaches or interruptions of service may require substantial commitments of resources and we may incur additional, unbudgeted operating and/or capital expenses, such as for specialized cyber security vendors as part of our response.

Similar to other companies, we have been the subject of attempts at unauthorized access to our systems, however, none were material. We have taken and are taking reasonable steps to prevent future unauthorized access to our systems, including implementation of system security measures, information back-up and disaster recovery processes. However, these steps may not be effective and there can be no assurance that any such steps can be effective against all possible risks.

Our services involve the receipt, storage and transmission of proprietary information. If our security measures are breached and unauthorized access is obtained, our services may be perceived as not being secure and regulators, panelists and survey respondents may hold us liable for disclosure of personal data, and clients and venture partners may hold us liable or reduce their use of our services.

We receive, store and transmit large volumes of proprietary information and data, including data that contain personal information about individuals. Similar to other companies, Nielsen is a target of cyber attacks, however, none were material. We have continued to invest in tools, technology and people to safeguard the enterprise. Security breaches could expose us to a risk of loss or misuse of this information, regulatory fines and penalties, litigation and possible liability and our reputation could be damaged. It may also make it more difficult to recruit panelists and survey respondents. For example, hackers or individuals who attempt to breach our network security could, if successful, misappropriate proprietary information or cause interruptions in our services. If we experience any breaches of our network security or sabotage, we might be required to expend significant capital and resources to protect against or to alleviate problems and to respond to regulators’ inquiries. We may not be able to remedy any problems caused by hackers or saboteurs in a timely manner, or at all. Techniques used to obtain unauthorized access or to sabotage systems change frequently and generally are not recognized until launched against a target and, as a result, we may be unable to anticipate these techniques or to implement adequate preventive measures. If an actual or perceived
breach of our security occurs, the perception of the effectiveness of our security measures could be harmed and we could lose current and potential clients. In addition, we may be subject to investigation and fines by jurisdictions that have data protection laws.

If we are unable to protect our intellectual property rights, our business could be adversely affected.

Our business relies on a combination of patented and patent-pending technologies, systems, processes, and methodologies; trademarks; copyrights; other proprietary rights; and contractual arrangements, including licenses, to establish and protect our technology and intellectual property. We believe our proprietary technologies and intellectual property rights are important to our continued success and our competitive position. Any impairment of any such intellectual property could adversely impact the results of our operations or financial condition.

We rely on a combination of contractual and confidentiality provisions and procedures, licensing arrangements, and the intellectual property laws of the U.S. and other countries to protect our intellectual property, as well as the intellectual property rights of third parties whose content, data and technology we license. These legal measures afford only limited protection and may not provide sufficient protection to prevent the infringement, misuse or misappropriation of our intellectual property. Although our employees, consultants, clients, and collaborators all enter into confidentiality agreements with us, our trade secrets, data and know-how could be subject to unauthorized use, misappropriation or unauthorized disclosure.

Our business success depends, in part, on:

- obtaining patent protection for our technology and services;
- enforcing and defending our patents, copyrights, trademarks, service marks and other intellectual property;
- preserving our trade secrets and maintaining the security of our know-how and data; and
- operating our business without infringing intellectual property rights held by third parties.

Our ability to establish, maintain and protect our intellectual property and proprietary rights against theft or infringement could be materially and adversely affected by insufficient and/or changing proprietary rights and intellectual property legal protections in some jurisdictions and markets. Intellectual property law in several foreign jurisdictions is subject to considerable uncertainty. Our pending patent and trademark applications may not be allowed in certain jurisdictions and inadequate intellectual property laws may limit our rights and ability to detect unauthorized uses or take appropriate, timely and effective steps to remedy unauthorized conduct, to protect or enforce our rights. Such limitations may allow competitors to design around our intellectual property rights, to independently develop non-infringing competing technologies, products, or services similar or identical to ours, thereby potentially eroding our competitive position, enabling competitors greater opportunity to capture market share, and consequently negatively impacting our revenues and operating results. The expiration of certain of our patents may also lead to increased competition. As such, our patents, copyrights, trademarks, and other intellectual property may not adequately protect our rights, provide significant competitive advantages, or prevent third parties from infringing or misappropriating our proprietary rights.

The growing need for global data, along with increased competition and technological advances, puts increasing pressure on us to share our intellectual property for client applications with others. In this way, competitors may gain access to our intellectual property and proprietary information. Third parties that license our intellectual property and proprietary rights may take actions or create incidents that may diminish the value of our rights, harm our business, reduce revenue, increase expenses, and/or harm our reputation.

To prevent or respond to unauthorized uses of our intellectual property, we may be required to enforce our intellectual property rights to protect our confidential and proprietary information by engaging in costly and time-consuming litigation or other proceedings that may be distracting to management, could result in the impairment or loss of portions of our intellectual property rights, and we may not ultimately prevail.
Third parties may claim that we are infringing their intellectual property and we could suffer significant litigation or licensing expenses, or be prevented from selling products or services, which may adversely impact our operating profits.

We cannot be certain that we do not and will not infringe the intellectual property rights of others in operating our business. In the ordinary course of business, third parties may claim, with or without merit, that one or more of our products or services infringe their intellectual property rights and may engage in legal proceedings against us. In some jurisdictions, plaintiffs can also seek injunctive relief that may limit the operation of our business or prevent the marketing and selling of our services that allegedly infringe a plaintiff’s intellectual property rights.

Certain agreements with suppliers or clients contain provisions where we indemnify, subject to certain limitations, the counterparty for damages suffered as a result of claims related to intellectual property infringement based on our data or technology. Infringement claims covered by such indemnity provisions could be expensive to litigate and may result in significant settlement payments. In certain businesses, we rely on third-party intellectual property licenses, and depending upon the outcome of any intellectual property dispute, we cannot ensure that these licenses will be available to us in the future on favorable terms or at all.

• Any such claims of intellectual property infringement, even those without merit, could:
  • be expensive and time-consuming to defend;
  • result in our being required to pay possibly significant damages;
  • cause us to cease providing our products or services that allegedly incorporate a third party’s intellectual property;
  • require us to redesign or rebrand our services;
  • require us to enter into potentially costly royalty or licensing agreements in order to obtain the right to use a third party’s intellectual property, although royalty or licensing agreements may not be available to us on acceptable terms or at all.

Any of the above could have a negative impact on our operating results and could harm our financial condition and prospects.

We analyze and take action in response to such claims on a case-by-case basis. Any dispute or litigation regarding patents or other intellectual property could be costly and time-consuming due to the complexity of our business and technology and the uncertainty of intellectual property litigation and could divert our management and key personnel from our business operations.

If we do not resolve these claims in advance of a trial, there is no guarantee that we will be successful in court. A claim of intellectual property infringement could compel us to enter into a license agreement with restrictive terms and/or significant fees, which may or may not be available under acceptable terms or at all, and an adverse judgment could subject us to significant damages or to an injunction against development and/or sale of certain of our products or services. We may be required to implement costly redesigns to the affected product or services, or pay damages to satisfy contractual obligations to others.

Currency exchange rate fluctuations may negatively impact our business, results of operations and financial position.

We operate globally, deriving approximately 42% of revenues for the year ended December 31, 2019 in currencies other than U.S. dollars, with approximately 10% of revenues deriving in Euros. Our U.S. operations earn revenues and incur expenses primarily in U.S. dollars, while our European operations earn revenues and incur expenses primarily in Euros. Outside the U.S. and the Euro Zone, we generate revenues and expenses predominantly in local currencies. Because of fluctuations (including possible devaluations) in currency exchange rates, we are subject to currency translation exposure on the revenues and profits of these operations, as well as on the value of balance sheet items (including cash) not denominated in U.S. dollars. In addition, we are subject to currency transaction exposure in those instances where transactions are not conducted in the relevant local currency. In certain instances, we may not be able to freely convert foreign currencies into U.S. dollars due to governmental limitations placed on such conversions.

Of our $454 million in cash and cash equivalents as of December 31, 2019, approximately $383 million was held in jurisdictions outside the U.S. We regularly review the amount of cash and cash equivalents held outside of the U.S. to determine the amounts necessary to fund the current operations of our foreign operations and their growth initiatives and amounts needed to service our U.S. indebtedness and related obligations.

Our international operations are exposed to risks which could impede growth in the future.

We continue to explore opportunities in major international markets around the world, including China, Russia, India and Brazil. International operations expose us to various additional risks, which could adversely affect our business, including:

• costs of customizing services for clients outside of the U.S.;
• reduced protection for intellectual property rights in some countries;
• the burdens of complying with a wide variety of foreign laws;
• difficulties in managing international operations;
• longer sales and payment cycles;
• exposure to foreign currency exchange rate fluctuation;
• exposure to local economic conditions;
• limitations on the repatriation of funds from foreign operations;
• exposure to local political conditions, including adverse tax and other government policies and positions, civil unrest and seizure of assets by a foreign government;
• the risks of an outbreak of war, the escalation of hostilities and acts of terrorism in the jurisdictions in which we operate and;
• the risks of outbreaks of pandemic or contagious diseases, such as Ebola, measles, avian flu, severe acute respiratory syndrome (SARS), H1N1 (swine) flu, Zika virus and coronavirus.

In countries where there has not been a historical practice of using consumer packaged goods retail information or audience measurement information in the buying and selling of advertising time, it may be difficult for us to maintain subscribers.

Additionally, we are subject to complex U.S., European and other regional and local laws and regulations that are applicable to our operations abroad, including trade sanctions laws, anti-corruption laws such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act 2010, anti-bribery laws, anti-money laundering laws, and other financial crimes laws. Although we have implemented a compliance program that includes internal controls, policies and procedures and employee training to deter prohibited practices, such measures may not be effective in preventing employees, contractors or agents from violating or circumventing such internal policies and violating applicable laws and regulations. Given our operations in the United Kingdom and Continental Europe, we face uncertainty surrounding the United Kingdom’s exit from the European Union in January 2020, commonly referred to as “Brexit.” It is likely that Brexit will cause increased regulatory and legal complexities and create uncertainty surrounding our business, including our relationships with existing and future clients, suppliers and employees, which could have an adverse effect on our business, financial results and operations.

**Criticism of our audience measurement service by various industry groups and market segments could adversely affect our business.**

Due to the high-profile nature of our services in the media, internet and entertainment information industries, we could become the target of criticism in the media and in other venues by various industry groups and market segments. We strive to be fair, transparent and impartial in the production of audience measurement services, and the quality of our U.S. ratings services is voluntarily subject to review and accreditation by the Media Rating Council, a voluntary trade organization whose members include many of our key client constituencies. However, criticism of our business by special interests, and by clients with competing and often conflicting demands on our measurement service, could result in government regulation. While we believe that government regulation is unnecessary, no assurance can be given that legislation will not be enacted in the future that would subject our business to regulation, which could adversely affect our business.

**A loss or decrease in business of one or more of our largest clients could adversely impact our results of operations.**

Our top ten clients collectively accounted for approximately 20% of our total revenues for the year ended December 31, 2019. We cannot assure you that any of our largest clients will continue to use our services to the same extent, or at all, in the future. A loss or decrease in business of one or more of our largest clients, if not replaced by a new client or an increase in business from existing clients, would adversely affect our prospects, business, financial condition and results of operations.

**We rely on third parties to provide or allow us to access certain data and services in connection with the provision of our current services. The loss or limitation of access to that data could harm our ability to provide our products and services.**

We rely on third parties to provide certain data and services for use in connection with the provision of our current services and our reliance on third-party data providers is growing. For example, both our Media and Connect segments enter into agreements with third parties to obtain data or facilitate the access to data from which we create products and services.
In the digital measurement business, publishers, browsers and platforms are making changes, often citing the increased attention on consumer privacy, which may result in our inability to collect the data we need to create our services. This may impact our ability to measure the Web and provide our clients with reporting at the rate of granularity that we do so today, in which case our business and/or potential growth may be affected adversely. We may need to enter into agreements with third parties directly to continue to measure certain types of media. In the event we are unable to use such third party data and services, access the necessary data, or if we are unable to enter into agreements with third parties, our business and/or our potential growth could be adversely affected. In the event that such data and services are unavailable for our use or the cost of acquiring such data and services increases, our business could be adversely affected.

Other suppliers of data may increase restrictions on our use of such data due to factors such as the increasing attention on consumer privacy, rigor of privacy regulation or cybersecurity risk, fail to adhere to our quality control standards or otherwise satisfactorily perform services, increase the price they charge us for this data or refuse altogether to license the data to us (in some cases because of exclusive agreements they may have entered into with our competitors). Supplier consolidation could put pressure on our cost structure.

We rely on third parties for the performance of a significant portion of our worldwide information technology and operations functions. A failure to provide these functions in a satisfactory manner could have an adverse effect on our business.

We are dependent upon third parties for the performance of a significant portion of our information technology and operations functions worldwide. The success of our business depends in part on maintaining our relationships with these third parties and their continuing ability to perform these functions in a timely and satisfactory manner. If we experience a loss or disruption in the provision of any of these functions, or they are not performed in a satisfactory manner, we may have difficulty in finding alternate providers on terms favorable to us, or at all, and our business could be adversely affected.

Long-term disruptions in the mail, telecommunication infrastructure and/or air service could adversely affect our business.

Our business is dependent on the use of the mail, telecommunication infrastructure and air service. Long-term disruptions in one or more of these services, which could be caused by events such as natural disasters, the outbreak of war, the escalation of hostilities, civil unrest and/or acts of terrorism, could adversely affect our business, results of operations and financial condition.

Our operations are vulnerable to the effects of epidemics, such as the coronavirus, which could materially disrupt our business.

We are vulnerable to the general economic effects of epidemics and other public health crises, including the ongoing coronavirus outbreak that has surfaced in China and is spreading throughout the world. Due to the recent outbreak of the coronavirus, there has been a substantial curtailment of business activities, particularly to and from China, which may potentially affect our ability to conduct fieldwork. The risk is particularly pronounced where our teams need to visit traditional stores to collect information where electronic data transmission is not possible, and where we need to conduct face to face consumer research interviews. Further, the virus could have a negative impact on our business if clients decide to cut back their research spend in China or other countries in light of poor performance due to the virus, and if it is not contained or otherwise continues, the impact of the epidemic could have a material adverse effect on our business.

Hardware and software failures, delays in the operations of our data gathering procedures, our computer and communications systems or the failure to implement system enhancements may harm our business.

Our success depends on the efficient and uninterrupted operation of our computer and communications systems and our data gathering procedures. A failure of our network or data gathering procedures could impede the processing of data, delivery of databases and services, client orders and day-to-day management of our business and could result in the corruption or loss of data. While many of our services have appropriate disaster recovery plans in place, we currently do not have full backup facilities everywhere in the world to provide redundant network capacity in the event of a system failure. Despite any precautions we may take, damage from fire, floods, hurricanes, power loss, telecommunications failures, computer viruses, break-ins and similar events at our various computer facilities, or delays in our data gathering or panel maintenance operations due to weather events, including those related to climate change, other acts of nature, or public health crises, such as pandemics and epidemics, could result in interruptions in the flow of data to our servers and to our clients. In addition, any failure by our computer environment to provide our required data communications capacity could result in interruptions in our service. In the event of a delay in the delivery of data, we could be required to transfer our data collection operations to an alternative provider. Such a transfer could result in significant delays in our ability to deliver our services to our clients and could be costly to implement. Additionally, significant delays in the planned delivery of system enhancements and improvements, or inadequate performance of the systems once they are completed, could damage our reputation and harm our business. Finally, long-term disruptions in infrastructure caused by events such as natural disasters, the outbreak of war, the escalation of hostilities, civil unrest and/or acts of terrorism (particularly involving cities in which we have offices) could adversely affect our services. Although we carry property and business interruption insurance, our coverage may not be adequate to compensate us for all losses that may occur.
The presence of our Global Technology and Information Center in Florida, as well as the global nature of our panels, heightens our exposure to climate-change related risks, including hurricanes and tropical storms, which could disrupt our business.

The technological data processing functions for certain of our U.S. operations are concentrated at our Global Technology and Information Center (“GTIC”) at a single location in Florida. Our geographic concentration in Florida heightens our exposure to a hurricane, tropical storm or other severe weather events specific to this region. These weather events, in Florida and elsewhere, could cause severe damage to our property and technology and could cause major disruptions to our operations, including our ability to produce and deliver ratings information and Answers on Demand data. For example, a hurricane or other similar event could lead to business interruption and other adverse consequences such as penalty fees, business interruption claims, or lost business. Although our GTIC was built in anticipation of severe weather events and we have insurance coverage, if we were to experience a catastrophic loss, we may exceed our policy limits and/or we may have difficulty obtaining similar insurance coverage in the future. As such, a hurricane or tropical storm could have an adverse effect on our business. In addition, our panels rely on field staff traveling to panelists’ homes for onboarding and troubleshooting; therefore, worsening or more frequent climate change-related weather events could disrupt the size and quality of our panels. With the increased occurrence of climate change-related natural disasters globally, such as droughts, record snowfalls, heat waves and fires, we recognize the wide-ranging risks this poses to our business continuity in certain locations as well as on a global scale.

Changes in tax laws and the continuing ability to apply the provisions of various international tax treaties may adversely affect our financial results and increase our tax expense.

We operate in over 100 countries, and changes in tax laws, international tax treaties, regulations, related interpretations and tax accounting standards in the United States, the United Kingdom and other countries in which we operate may adversely affect our financial results, particularly our income tax expense, liabilities and cash flow. Our effective tax rate could also be affected by changes in our business (including acquisitions or dispositions), intercompany transactions, the applicability of special tax regimes, and the relative amount of foreign earnings in jurisdictions with high statutory tax rates or where losses are incurred for which we are not able to realize tax benefits.

Governments are resorting to more aggressive tax audit tactics and are increasingly considering changes to tax law regimes or policies as a means to cover budgetary shortfalls resulting from the current economic environment. We are subject to direct and indirect taxes in numerous jurisdictions and the amount of tax we pay is subject to our interpretation of applicable tax laws in the jurisdictions in which we file. We have taken and will continue to take tax positions based on our interpretation of tax laws, but tax accounting often involves complex matters and judgment. Although we believe that we have complied with all applicable tax laws, we have been and expect to continue to be subject to ongoing tax audits in various jurisdictions and tax authorities have disagreed, and may in the future disagree, with some of our interpretations of taxable law. We regularly assess the likely outcomes of these audits to determine the appropriateness of our tax provisions. However, our judgments may not be sustained on completion of these audits, and the amounts ultimately paid could be different from the amounts previously recorded, which could have a material adverse effect on our results of operations and financial condition.

We face competition, which could adversely affect our business, financial condition, results of operations and cash flow.

We are faced with a number of competitors worldwide in the markets in which we operate. Some of our competitors in our markets may have substantially greater financial, marketing, technological and other resources than we do and may in the future engage in aggressive pricing action to compete with us or develop products and services that are superior to or that achieve greater market acceptance than our products and services. Although we believe we are currently able to compete effectively in each of the various markets in which we participate, we may not be able to do so in the future or be capable of maintaining or further increasing our current market share. Our failure to compete successfully in our various markets could adversely affect our business, financial condition, results of operations and cash flow.
We are currently subject to shareholder litigation, and may become subject to additional shareholder litigation, antitrust litigation or government investigations in the future, any of which may result in an award of money damages or force us to change the way we do business.

In the past, certain of our business practices have been investigated by government antitrust or competition agencies, have been the subject of shareholder litigation, and we have been sued by private parties for alleged violations of the antitrust and competition laws of certain jurisdictions. We have changed certain of our business practices to reduce the likelihood of future litigation. Although each of these material prior legal actions have been resolved, there is a risk based upon the leading position of certain of our business operations that we could, in the future, be the target of investigations by government entities or actions by private parties challenging the legality of our business practices. We are subject to allegations, claims and legal actions arising in the ordinary course of business. In addition, we are currently subject to securities litigation, which we discuss in greater detail below under “Item 3. Legal Proceedings” and Note 17–Commitments and Contingencies to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The outcome of many of these proceedings cannot be predicted. If any proceedings, inspections or investigations were to be determined adversely against us or result in legal actions, claims, regulatory proceedings, enforcement actions, or judgments, fines, or settlements involving a payment of material sums of money, or if injunctive relief were issued against us, we may be required to change the way we do business and our business, financial condition and results of operations could be materially adversely affected. Even the successful defense of legal proceedings may cause us to incur substantial legal costs and may divert management’s attention and resources.

Our ability to successfully manage ongoing organizational changes could impact our business results.

As we have in prior years, we continue to execute a number of significant business and organizational changes, including operating reorganizations, acquisition integration and divestitures to improve productivity and create efficiencies to support our growth strategies. We expect these types of changes, which may include many staffing adjustments as well as employee departures, to continue for the foreseeable future. Successfully managing these changes, including the identification, engagement and development and retention of key employees to provide uninterrupted leadership and direction for our business, is critical to our success. This includes developing organization capabilities in specific markets, businesses and functions where there is increased demand for specific skills or experiences. Finally, our financial targets assume a consistent level of productivity improvement. If we are unable to deliver expected productivity improvements, while continuing to invest in business growth, our financial results could be adversely impacted.

If we are unable to attract, retain and engage employees, we may not be able to compete effectively and will not be able to expand our business.

Our success and ability to grow is dependent, in part, on our ability to hire, retain and engage sufficient numbers of talented people, with the increasingly diverse skills needed to serve clients and expand our business, in many locations around the world. Competition for highly qualified, specialized technical, managerial, and particularly consulting personnel is intense. Changes to U.S. or other immigration policies that restrain the flow of professional talent may also inhibit our ability to staff our offices or projects. Further, as a result of our review of strategic alternatives, we may suffer increased attrition. Recruiting, training and retention costs and benefits place significant demands on our resources. The inability to attract qualified employees in sufficient numbers to meet particular demands or the loss of a significant number of our employees could have an adverse effect on us, including our ability to execute on growth initiatives as well as obtain and successfully complete important client engagements and partnerships and thus maintain or increase our revenues.

We have suffered losses due to goodwill impairment charges in the past and could do so in the future.

Goodwill and indefinite-lived intangible assets are subject to annual review for impairment (or more frequently should indications of impairment arise). In addition, other intangible assets are also reviewed for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. During the third quarter of 2019, we recorded a goodwill impairment charge of approximately $1.0 billion. As of December 31, 2019, we had goodwill and intangible assets of $10,874 million. Any downward revisions in the fair value of our reporting units or our intangible assets could result in impairment charges for goodwill and intangible assets that could materially affect our financial performance.

We rely, in part, on acquisitions, joint ventures and other alliances to grow our business and expand our access to technology. If we are unable to complete or integrate acquisitions into our existing operations or successfully develop and maintain joint ventures and other alliances, our growth may be adversely impacted. In addition, the acquisition, integration or divestiture of businesses by us may not produce the expected financial or operating results.

- We have made and expect to continue to make acquisitions or enter into other strategic transactions to strengthen our business and grow our Company. Such transactions present significant challenges and risks.
- The market for acquisition targets and other strategic transactions is highly competitive, especially in light of industry consolidation, which may affect our ability to complete such transactions.
- If we are unsuccessful in completing such transactions at all or within the anticipated time frame or if such opportunities for expansion do not arise, our business, financial condition or results of operations could be materially adversely affected.
• If such transactions are completed, the anticipated growth and other strategic objectives of such transactions may not be fully realized, and a variety of factors may adversely affect any anticipated benefits from such transactions. For instance, the process of integration may require more resources than anticipated, we may assume unintended liabilities, there may be unexpected regulatory and operating difficulties and expenditures, we may fail to retain key personnel of the acquired business, we may fail to combine our businesses with the business of the acquired company in a manner that permits cost savings to be realized and such transactions may divert management’s focus from base strategies and objectives.

• Acquisitions outside of the U.S. increase our exposure to risks associated with foreign operations, including fluctuations in foreign exchange rates and compliance with foreign laws and regulations.

• The anticipated benefits from an acquisition or other strategic transaction may take longer to realize than expected or may not be realized fully. As a result, the failure of acquisitions and other strategic transactions to perform as expected could have a material adverse effect on our business, financial condition or results of operations.

• Despite our past experience, opportunities to grow our business through acquisitions, joint ventures and other alliances may not be available to us in the future. In addition, as a result of our proposed separation of Nielsen Global Connect and the resources and management attention required in connection therewith, there may be more limited resources available for acquisitions and management’s attention is likely to be diverted away from sourcing and developing potential acquisitions and joint venture opportunities, resulting in decreased growth.

**Our results of operations and financial condition could be negatively impacted by our U.S. and non-U.S. pension plans.**

The performance of the financial markets and interest rates impact our plan expenses, plan assets and funding obligations. Changes in market interest rates, decreases in our pension trust assets or investment losses could increase our funding obligations, which would negatively impact our operations and financial condition. In addition we may be subject to potential pressure from pension regulators to accelerate contribution funding in light of the proposed separation of our Global Connect business.

**Ineffective internal controls could impact our business and operating results.**

Our internal control over financial reporting may not prevent or detect misstatements because of its inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. If we fail to maintain the adequacy of our internal controls, including any failure to implement required new or improved controls, or if we experience difficulties in its implementation, our business and operating results could be harmed and we could fail to meet our financial reporting obligations.

**Future legislation, regulations, or policy changes under the current U.S. administration and new Congress could have a material effect on our business and results of operations.**

Future legislation, regulatory changes or policy shifts under the current U.S. administration, could impact our business. Trade issues between the U.S. and several countries could provide a changing and sometimes challenging landscape. In December 2019, the United States, Mexico and Canada signed the amended United States-Mexico-Canada Agreement (the “USMCA”), which, once ratified by all three countries, will replace NAFTA. While the USMCA is generally a positive development for Nielsen, it is currently difficult to predict what affect the USMCA will have on us and if the transition to the new trade agreement will have any negative effects to our business. Existing trade tensions with China and other countries will also provide challenges and marketplace uncertainty to Nielsen and Nielsen’s clients. Nielsen has been granted an exclusion from tariffs on certain products by the Office of the United States Trade Representative, but cannot guarantee the continuation of such exemptions or additional grants of exemptions based on future legislation, regulatory changes or policy shifts in the United States or abroad.

Other possible U.S. legislation and regulation that could have an impact on Nielsen includes comprehensive state and federal privacy legislation and regulation, artificial intelligence policy, the reauthorization of the Satellite Home Viewer Act, government restrictions on manufacturers within Nielsen’s existing supply chain, and the alteration of questions in the U.S. Census and the American Community Survey, which provides a touchstone for Nielsen’s demographics.

The U.S. Treasury will continue to develop rules and regulations emanating from the U.S. Tax Cuts and Jobs Act (“TCJA”). It is still uncertain to the extent how many of its provisions could affect Nielsen. Many members of Congress and Presidential candidates have indicated a desire to roll back the recently reduced corporate rate.

France has passed a proposal to tax digital services. It’s impact to Nielsen's services remain unclear. We believe it is likely other countries will follow suit and also introduce such tax. At this time we cannot predict the scope or nature of these changes or assess what the overall effect of such potential changes could be on our results of operations or cash flows.

Some policy issues, such as tax, privacy and trade, will be risks that span the globe. At this time we cannot predict the scope or nature of these changes or assess what the overall effect of such potential changes could be on our results of operations or cash flows.
Inadvertent use of certain open source software could impose unanticipated limitations upon our ability to commercialize our products and services or subject our proprietary code to public disclosure if not properly managed.

We use certain open source software in our technologies, most often as small components supporting a larger product or service and it is also contained in some third-party software that we license. We also contribute to the open source community in certain circumstances, which then may make it difficult or impossible to maintain proprietary rights in such contributions. There are many types of open source licenses, some of which are quite complex, and most have not been interpreted or adjudicated by U.S. or other courts. Although we do have an open source use policy and practice, inadvertent use of certain open source licenses could impose unanticipated limitations upon our ability to commercialize our products and services or subject our proprietary code to public disclosure if not properly managed. Remediation of such issues may involve licensing the software on less than unfavorable terms or require remedial actions including a need to re-engineer our products and services, either of which could have a material adverse effect on our business.

If our clients experience financial distress, or seek to change or delay payment terms, it could negatively affect our own financial position and results.

We have a large and diverse client and partner base and, at any given time, one or more of our clients or partners may experience financial difficulty, file for bankruptcy protection or go out of business. Unfavorable economic and financial conditions could result in an increase in client financial difficulties that affect us. The direct impact on us could include reduced revenues and write-offs of accounts receivable and expenditures billable to clients, and if these effects were severe, the indirect impact could include impairments of intangible assets, credit facility covenant violations and reduced liquidity.

Failure to meet the financial performance guidance or other forward-looking statements we have provided to the public could result in a decline in our stock price.

We may provide public guidance on our expected financial results or other forward-looking information for future periods. Although we believe that this guidance provides investors and analysts with a better understanding of management's expectations for the future and is useful to our existing and potential shareholders, such guidance is comprised of forward-looking statements subject to the risks and uncertainties described in this Annual Report on Form 10-K and in our other public filings and public statements. Our actual results may not be in line with the guidance we provide. If our financial results for a particular period do not meet our guidance or the expectations of market participants or if we reduce our guidance for future periods, the market price of our common stock may decline.

Design defects, errors, failures or delays associated with our products or services, could negatively impact our business.

Despite testing, software, products and services that we develop, license or distribute may contain errors or defects when first released or when major new updates or enhancements are released that cause the product or service to operate incorrectly or less effectively. Many of our products and services also rely on data and services provided by third-party providers over which we have no control and which may be provided to us with defects, errors or failures. In addition, our data integrity and quality relies on human-led, manual data collection and management processes which may be vulnerable due to human error and complexity of systems, resulting in the need for increased field support to ensure sample representation and prevent unauthorized or excessive access. We may also experience delays while developing and introducing new products and services for various reasons, such as difficulties in licensing data inputs or adapting to particular operating environments. Defects, errors or delays in our products or services that are significant, or are perceived to be significant, could result in rejection or delay in market acceptance, damage to our reputation, loss of revenue, a lower rate of license renewals or upgrades, diversion of development resources, product liability claims or regulatory actions, or increases in service and support costs. We may also need to expend significant capital resources to eliminate or work around defects, errors, failures or delays. In each of these ways, our business, financial condition or results of operations could be materially adversely impacted.

USD-Libor, which today is an important interest rate determinant for the majority of our debt under our credit facility and our interest rate swaps, will likely not exist as a market reference rate after 2021.

In July 2017, the Financial Conduct Authority (the authority that regulates LIBOR) announced it intends to stop compelling banks to submit rates for the calculation of LIBOR after 2021. The Alternative Reference Rates Committee ("ARRC") has proposed that the Secured Overnight Financing Rate ("SOFR") is the rate that represents best practice as the alternative to USD-LIBOR for use in derivatives and other financial contracts that are currently indexed to USD-LIBOR. ARRC has proposed a market transition to SOFR from USD-LIBOR and organizations are currently working on industry wide transition plans. The Company has material debt and interest rate hedging contracts that are indexed to USD-LIBOR and is monitoring this activity and evaluating the related risks.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties
We lease property in over 400 locations worldwide. We also own three properties worldwide presently consisting of (vacant land in Oldsmar, Florida); Sao Paulo Brazil; and Athens, Greece. Our leased property includes offices in New York, New York; Oldsmar, Florida; Chicago, Illinois; and Markham, Canada. We are subject to certain covenants including the requirement that we meet certain conditions in the event we merge into or convey, lease, transfer or sell our properties or assets as an entirety or substantially as an entirety to, any person or persons, in one or a series of transactions.

Item 3. Legal Proceedings

In August 2018, a putative shareholder class action lawsuit was filed in the Southern District of New York, naming as defendants Nielsen, former Chief Executive Officer Dwight Mitchell Barns, and former Chief Financial Officer Jamere Jackson. Another lawsuit, which alleged similar facts but also named other Nielsen officers, was filed in the Northern District of Illinois in September 2018 and transferred to the Southern District of New York in December 2018. The actions were consolidated on April 22, 2019, and the Public Employees’ Retirement System of Mississippi was appointed lead plaintiff for the putative class. The operative complaint was filed on September 27, 2019, and asserts violations of certain provisions of the Securities Exchange Act of 1934, as amended, based on allegedly false and materially misleading statements relating to the outlook of Nielsen’s Buy (now “Connect”) segment, the Company’s preparedness for changes in global data privacy laws and Nielsen’s reliance on third-party data. The Company moved to dismiss the operative complaint on November 26, 2019. Briefing of the Company’s motion is scheduled to conclude on February 26, 2020. In addition, in January 2019, a shareholder derivative lawsuit was filed in New York Supreme Court against a number of Nielsen’s current and former officers and directors. The derivative lawsuit alleges that the named officers and directors breached their fiduciary duties to Nielsen in connection with factual assertions substantially similar to those in the putative class action complaints. The derivative lawsuit further alleges that certain officers and directors engaged in trading Nielsen stock based on material, nonpublic information. By agreement dated June 26, 2019, the derivative lawsuit has been stayed pending resolution of the Company’s motion to dismiss the aforementioned securities litigation. Nielsen intends to defend these lawsuits vigorously. Based on currently available information, Nielsen believes that the Company has meritorious defenses to these actions and that their resolution is not likely to have a material adverse effect on Nielsen’s business, financial position, or results of operations.

Nielsen is subject to litigation and other claims in the ordinary course of business, some of which include claims for substantial sums. Accruals have been recorded when the outcome is probable and can be reasonably estimated. While the ultimate results of claims and litigation cannot be determined, the Company does expect that the ultimate disposition of these matters will not have a material adverse effect on its operations or financial condition. However, depending on the amount and the timing, an unfavorable resolution of some or all of these matters could materially affect the Company’s future results of operations or cash flows in a particular period.

Item 4. Mine Safety Disclosures

Not Applicable.
PART II

Item 5. Market for Registrant’s Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities

Our common stock is listed on the New York Stock Exchange and is traded under the symbol “NLSN.” At the close of business on February 1, 2020, there was one shareholder of record. We believe that the number of beneficial owners is substantially greater than the number of record holders because a large portion of our common stock is held in “street name” by brokers.

Dividends

In January 2013, our Board of Directors (the “Board”) adopted a cash dividend policy with the intent to pay quarterly cash dividends on our outstanding common stock. Any decision to declare and pay dividends is made at the discretion of our Board and is subject to the Board’s continuing determination that the dividend policy and the declaration of dividends thereunder are in the best interests of our shareholders and are in compliance with all laws and agreements to which we are subject.

On November 3, 2019 the Board approved a plan to reduce the quarterly cash dividend, with the goal of strengthening Nielsen’s balance sheet and providing added flexibility to invest for growth. On February 20, 2020, the Board declared a cash dividend of $0.06 per share on our common stock. The dividend is payable on March 19, 2020 to shareholders of record at the close of business on March 5, 2020.

Purchases of Equity Securities by the Issuer

Our Board has approved a share repurchase program, as included in the below table, for up to $2 billion in the aggregate of our outstanding common stock. The primary purpose of the program is to return value to shareholders and to mitigate dilution associated with our equity compensation plans.

<table>
<thead>
<tr>
<th>Board Approval</th>
<th>Share Repurchase Authorization ($ in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 25, 2013</td>
<td>$500</td>
</tr>
<tr>
<td>October 23, 2014</td>
<td>$1,000</td>
</tr>
<tr>
<td>December 11, 2015</td>
<td>$500</td>
</tr>
<tr>
<td>Total Share Repurchase Authorization</td>
<td>$2,000</td>
</tr>
</tbody>
</table>

Repurchases under this program will be made in accordance with applicable securities laws from time to time in the open market or otherwise depending on our evaluation of market conditions and other factors. This program has been executed within the limitations of the authority granted by our shareholders.

During the fourth quarter 2019, there was no activity for share repurchases:

Unregistered Sales of Company Securities

None

United Kingdom tax consequences for holders of common stock

The United Kingdom tax consequences discussed below do not reflect a complete analysis or listing of all the possible United Kingdom tax consequences that may be relevant to holders of our common stock. Furthermore, the statements below only apply to holders of our common stock who are resident for tax purposes outside of the United Kingdom.

Investors should consult their own tax advisors in respect of the tax consequences related to receipt, ownership, purchase or sale or other disposition of our common stock.
United Kingdom withholding tax

Under current law, the Company is not required to make any deduction or withholding for or on account of United Kingdom tax from dividends distributed on our common stock, irrespective of the tax residence or individual circumstances of the recipient shareholder.

United Kingdom income tax on dividends

A non-United Kingdom tax resident holder of our common stock will not be subject to United Kingdom income taxes on dividend income and similar distributions in respect of our shares, unless the shares are attributable to a permanent establishment or a fixed place of business maintained in the United Kingdom by such non-U.K. holder.

Disposition of Nielsen Shares

Holders of our common stock who are neither resident for tax purposes in the United Kingdom nor holding the common stock in connection with a trade carried on through a permanent establishment in the United Kingdom will not be subject to any United Kingdom taxes on chargeable gains as a result of any disposals of their common stock.

Common stock held outside the facilities of The Depository Trust Company ("DTC") should be treated as U.K. situs assets for the purpose of U.K. inheritance tax.

Stamp duty and stamp duty reserve tax ("SDRT")

Stamp duty and/or SDRT are imposed in the United Kingdom on certain transfers of securities (including shares in companies which, like us, are incorporated in the United Kingdom) at a rate of 0.5% of the consideration paid for the transfer. Certain transfers of shares to depositaries or into clearance systems are charged a higher rate of 1.5%. Transfers of interests in shares within a depositary or clearance system, and from a depositary to a clearance system, are generally exempt from stamp duty and SDRT.

Transfers of our common stock held in book entry form through the facilities of DTC will not attract a charge to stamp duty or SDRT in the United Kingdom provided no instrument of transfer is entered into (which should not be necessary).

Any transfer of, or agreement to transfer, our common stock that occurs outside the DTC system, including repurchases by us, will ordinarily attract stamp duty or SDRT at a rate of 0.5%. This duty must be paid (and where applicable the transfer document stamped by Her Majesty's Revenue and Customs ("HMRC") before the transfer can be registered in our books. Typically this stamp duty or SDRT would be paid by the purchaser of the common stock.

A transfer of title in our common stock from within the DTC system out of the DTC system will not attract stamp duty or SDRT if undertaken for no consideration. If that common stock is redeposited into DTC (which may only be done via a deposit of the common stock first with an appropriate offshore depositary followed by a transfer of the common stock from the offshore depositary into DTC), however, the redeposit will attract stamp duty or SDRT at a rate of 1.5%.

Investors should therefore note that the withdrawal of our common stock from the DTC system, or any transfers outside the DTC system, are likely to cause additional costs and delays in disposing of their common stock than would be the case if they hold our common stock in book entry form through the DTC system.
Item 6. Selected Financial and Other Data

The following table sets forth selected historical consolidated financial data as of the dates and for the periods indicated. The selected consolidated statement of operations data for the years ended December 31, 2019, 2018 and 2017, and selected consolidated balance sheet data as of December 31, 2019 and 2018 have been derived from our audited consolidated financial statements and related notes appearing elsewhere in this Form 10-K. The selected consolidated statement of operations data for the years ended December 31, 2016 and 2015 and selected consolidated balance sheet data as of December 31, 2017, 2016 and 2015 have been derived from our audited consolidated financial statements, which are not included in this annual report on Form 10-K.

The results of operations for any period are not necessarily indicative of the results to be expected for any future period. The audited consolidated financial statements, from which the historical financial information for the periods set forth below have been derived, were prepared in accordance with U.S. generally accepted accounting principles (“GAAP”). The selected historical consolidated financial data set forth below should be read in conjunction with, and are qualified by reference to “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our audited consolidated financial statements and related notes thereto appearing elsewhere in this annual report on Form 10-K.

### Statement of Operations Data:

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
<th>2019(1)</th>
<th>2018(2)</th>
<th>2017(3)</th>
<th>2016(4)</th>
<th>2015(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$6,498</td>
<td>$6,515</td>
<td>$6,572</td>
<td>$6,309</td>
<td>$6,172</td>
</tr>
<tr>
<td>Depreciation and amortization(6)</td>
<td>756</td>
<td>675</td>
<td>640</td>
<td>603</td>
<td>574</td>
</tr>
<tr>
<td>Operating income/(loss)</td>
<td>(93)</td>
<td>(475)</td>
<td>1,214</td>
<td>1,130</td>
<td>1,098</td>
</tr>
<tr>
<td>Interest expense</td>
<td>397</td>
<td>394</td>
<td>374</td>
<td>333</td>
<td>311</td>
</tr>
<tr>
<td>Income/(loss) from continuing operations</td>
<td>(403)</td>
<td>(700)</td>
<td>440</td>
<td>507</td>
<td>575</td>
</tr>
<tr>
<td>Income/(loss) from continuing operations per common share (basic)</td>
<td>(1.17)</td>
<td>(2.00)</td>
<td>1.20</td>
<td>1.40</td>
<td>1.55</td>
</tr>
<tr>
<td>Income/(loss) from continuing operations per common share (diluted)</td>
<td>(1.17)</td>
<td>(2.00)</td>
<td>1.20</td>
<td>1.39</td>
<td>1.54</td>
</tr>
<tr>
<td>Cash dividends declared per common share</td>
<td>1.11</td>
<td>1.39</td>
<td>1.33</td>
<td>1.21</td>
<td>1.09</td>
</tr>
</tbody>
</table>

### Balance Sheet Data:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>$14,319</td>
<td>$15,179</td>
<td>$16,866</td>
<td>$15,730</td>
<td>$15,303</td>
</tr>
<tr>
<td>Long-term debt including finance leases</td>
<td>$8,309</td>
<td>$8,387</td>
<td>$8,441</td>
<td>$7,926</td>
<td>$7,338</td>
</tr>
</tbody>
</table>

---

(1) Loss for the year ended December 31, 2019 included $1,004 million in impairment charges associated with our Connect reporting unit, a non-cash expense of $170 for the settlement of certain pension plans and $80 million in restructuring charges. See Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Goodwill and Indefinite-Lived Intangible Asset”. See Note 11 “Pensions and Other Post-Retirement Benefits” for further discussion on the pension settlement charge.

(2) Loss for the year ended December 31, 2018 included $1,411 million in impairment charges associated with our Connect reporting unit and $139 million in restructuring charges. See Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Goodwill and Indefinite-Lived Intangible Assets”.

(3) Income for the year ended December 31, 2017 included $80 million in restructuring charges.

(4) Income for the year ended December 31, 2016 included $105 million in restructuring charges.

(5) Income for the year ended December 31, 2015 included $51 million in restructuring charges, a gain of $158 million recorded from the step acquisition of Nielsen Catalina Solutions and an $8 million charge associated with the change to the Venezuelan currency exchange rate mechanism.

(6) Depreciation and amortization expense included charges for the depreciation and amortization of tangible and intangible assets acquired in business combinations of $205 million, $220 million, $219 million, $210 million and $205 million for the years ended December 31, 2019, 2018, 2017, 2016 and 2015, respectively.
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Introduction

The following discussion and analysis should be read together with the accompanying consolidated financial statements and related notes thereto. Further, this report may contain material that includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that reflect, when made, Nielsen’s current views with respect to current events and financial performance. These forward-looking statements are subject to numerous risks and uncertainties, including, but not limited to, those described in “Item 1A. Risk Factors.” Statements, other than those based on historical facts, which address activities, events or developments that we expect or anticipate may occur in the future are forward-looking statements. Such forward-looking statements are and will be, as the case may be, subject to many risks, uncertainties and factors relating to Nielsen’s operations and business environment that may cause actual results to be materially different from any future results, express or implied, by such forward-looking statements. See “Cautionary Statement Regarding Forward-Looking Statements” in Part I of this Annual Report on Form 10-K. The terms “Company,” “Nielsen,” “we,” “our” or “us,” as used herein, refer to Nielsen Holdings plc and each of its consolidated subsidiaries unless otherwise stated or indicated by context.

Background and Executive Summary

We are a leading global measurement and data analytics company that provides clients with a comprehensive understanding of consumers and consumer behavior. Our approach marries our proprietary data with other data sources to help clients around the world understand what's happening now, what's happening next, and how to best act on this knowledge. For more than 90 years we have provided data and analytics based on scientific rigor and innovation, continually developing new ways to answer the most important questions facing the media, advertising, retail and fast-moving consumer goods industries. We have a presence in more than 100 countries, including many emerging markets, and hold leading market positions in many of our services and geographies.

We believe that important measures of our results of operations include revenue, operating income/(loss) and Adjusted EBITDA (defined below). Our long-term financial objectives include consistent revenue growth and expanding operating margins. Accordingly, we are focused on geographic market and service offering expansion to drive revenue growth and improve operating efficiencies, including effective resource utilization, information technology leverage and overhead cost management.

Our business strategy is built upon a model that has traditionally yielded consistent revenue performance. Typically, before the start of each year, more than 70% of our annual revenue has been committed under contracts in our combined Nielsen Global Connect (“Connect”) and Nielsen Global Media (“Media”) segments, which provides us with a greater degree of stability for our revenue and allows us to more effectively manage our profitability and cash flows. See “Business Segment Overview” below for further discussion. We continue to look for growth opportunities through global expansion, specifically within emerging markets, as well as through the cross-platform expansion of our analytical services and measurement services.

On November 3, 2019, our Board of Directors completed its strategic review and approved a plan to spin-off our Global Connect business, creating two independent, publicly traded companies - the Global Media business and the Global Connect business - each of which will have sharper strategic focus and greater opportunity to leverage its unique competitive advantages.

Our restructuring and other productivity initiatives have been focused on a combination of improving operating leverage through targeted cost-reduction programs, business process improvements and portfolio restructuring actions, while at the same time investing in key programs to enhance future growth opportunities.

Achieving our business objectives requires us to manage a number of key risk areas. Our growth objective of geographic market and service expansion requires us to maintain the consistency and integrity of our information and underlying processes on a global scale, and to invest effectively our capital in technology and infrastructure to keep pace with our clients’ demands and our competitors. Core to managing these key risk areas is our commitment to data privacy and security as it drives our ability to deliver quality insights for our clients in line with evolving regulatory requirements and governing standards across all the geographies and industries in which we operate. Our operating footprint across more than 100 countries requires disciplined global and local resource management of internal and third party providers to ensure success. In addition, our high level of indebtedness requires active management of our debt profile, with a focus on underlying maturities, interest rate risk, liquidity and operating cash flows.
Business Segment Overview

Prior to February 2019, we were aligned into two reporting segments: what consumers buy (“Buy”) and what consumers read, watch and listen to (“Watch”). In February 2019, we realigned our business segments from Buy and Watch to Connect and Media. Each segment operates as a complete unit—from the conception of a product, through the collection of the data, into the technology and operations, all the way to the data being sold and delivered to the client. Our Connect and Media segments are built on a foundation of proprietary data assets that are designed to yield essential insights for our clients to successfully measure, analyze and grow their businesses. Our segments each consist of two categories: Measure and Predict / Activate in Connect and Audience Measurement and Plan / Optimize in Media. These categories are based on our core measurement platforms in both Connect and Media, while Predict / Activate and Plan / Optimize are designed to build on our measurement capabilities to enhance client decision-making. These changes better align our external view to our go-forward internal view. Our reportable segments are stated on the new basis and such changes were retrospectively applied. The impact of these changes did not have a material impact on our condensed consolidated financial statements or segment results.

Our Connect segment provides measurement services, which include our core tracking and scan data (primarily transactional measurement data and consumer behavior information), and analytical services to businesses in the consumer packaged goods industry. Our services also enable our clients to better manage their brands, uncover new sources of demand, launch and grow new products, analyze their sales and establish more effective consumer relationships. Our data is used by our clients to measure their market share, tracking billions of sales transactions per month in retail outlets around the world. Our extensive database of retail and consumer information, combined with our advanced analytical capabilities, helps generate strategic insights that influence our clients’ key business decisions.

Our Media segment provides viewership and listening data and analytics primarily to the media and advertising industries for television, radio, digital and mobile viewing and listening platforms. Our Media data is used by our media clients to understand their audiences, establish the value of their advertising inventory and maximize the value of their content, and by our advertising clients to plan and optimize their spending.

Certain corporate costs, including those related to selling, finance, legal, human resources, and information technology systems, are considered operating costs and are allocated to our segments based on either the actual amount of costs incurred or on a basis consistent with the operations of the underlying segment.

Critical Accounting Policies

The discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”). The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses and the related disclosure of contingent assets and liabilities. The most significant of these policies relate to: revenue recognition; business combinations including purchase price allocations; accruals for pension costs and other post-retirement benefits; accounting for income taxes; and valuation of long-lived assets including goodwill and indefinite-lived intangible assets, computer software and share-based compensation. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the valuation of assets and liabilities that are not readily apparent from other sources. We evaluate these estimates on an ongoing basis. Actual results could vary from these estimates under different assumptions or conditions. For a summary of the significant accounting policies, including the critical accounting policies discussed below, see Note 1 – “Description of Business, Basis of Presentation and Significant Accounting Policies” – to our consolidated financial statements.

Revenue Recognition

On January 1, 2018, we adopted Accounting Standards Codification (“ASC”) 606, Revenue from Contracts with Customers, using the modified retrospective method. The ASC has been applied to all contracts as of the date of adoption. There was no impact on our financial statements as a result of this adoption.

Revenue is measured based on the consideration specified in a contract with a customer. We recognizes revenue when it satisfies a performance obligation by transferring control of a product or service to a customer, which generally occurs over time. Substantially all of our customer contracts are non-cancelable and non-refundable.
The following is a description of principal activities, by reportable segment, from which we generate its revenues.

Revenue from the Connect segment consists primarily of measurement services, which include our core tracking and scan data (primarily transactional measurement data and consumer behavior information) to businesses in the consumer packaged goods industry. Our data is used by its clients to measure their market share, tracking billions of sales transactions per month in retail outlets around the world. Revenues for these services are recognized over the period during which the performance obligations are satisfied as the customer receives and consumes the benefits provided us and control of the services are transferred to the customer.

We also provide consumer intelligence and analytical services that help clients make smarter business decisions throughout their product development and marketing cycles. Our performance under these arrangements do not create an asset with an alternative use to us and generally include an enforceable right to payment for performance completed to date, as such, revenue for these services is typically recognized over time. Revenue for contracts that do not include an enforceable right to payment for performance completed to date is recognized at a point in time when the performance obligation is satisfied, generally upon delivery of the services, and when control of the service is transferred to the customer.

Revenue from our Media segment is primarily generated from television, radio, digital and mobile audience measurement services and analytics which are used by our media clients to establish the value of airtime and more effectively schedule and promote their programming and our advertising clients to plan and optimize their spending. As the customer simultaneously receives and consumes the benefits provided by our performance, revenues for these services are recognized over the period during which the performance obligations are satisfied and control of the service is transferred to the customer.

We enter into cooperation arrangements with certain customers, under which the customer provides us with its data in exchange for our services. We record these transactions at fair value, which is determined based on the fair value of goods or services received, if reasonably estimable. If not reasonably estimable, we consider the fair value of the goods or services surrendered.

**Share-based Compensation**

**Expense Recognition**

Our share-based compensation programs are comprised of stock options, performance-based stock options, restricted stock units ("RSUs") and performance restricted stock units. We measure the cost of all share-based payments, including stock options, at fair value on the grant date and recognize such costs within the consolidated statements of operations; however, no expense is recognized for share-based payments that do not ultimately vest. We recognize expense associated with share-based payments that vest upon a single date using the straight-line method. For those that vest over time, an accelerated graded vesting is used. We recorded $50 million, $35 million and $45 million of expense associated with share-based compensation for the years ended December 31, 2019, 2018 and 2017, respectively. As of December 31, 2019, the aggregate grant date fair value of all outstanding vested and unvested options was $20 million and $3 million, respectively. As of December 31, 2019, the aggregate grant date fair value of all outstanding vested and unvested performance stock options was $2 million and $2 million, respectively.

As of December 31, 2019, the following amounts of unearned share-based compensation (net of estimated forfeitures) are expected to be recognized: approximately $1 million related to stock options over the next two years, approximately $1 million related to performance stock options over the next two years, approximately $51 million related to unvested RSUs over a weighted average period of 2.8 years and approximately $6 million related to performance restricted stock units over the next two years.

**Fair Value Measurement**

Determining the fair value of share-based awards at the grant date requires considerable judgment. Share-based compensation expense for time-based stock options is primarily based on the estimated grant date fair value using the Black-Scholes option pricing model, which considers factors such as estimating the expected term of stock options, expected volatility of our stock, and the number of share-based awards expected to be forfeited due to future terminations. Some of the critical assumptions used in estimating the grant date fair value are presented in the table below:

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected life (years)</td>
<td>—</td>
<td>6.00</td>
<td>4.50</td>
</tr>
<tr>
<td>Risk-free interest rate</td>
<td>—</td>
<td>2.87%</td>
<td>2.02%</td>
</tr>
<tr>
<td>Expected dividend yield</td>
<td>—</td>
<td>4.97%</td>
<td>3.76%</td>
</tr>
<tr>
<td>Expected volatility</td>
<td>—</td>
<td>25.96%</td>
<td>22.01%</td>
</tr>
<tr>
<td>Weighted-average volatility</td>
<td>—</td>
<td>25.96%</td>
<td>22.01%</td>
</tr>
</tbody>
</table>


Under the Nielsen 2010 Stock Incentive Plan, we granted time and performance based stock options to purchase shares during the year ended December 31, 2018. Share-based compensation expense for the time and performance based stock options is based on the Monte Carlo simulation model which considers factors such as estimating the expected term of stock options, expected volatility of our stock, and the number of share-based awards expected to be forfeited due to future terminations. Some of the critical assumptions used in estimating the grant date fair value are presented in the table below:

```
<table>
<thead>
<tr>
<th>Year Ended December 31, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected life (years)</td>
</tr>
<tr>
<td>Risk-free interest rate</td>
</tr>
<tr>
<td>Expected dividend yield</td>
</tr>
<tr>
<td>Expected volatility</td>
</tr>
<tr>
<td>Weighted-average volatility</td>
</tr>
</tbody>
</table>
```

We consider the historical option exercise behavior of our employees in estimating the expected life of our options granted, which we believe are representative of future behavior. For 2018, expected volatility was based on our historical volatility. For the years ended December 31, 2019 and 2017, there were no time and performance based stock options issued.

In addition, for share-based awards where vesting is dependent upon achieving certain operating performance goals, we estimate the likelihood of achieving the performance goals. The total number of performance restricted share units to be earned is subject to achievement of cumulative performance goals for the three year period. For the 2019 award, fifty percent of the target award will be determined based on the Company’s revenue compounded annual growth rate achievements and fifty percent of the award will be determined based on adjusted earnings per share achievements. There is a relative total shareholder return modifier that can increase or decrease the payout. For the 2018 award, twenty five percent of the target award will be determined based on the Company’s revenue compounded annual growth rate achievements, twenty five percent of the target award will be based on the Company’s relative total shareholder return and fifty percent of the award will be determined based on free cash flow achievements. For the 2017 awards, forty percent of the target award will be determined based on the Company’s relative total shareholder return and sixty percent of the target award will be determined based on free cash flow achievements. The maximum payout is 200% of target. Differences between actual results and these estimates could have a material effect on our financial results.

The assumptions used in calculating the fair value of share-based awards represent our best estimates and, although we believe them to be reasonable, these estimates involve inherent uncertainties and the application of management’s judgment. If factors change and we employ different assumptions in the application of our option-pricing model in future periods or if we experience different forfeiture rates, the compensation expense that is derived may differ significantly from what we have recorded in the current year.

**Cash and Cash Equivalents**

Cash and cash equivalents include cash and short-term, highly liquid investments with an original maturity date of three months or less. Cash and cash equivalents are carried at fair value.

**Goodwill and Indefinite-Lived Intangible Assets**

Goodwill and other indefinite-lived intangible assets are stated at historical cost less accumulated impairment losses, if any.

Goodwill and other indefinite-lived intangible assets, consisting of certain trade names and trademarks, are each tested for impairment on an annual basis and whenever events or circumstances indicate that the carrying amount of such asset may not be recoverable. We review the recoverability of our goodwill by comparing the estimated fair values of reporting units with their respective carrying amounts. We have designated October 1st as the date in which the annual assessment is performed as this timing corresponds with the development of the Company’s formal budget and business plan review.

We established, and continue to evaluate, our reporting units based on our internal reporting structure and define such reporting units at our operating segment level or one level below. The estimates of fair value of a reporting unit are determined using a combination of valuation techniques, primarily by an income approach using a discounted cash flow analysis and supplemented by a market-based approach.
A discounted cash flow analysis requires the use of various assumptions, including expectations of future cash flows, growth rates, discount rates and tax rates in developing the present value of future cash flow projections. Many of the factors used in assessing fair value are outside of the control of management, and these assumptions and estimates can change in future periods. Changes in assumptions or estimates could materially affect the determination of the fair value of a reporting unit, and therefore could affect the amount of potential impairment. The following assumptions are significant to our discounted cash flow analysis:

- **Business projections** – expected future cash flows and growth rates are based on assumptions about the level of business activity in the marketplace as well as applicable cost levels that drive our budget and business plans. The budget and business plans are updated at least annually and are frequently reviewed by management and our Board of Directors. Actual results of operations, cash flows and other factors will likely differ from the estimates used in our valuation, and it is possible that differences and changes could be material. A deterioration in profitability, adverse market conditions and a slower or weaker economic recovery than currently estimated by management could have a significant impact on the estimated fair value of our reporting units and could result in an impairment charge in the future. Should such events or circumstances arise, management would evaluate other options available at that time that, if executed, could result in future profitability.

- **Long-term growth rates** – the assumed long-term growth rate representing the expected rate at which a reporting unit’s earnings stream, beyond that of the budget and business plan period, is projected to grow. These rates are used to calculate the terminal value, or value at the end of the future earnings stream, of our reporting units, and are added to the cash flows projected for the budget and business plan period. The long-term growth rate for each reporting unit is influenced by general market conditions as well as factors specific to the reporting unit such as the maturity of the underlying services. The long-term growth rates we used for each of our reporting units in our 2019 evaluation were between 1.5% and 2.5%.

- **Discount rates** – the reporting unit’s combined future cash flows are discounted at a rate that is consistent with a weighted-average cost of capital that is likely to be used by market participants. The weighted-average cost of capital is our estimate of the overall after-tax rate of return required by equity and debt holders of a business enterprise. The discount rate for each reporting unit is influenced by general market conditions as well as factors specific to the reporting unit. The discount rates we used in our 2019 evaluation of our reporting units were between 10.25% and 11.25%.

These estimates and assumptions vary between each reporting unit depending on the facts and circumstances specific to that unit. We believe that the estimates and assumptions we made are reasonable, but they are susceptible to change from period to period.

We also use a market-based approach in estimating the fair value of our reporting units. The market-based approach utilizes available market comparisons such as indicative industry multiples that are applied to current year revenue and earnings, next year’s revenue and earnings as well as recent comparable transactions.

To validate the reasonableness of the reporting unit fair values, we reconcile the aggregate fair values of our reporting units to our enterprise market capitalization. Enterprise market capitalization includes, among other factors, the market value of our common stock and the appropriate redemption values of our debt.

During the first quarter of 2019, we updated our reporting structure in a manner that changed the composition of our reporting units. The result of this change was combining two of our reporting units into one. Both of these reporting units were in the former Watch reportable segment. The current reporting units are Media and Connect (formerly Watch and Buy), which is the same as our reportable segments. As a result of this change in reporting units, we performed an interim goodwill impairment analysis during the first quarter immediately prior to the change and after the change, and determined that the estimated fair values of the reporting units exceeded their carrying values (including goodwill). As such, there was no impairment as a result of this change.

In connection with our strategic review, we considered various alternatives for us including the potential sale of the Connect business. During this process, there were indications that the fair value of the Connect reporting unit was lower than the carrying value. We considered this as well as other factors to be interim indicators of impairment and determined that it was more likely than not that the Connect reporting unit was impaired. Management performed an updated impairment analysis of Connect as of September 30, 2019. As a result of this analysis, we concluded that the fair value was less than the carrying value and recorded a non-cash goodwill impairment charge of $1,004 million for the Connect reporting unit. The primary inputs for determining the estimated fair value were inputs from the strategic review process, market values for comparable entities and updated intrinsic values.
The following table summarizes the results of the two reporting units that were subject to the October 1, 2019 annual impairment testing and the related goodwill value associated with the reporting units for (a) fair values exceeding carrying values by less than 10%, (b) fair values exceeding carrying values between 10% and 20%, and (c) fair values exceeding carrying values by more than 20%. There was no impairment or indicators of impairment noted in the October 1, 2019 assessment. The table below represents the reporting units goodwill balances as of December 31, 2019.

<table>
<thead>
<tr>
<th>Fair value exceeds carrying value by:</th>
<th>Number of reporting units</th>
<th>Reporting units goodwill (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10% .................................................................</td>
<td>—</td>
<td>$ ..................................................</td>
</tr>
<tr>
<td>10% to 20% .................................................................</td>
<td>1</td>
<td>331 ............................................</td>
</tr>
<tr>
<td>Greater than 20% ....................................................</td>
<td>1</td>
<td>5,662 ..........................................</td>
</tr>
<tr>
<td>Total ..........................................................................</td>
<td>2</td>
<td>$5,993 .......................................</td>
</tr>
</tbody>
</table>

We perform sensitivity analyses on our assumptions, primarily around both long-term growth rate and discount rate assumptions. Our sensitivity analyses include several combinations of reasonably possible scenarios with regard to these assumptions, including a one percent movement in both our long-term growth rate and discount rate assumptions. When applying these sensitivity analyses, we noted that the fair value was greater than the carrying value for both of our reporting units. While management believes that these sensitivity analyses provide a reasonable basis on which to evaluate the recovery of our goodwill, other facts or circumstances may arise that could impact the impairment assessment and therefore these analyses should not be used as a sole predictor of impairment.

The impairment test for other indefinite-lived intangible assets consists of a comparison of the fair value of the intangible asset with its carrying amount. If the carrying amount of the intangible asset exceeds its fair value, an impairment loss is recognized in an amount equal to that excess. The estimates of fair value of trade names and trademarks are determined using a “relief from royalty” discounted cash flow valuation methodology. Significant assumptions inherent in this methodology include estimates of royalty rates and discount rates. Discount rate assumptions are based on an assessment of the risk inherent in the respective intangible assets. Assumptions about royalty rates are based on the rates at which comparable trade names and trademarks are being licensed in the marketplace. There was no impairment noted in any period presented with respect to the Company’s indefinite-lived intangible assets. As of the October 1, 2019 assessment, one of our indefinite-lived intangible assets had a fair value that exceeded its carrying value by less than 10%.

**Pension Costs**

We provide a number of retirement benefits to our employees, including defined benefit pension plans and post-retirement medical plans. Pension costs, in respect of defined benefit pension plans, primarily represent the increase in the actuarial present value of the obligation for pension benefits based on employee service during the year and the interest on this obligation in respect of employee service in previous years, net of the expected return on plan assets. Differences between this expected return and the actual return on these plan assets and actuarial changes are not recognized in the statement of operations, unless the accumulated differences and changes exceed a certain threshold. The excess is amortized and charged to the statement of operations over, at the maximum, the average remaining term of employee service. We recognize obligations for contributions to defined contribution pension plans as expenses in the statement of operations as they are incurred.

The determination of benefit obligations and expenses is based on actuarial models. In order to measure benefit costs and obligations using these models, critical assumptions are made with regard to the discount rate, the expected return on plan assets and the assumed rate of compensation increases. We provide retiree medical benefits to a limited number of participants in the U.S. Therefore, retiree medical care cost trend rates are not a significant driver of our post retirement costs. Management reviews these critical assumptions at least annually. Other assumptions involve demographic factors such as turnover, retirement and mortality rates. Management reviews these assumptions periodically and updates them as necessary.

The discount rate is the rate at which the benefit obligations could be effectively settled. For our U.S. plans, the discount rate is based on a bond portfolio that includes only long-term bonds with an Aa rating, or equivalent, from a major rating agency. For the Dutch and other non-U.S. plans, the discount rate is set by reference to market yields on high-quality corporate bonds. We believe the timing and amount of cash flows related to the bonds in these portfolios are expected to match the estimated payment benefit streams of our plans.
To determine the expected long-term rate of return on pension plan assets, we consider, for each country, the structure of the asset portfolio and the expected rates of return for each of the components. For our U.S. plans, a 50 basis point decrease in the expected return on assets would increase pension expense on our principal plans by approximately $1 million per year. A similar 50 basis point decrease in the expected return on assets for the Company’s Dutch plan would also increase pension expense by approximately $1 million per year. We assumed that the weighted-average of long-term returns on our pension plans were 4.3% for the year ended December 31, 2019, 4.4% for the year ended December 31, 2018 and 4.6% for the year ended December 31, 2017. The expected long-term rate of return is applied to the fair value of pension plan assets. The actual return on plan assets will vary year to year from this assumption. Although the actual return on plan assets will vary from year to year, it is appropriate to use long-term expected forecasts in selecting our expected return on plan assets. As such, there can be no assurance that our actual return on plan assets will approximate the long-term expected forecasts.

During 2019, certain of our pension plans contracted with insurance companies and transferred $632 million of outstanding defined benefit pension obligations and related pension assets for approximately 6,000 retirees and beneficiaries in the Netherlands and UK to these insurance companies. These insurance companies are now required to pay and administer the retirement benefits owed to these retirees and beneficiaries. These transactions have no impact on the amount, timing, or form of the monthly retirement benefit payments to the covered retirees and beneficiaries. These transactions resulted in a non-cash charge to other income/expense of $170 million in our consolidated statements of operations and did not impact cash flows in 2019.

Income Taxes

We have a presence in more than 100 countries, and our effective tax rate is subject to significant variation due to several factors including variability in our pre-tax and taxable income or loss and the mix of jurisdictions to which they relate, intercompany transactions, the applicability of special tax regimes, changes in where or how we do business, acquisitions or dispositions, audit-related developments, and interpretations related to tax, including changes to the global tax framework, competition, and other laws and accounting rules in various jurisdictions. Additionally, our effective tax rate can fluctuate based on the level of pre-tax income or loss. For example, the impact of non-deductible expenses on our effective tax rate is greater when our pre-tax income is lower.

We have completed a number of material acquisitions and divestitures which have generated complex tax issues requiring management to use its judgment to make various tax determinations. We have sought to organize the affairs of our subsidiaries in a tax efficient manner, taking into consideration the jurisdictions in which we operate. Although we are confident that tax returns have been appropriately prepared and filed, there is risk that additional tax may be assessed on certain transactions or that the deductibility of certain expenditures may be disallowed for tax purposes. Our policy is to estimate tax risk to the best of our ability and provide accordingly for those risks and take positions in which a high degree of confidence exists that the tax treatment will be accepted by the tax authorities. The policy with respect to deferred taxation is to provide in full for temporary differences using the liability method.

Deferred tax assets and deferred tax liabilities are computed by assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. The carrying value of deferred tax assets is adjusted by a valuation allowance to the extent that these deferred tax assets are not considered to be realized on a more likely than not basis. Realization of deferred tax assets is based, in part, on our judgment and various factors including reversal of deferred tax liabilities, our ability to generate future taxable income in jurisdictions where such assets have arisen and potential tax planning strategies. Valuation allowances are recorded in order to reduce the deferred tax assets to the amount expected to be realized in the future.

We record a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in a tax return. Such tax positions are, based solely on their technical merits, more likely than not to be sustained upon examination by taxing authorities and reflect the largest amount of benefit, determined on a cumulative probability basis, which is more likely than not to be realized upon settlement with the applicable taxing authority with full knowledge of all relevant information. We recognize interest and penalties, if any, related to unrecognized tax benefits in income tax expense.
**Long-Lived Assets**

We are required to assess whether the value of our long-lived assets, including our buildings, improvements, technical and other equipment, and amortizable intangible assets have been impaired whenever events or changes in circumstances indicate that the carrying amount of the assets might not be recoverable. We do not perform a periodic assessment of assets for impairment in the absence of such information or indicators. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset, a significant change in the extent or manner in which an asset is used or a significant adverse change that would indicate that the carrying amount of an asset or group of assets is not recoverable. Recoveryability of assets that are held and used is measured by comparing the sum of the future undiscounted cash flows expected to be derived from an asset (or a group of assets) to their carrying value. If the carrying value of the asset (or the group of assets) exceeds the sum of the future undiscounted cash flows, impairment is considered to exist. If impairment is considered to exist based on undiscounted cash flows, the impairment charge is measured using an estimation of the assets’ fair value, typically using a discounted cash flow method. The identification of impairment indicators, the estimation of future cash flows and the determination of fair values for assets (or groups of assets) requires us to make significant judgments concerning the identification and validation of impairment indicators, expected cash flows and applicable discount rates. These estimates are subject to revision as market conditions and our assessments change.

We capitalize software development costs with respect to major internal use software initiatives or enhancements. The costs are capitalized from the time that the preliminary project stage is completed, and we consider it probable that the software will be used to perform the function intended until the time the software is placed in service for its intended use. Once the software is placed in service, the capitalized costs are generally amortized over periods of three to seven years. If events or changes in circumstances indicate that the carrying value of software may not be recovered, a recoverability analysis is performed based on estimated undiscounted cash flows to be generated from the software in the future. If the analysis indicates that the carrying value is not recoverable from future cash flows, the software cost is written down to estimated fair value and an impairment is recognized. These estimates are subject to revision as market conditions and as our assessments change. No impairment indicators were noted for other long-lived assets for the years ended December 31, 2019 and 2018. The Company’s impairment assessments resulted in the recognition of a non-cash self-developed software asset impairment charge of $2 million during the fourth quarter of 2018.

**Factors Affecting Nielsen’s Financial Results**

**Acquisitions, Dispositions and Investments in Affiliates**

**Acquisitions**

For the year ended December 31, 2019, we paid cash consideration of $61 million associated with current period acquisitions, net of cash acquired. Had these 2019 acquisitions occurred as of January 1, 2019, the impact on our consolidated results of operations would not have been material.

For the year ended December 31, 2018, we paid cash consideration of $43 million associated with both current period and previously executed acquisitions, net of cash acquired. Had these 2018 acquisitions occurred as of January 1, 2018, the impact on our consolidated results of operations would not have been material.

For the year ended December 31, 2017, including Gracenote, we paid cash consideration of $778 million associated with both current period and previously executed acquisitions, net of cash acquired. Had these 2017 acquisitions occurred as of January 1, 2017, the impact on our consolidated results of operations would not have been material.

**Foreign Currency**

Our financial results are reported in U.S. dollars and are therefore subject to the impact of movements in exchange rates on the translation of the financial information of individual businesses whose functional currencies are other than U.S. dollars. Our principal foreign exchange revenue exposure is spread across several currencies, primarily the Euro. The table below sets forth the profile of our revenue by principal currency.

<table>
<thead>
<tr>
<th></th>
<th>Year ended December 31, 2019</th>
<th>Year ended December 31, 2018</th>
<th>Year ended December 31, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Dollar</td>
<td>58%</td>
<td>57%</td>
<td>59%</td>
</tr>
<tr>
<td>Euro</td>
<td>10%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Other Currencies</td>
<td>32%</td>
<td>32%</td>
<td>31%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
As a result, fluctuations in the value of foreign currencies relative to the U.S. dollar impact our operating results. Impacts associated with fluctuations in foreign currency are discussed in more detail under “Item 7A.—Quantitative and Qualitative Disclosures about Market Risk.” In countries with currencies other than the U.S. dollar, assets and liabilities are translated into U.S. dollars using end-of-period exchange rates; revenues, expenses and cash flows are translated using average rates of exchange. The average U.S. dollar to Euro exchange rate was $1.12 to €1.00, $1.18 to €1.00 and $1.13 to €1.00 for the years ended December 31, 2019, 2018 and 2017, respectively. Constant currency growth rates used in the following discussion of results of operations eliminate the impact of year-over-year foreign currency fluctuations.

We evaluate our results of operations on both an as reported and a constant currency basis. The constant currency presentation, which is a non-GAAP financial measure, excludes the impact of year-over-year fluctuations in foreign currency exchange rates. We believe providing constant currency information provides valuable supplemental information regarding our results of operations, thereby facilitating period-to-period comparisons of our business performance and is consistent with how management evaluates the Company’s performance. We calculate constant currency percentages by converting our prior-period local currency financial results using the current period exchange rates and comparing these adjusted amounts to our current period reported results. This calculation may differ from similarly-titled measures used by others and, accordingly, the constant currency presentation is not meant to be a substitution for recorded amounts presented in conformity with GAAP nor should such amounts be considered in isolation.

Operations in Argentina

We have operations in both the Connect and Media segments in Argentina and the functional currency for those operations is the Argentine Peso. In accordance with U.S. GAAP, Argentina’s currency has been considered hyperinflationary since July 1, 2018, and, accordingly, local currency transactions have been denominated in U.S. dollars since July 1, 2018, and will continue to be denominated in U.S. dollars until Argentina’s currency is no longer deemed to be hyperinflationary. We will continue to assess the appropriate conversion rate based on events in Argentina and our Argentina operations. This event has had an immaterial impact on our condensed consolidated financial statements.

Results of Operations – Years Ended December 31, 2019, 2018 and 2017

The following table sets forth, for the periods indicated, the amounts included in our consolidated statements of operations:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Revenues</td>
<td>$ 6,498</td>
</tr>
<tr>
<td>Cost of revenues, exclusive of depreciation and amortization shown separately below</td>
<td>2,822</td>
</tr>
<tr>
<td>Selling, general and administrative expenses, exclusive of depreciation and amortization shown separately below</td>
<td>1,929</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>756</td>
</tr>
<tr>
<td>Impairment of goodwill and other long-lived assets</td>
<td>1,004</td>
</tr>
<tr>
<td>Restructuring charges</td>
<td>80</td>
</tr>
<tr>
<td>Operating income/(loss)</td>
<td>(93)</td>
</tr>
<tr>
<td>Interest income</td>
<td>6</td>
</tr>
<tr>
<td>Interest expense</td>
<td>(397)</td>
</tr>
<tr>
<td>Foreign currency exchange transaction gains/(losses), net</td>
<td>(10)</td>
</tr>
<tr>
<td>Other income/(expense), net</td>
<td>(169)</td>
</tr>
<tr>
<td>Income/(loss) before income taxes and equity in net income/(loss) of affiliates</td>
<td>(663)</td>
</tr>
<tr>
<td>Benefit/(provision) for income taxes</td>
<td>260</td>
</tr>
<tr>
<td>Net income/(loss)</td>
<td>(403)</td>
</tr>
<tr>
<td>Net income/(loss) attributable to noncontrolling interests</td>
<td>12</td>
</tr>
<tr>
<td>Net income/(loss) attributable to Nielsen shareholders</td>
<td>$(415)</td>
</tr>
</tbody>
</table>
Net Income to Adjusted EBITDA Reconciliation

We define Adjusted EBITDA as net income or loss from our consolidated statements of operations before interest income and expense, income taxes, depreciation and amortization, restructuring charges, impairment of goodwill and other long-lived assets, share-based compensation expense and other non-operating items from our consolidated statements of operations as well as certain other items considered outside the normal course of our operations specifically described below.

Restructuring charges: We exclude restructuring expenses, which primarily include employee severance, office consolidation and contract termination charges, from our Adjusted EBITDA to allow more accurate comparisons of the financial results to historical operations and forward-looking guidance. By excluding these expenses from our non-GAAP measures, we are better able to evaluate our ability to utilize our existing assets and estimate the long-term value these assets will generate for us. Furthermore, we believe that the adjustments of these items more closely correlate with the sustainability of our operating performance.

Impairment of goodwill and other long-lived assets: We exclude the impact of charges related to the impairment of goodwill and other long-lived assets. Given the significance of the impairment of goodwill and other long-lived assets, we reported it separately in the consolidated statements of operations. We believe that the exclusion of these impairments, which are non-cash, allows for meaningful comparisons of operating results to peer companies. We believe that this increases period-to-period comparability and is useful to evaluate the performance of the total company.

Share-based compensation expense: We exclude the impact of costs relating to share-based compensation. Due to the subjective assumptions and a variety of award types, we believe that the exclusion of share-based compensation expense, which is typically non-cash, allows for more meaningful comparisons of our operating results to peer companies. Share-based compensation expense can vary significantly based on the timing, size and nature of awards granted.

Other non-operating income/(expense), net: We exclude foreign currency exchange transaction gains and losses, primarily related to intercompany financing arrangements, as well as other non-operating income and expense items, such as gains and losses recorded on business combinations or dispositions, sales of investments, pension settlements, net income/(loss) attributable to noncontrolling interests and early redemption payments made in connection with debt refinancing. We believe that the adjustments of these items more closely correlate with the sustainability of our operating performance.

Other items: To measure operating performance, we exclude certain expenses and gains that arise outside the ordinary course of our operations. Such costs primarily include legal settlements, acquisition related expenses, business optimization costs and other transactional costs. We believe the exclusion of such amounts allows management and the users of the financial statements to better understand our financial results.

Adjusted EBITDA is not a presentation made in accordance with GAAP, and our use of the term Adjusted EBITDA may vary from the use of similarly-titled measures by others in our industry due to the potential inconsistencies in the method of calculation and differences due to items subject to interpretation. Adjusted EBITDA margin is Adjusted EBITDA for a particular period expressed as a percentage of revenues for that period.

We use Adjusted EBITDA to measure our performance from period to period both at the consolidated level as well as within our operating segments, to evaluate and fund incentive compensation programs and to compare our results to those of our competitors. In addition to Adjusted EBITDA being a significant measure of performance for management purposes, we also believe that this presentation provides useful information to investors regarding financial and business trends related to our results of operations and that when non-GAAP financial information is viewed with GAAP financial information, investors are provided with a more meaningful understanding of our ongoing operating performance.

Adjusted EBITDA should not be considered as an alternative to net income or loss, operating income/(loss), cash flows from operating activities or any other performance measures derived in accordance with GAAP as measures of operating performance or cash flows as measures of liquidity. Adjusted EBITDA has important limitations as an analytical tool and should not be considered in isolation or as a substitute for analysis of our results as reported under GAAP. In addition, our definition of Adjusted EBITDA may not be comparable to similarly titled measures of other companies and may, therefore, have limitations as a comparative analytical tool.
The below table presents a reconciliation from net income/(loss) to Adjusted EBITDA for the years ended December 31, 2019, 2018 and 2017:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Net income/(loss) attributable to Nielsen shareholders</td>
<td>$(415)</td>
</tr>
<tr>
<td>Interest expense, net</td>
<td>391</td>
</tr>
<tr>
<td>(Benefit)/provision for income taxes</td>
<td>(260)</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>756</td>
</tr>
<tr>
<td>EBITDA</td>
<td>472</td>
</tr>
<tr>
<td>Other non-operating (income)/expense, net(b)</td>
<td>191</td>
</tr>
<tr>
<td>Restructuring charges</td>
<td>80</td>
</tr>
<tr>
<td>Impairment of goodwill and other long-lived assets</td>
<td>1,004</td>
</tr>
<tr>
<td>Share-based compensation expense</td>
<td>50</td>
</tr>
<tr>
<td>Other items(a)</td>
<td>56</td>
</tr>
<tr>
<td>Adjusted EBITDA</td>
<td>$1,853</td>
</tr>
</tbody>
</table>

(a) For the years ended December 31, 2019 and 2018 other items primarily consists of business optimization costs, including strategic review costs and transaction related costs. For the year ended December 31, 2017, other items primarily consists of transaction related costs and business optimization costs.

(b) For the year ended December 31, 2019, other non-operating (income)/expense, net, included non-cash expenses of $170 million for pension settlements which included plan transfers to third parties in the Netherlands and UK, where we terminated our responsibility for future defined benefit obligations and transferred that responsibility to the third parties. See Note 11 “Pensions and Other Post-Retirement Benefits” for more information.

**Consolidated Results for the Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018**

**Revenues**

Revenues decreased 0.3% to $6,498 million for the year ended December 31, 2019 from $6,515 million for the year ended December 31, 2018, or an increase of 1.7% on a constant currency basis. Revenues within our Connect segment decreased 2.6%, or an increase of 0.7% on a constant currency basis. Revenues within our Media segment increased 1.9%, or an increase of 2.6% on a constant currency basis. Refer to the “Business Segment Results” section for further discussion of our revenue performance.

**Cost of Revenues, Exclusive of Depreciation and Amortization**

Cost of revenues increased 0.6% to $2,822 million for the year ended December 31, 2019 from $2,805 million for the year ended December 31, 2018, or an increase of 2.6% on a constant currency basis.

Costs within our Connect segment decreased 0.1%, or an increase of 2.9% on a constant currency basis, primarily due to global investments in our services, partially offset by our productivity initiatives.

Costs within our Media segment increased 0.5%, or an increase of 1.3% on a constant currency basis, primarily due to the impact of our investments and higher spending on product portfolio management initiatives, partially offset by productivity initiatives.

**Selling, General and Administrative Expenses, Exclusive of Depreciation and Amortization**

Selling, general and administrative expenses decreased 1.5% to $1,929 for the year ended December 31, 2019 from $1,958 million for the year ended December 31, 2018, or an increase of 1.0% on a constant currency basis.

Costs within our Connect segment decreased 7.0%, or a decrease of 3.8% on a constant currency basis primarily due to productivity initiatives.

Costs within our Media segment increased 8.3%, or an increase of 9.7% on a constant currency basis. Selling, general and administrative expenses increased on a constant currency basis primarily due to the impact of our investments.
Depreciation and Amortization

Depreciation and amortization expense was $756 million for the year ended December 31, 2019 as compared to $675 million for the year ended December 31, 2018. This increase was primarily due to higher depreciation and amortization expense associated with capital expenditures, partially offset by lower depreciation and amortization expense associated with assets acquired in business combinations.

Depreciation and amortization expense associated with tangible and intangible assets acquired in business combinations decreased to $205 million for the year ended December 31, 2019 from $220 million for the year ended December 31, 2018.

Impairment of Goodwill and other Long-Lived Assets

During 2019, we recorded a non-cash goodwill impairment charge of $1,004 million. This charge was recorded within our Connect reporting unit. During 2018, we recorded an impairment of goodwill and other long-lived asset charge of $1,413 million, primarily related to a non-cash goodwill impairment charge of $1,411 million. This charge was recorded primarily within our Connect reporting unit.

Restructuring Charges

We recorded $80 million and $139 million in restructuring charges, primarily related to employee severance costs associated with our plans to reduce selling, general, and administrative expenses and consolidate operations centers, as well as automation initiatives for the years ended December 31, 2019 and 2018, respectively.

Operating Income/(loss)

Operating loss for the year ended December 31, 2019 was $93 million compared to operating loss of $475 million for the year ended December 31, 2018. Operating loss within our Connect segment was $877 million for the year ended December 31, 2019 compared to operating loss of $1,329 million for the year ended December 31, 2018. Operating income within our Media segment decreased to $930 million for the year ended December 31, 2019 from $998 million for the year ended December 31, 2018. Corporate operating expenses increased to $146 million for the year ended December 31, 2019 from $144 million for the year ended December 31, 2018.

Interest Expense

Interest expense was $397 million for the year ended December 31, 2019 compared to $394 million for the year ended December 31, 2018. This increase was primarily due to slightly higher USD LIBOR interest rates on our senior secured term loans without hedged positions and a higher EURO denominated debt balance.

Foreign Currency Exchange Transaction Gains/(Losses), Net

Foreign currency exchange transaction losses, net, represent the net loss on revaluation of certain cash, external debt, intercompany loans and other receivables and payables. Fluctuations in the value of foreign currencies relative to the U.S. Dollar, particularly the Euro, have a significant effect on our operating results. The average U.S. Dollar to Euro exchange rate was $1.12 to €1.00 and $1.18 to €1.00 for the years ended December 31, 2019 and 2018, respectively.

We realized net losses of $10 million and $16 million for the years ended December 31, 2019 and 2018, respectively, resulting primarily from fluctuations in certain foreign currencies associated with intercompany transactions.

Other Income/(Expense), Net

Other expense, net of $169 million for the year ended December 31, 2019 was primarily related to a non-cash expense of $170 million for pension settlements which included plan transfers to third parties in the Netherlands and UK, where we terminated our responsibility for future defined benefit obligations and transferred that responsibility to the third parties. See Note 11 “Pensions and Other Post-Retirement Benefits” for more information.

Other expense, net of $5 million for the year ended December 31, 2018 was primarily related to certain costs incurred in connection with the September 2018 debt refinancing as well as the write-off of certain previously capitalized deferred financing fees in conjunction with the refinancing, partially offset by certain non-service related pension amounts.
Income/(Loss) Before Income Taxes and Equity in Net Income of Affiliates

Loss was $663 million for the year ended December 31, 2019 compared to a loss of $882 million for the year ended December 31, 2018 due primarily to the consolidated results mentioned above.

Income Taxes

The effective tax rates for the years ended December 31, 2019 and 2018 were 39% and 21%, respectively.

Our effective tax rate benefit of 39% for the year ended December 31, 2019 was higher than the UK statutory rate as a result of the impact of goodwill impairment, tax rate differences in other jurisdictions where the Company files tax returns, post-retirement settlements, and withholding and foreign taxes as well as state and local income taxes offset by the favorable impact of changes in estimates for uncertain tax positions and audit settlements, decreases in valuation allowances, the effect of global licensing activities, and certain financing activities. Our effective tax rate for the year ended December 31, 2018 was higher than the UK statutory rate as a result of the impact of goodwill impairment, tax rate differences in other jurisdictions where the Company files tax returns, the effect of global licensing activities, withholding and foreign taxes as well as state and local income taxes, changes in estimates for uncertain tax positions, and increases in valuation allowances offset by the favorable impact of the TCJA adjustments, certain financing activities, and intercompany restructuring.

At December 31, 2019 and 2018, we had gross uncertain tax positions of $164 million and $572 million, respectively. We also have accrued interest and penalties associated with these uncertain tax positions as of December 31, 2019 and 2018 of $25 million and $70 million, respectively.

Estimated interest and penalties related to the underpayment of income taxes is classified as a component of our provision or benefit for income taxes. It is reasonably possible that within the next 12 months certain tax examinations will close, which could result in a change in unrecognized tax benefits, along with related interest and penalties. Furthermore, the amounts ultimately paid may differ from the amounts accrued. An estimate of any possible change cannot be made at this time.

Our future effective tax rates could be adversely affected by earnings being lower than anticipated in countries where statutory rates are lower and earnings being higher than anticipated in countries where statutory rates are higher, or by changes in tax laws, regulations, accounting principles, or interpretations thereof. Other factors that may affect our effective income tax rate include, but are not limited to, losses in jurisdictions where no income tax benefit can be recognized, changes in the valuation of deferred tax assets and liabilities, the establishment of valuation allowances against deferred income tax assets if we determined that it is more likely than not that future income tax benefits will not be realized, and audits by taxing authorities.

Adjusted EBITDA

Adjusted EBITDA increased 0.2% to $1,853 million for the year ended December 31, 2019 from $1,850 million for the year ended December 31, 2018, or an increase of 1.4% on a constant currency basis. Our Adjusted EBITDA margin increased to 28.52% for the year ended December 31, 2019 from 28.40% for the year ended December 31, 2018. See “Results of Operations – Years Ended December 31, 2019, 2018 and 2017” for the reconciliation of net income/(loss) to Adjusted EBITDA.

Consolidated Results for the Year Ended December 31, 2018 Compared to the Year Ended December 31, 2017

Revenues

Revenues decreased 0.9% to $6,515 million for the year ended December 31, 2018 from $6,572 million for the year ended December 31, 2017, or a decrease of 0.7% on a constant currency basis. Revenues within our Connect segment decreased 4.3%, or a decrease of 3.8% on a constant currency basis. Revenues within our Media segment increased 2.5%, or an increase of 2.4% on a constant currency basis. Refer to the “Business Segment Results” section for further discussion of our revenue performance.

Cost of Revenues, Exclusive of Depreciation and Amortization

Cost of revenues increased 1.4% on reported and constant currency basis to $2,805 million for the year ended December 31, 2018 from $2,765 million for the year ended December 31, 2017.

Costs within our Connect segment increased 3.5% on a reported and constant currency basis, primarily due to the continued global investment in our services, including retailer investments.
Costs within our Media segment increased 0.4%, or an increase of 0.2% on a constant currency basis. Cost of revenues increased primarily due to the impact of our investments and higher spending on product portfolio management initiatives, including our digital and Marketing Effectiveness product offerings, partially offset by productivity initiatives.

Selling, General and Administrative Expenses, Exclusive of Depreciation and Amortization

Selling, general and administrative expenses increased 4.5% to $1,958 for the year ended December 31, 2018 from $1,873 million for the year ended December 31, 2017, or an increase of 4.4% on a constant currency basis.

Costs within our Connect segment decreased 0.9% on a reported and constant currency basis. Selling, general and administrative expenses decreased due to productivity initiatives.

Costs within our Media segment increased 12.1%, or an increase of 10.9% on a constant currency basis. Selling, general and administrative expenses increased primarily due to the impact of our investments.

Depreciation and Amortization

Depreciation and amortization expense was $675 million for the year ended December 31, 2018 as compared to $640 million for the year ended December 31, 2017. This increase was primarily due to higher depreciation and amortization expense associated with higher capital expenditures.

Depreciation and amortization expense associated with tangible and intangibles assets acquired in business combinations increased to $220 million for the year ended December 31, 2018 from $219 million for the year ended December 31, 2017.

Impairment of Goodwill and other Long-Lived Assets

During 2018, we recorded an impairment of goodwill and other long-lived asset charge of $1,413 million, primarily related to a non-cash goodwill impairment charge of $1,411 million in our Connect reporting unit.

Restructuring Charges

We recorded $139 million and $80 million in restructuring charges, primarily related to employee severance costs associated with our plans to reduce selling, general and administrative expenses and consolidate operations centers, as well as automation initiatives for the years ended December 31, 2018 and 2017, respectively.

Operating Income/(loss)

Operating loss for the year ended December 31, 2018 was $475 million compared to operating income of $1,214 million for the year ended December 31, 2017. Operating loss within our Connect segment was $1,329 million for the year ended December 31, 2018 compared to operating income of $336 million for the year ended December 31, 2017. Operating income within our Media segment decreased to $998 million for the year ended December 31, 2018 from $1,021 million for the year ended December 31, 2017. Corporate operating expenses increased to $144 million for the year ended December 31, 2018 from $143 million for the year ended December 31, 2017.

Interest Expense

Interest expense was $394 million for the year ended December 31, 2018 compared to $374 million for the year ended December 31, 2017. This increase was primarily due to higher USD LIBOR interest rates on our senior secured term loans without hedged positions.

Foreign Currency Exchange Transaction Gains/(Losses), Net

Foreign currency exchange transaction losses, net, represent the net loss on revaluation of certain cash, external debt, intercompany loans and other receivables and payables. Fluctuations in the value of foreign currencies relative to the U.S. Dollar, particularly the Euro, have a significant effect on our operating results. The average U.S. Dollar to Euro exchange rate was $1.18 to €1.00 and $1.13 to €1.00 for the years ended December 31, 2018 and 2017, respectively.

We realized net losses of $16 million and $10 million for the year ended December 31, 2018 and 2017, respectively, resulting primarily from fluctuations in certain foreign currencies associated with intercompany transactions.
Other Income/(Expense), Net

Other expense, net of $5 million for the year ended December 31, 2018 was primarily related to certain costs incurred in connection with the June 2018 debt refinancing discussed below under “Liquidity and Capital Resources”, as well as the write-off of certain previously capitalized deferred financing fees in conjunction with the refinancing, partially offset by certain pension related amounts reclassified from operating expense as a result of our adoption of ASU “Compensation — Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.” See “Summary of Recent Accounting Pronouncements” below for more information.

Other expense, net of $6 million for the year ended December 31, 2017 was primarily related to the finalization of working capital and other matters associated with dispositions, partially offset by certain pension related amounts reclassified from operating expense as a result of our adoption of ASU “Compensation — Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.” See “Summary of Recent Accounting Pronouncements” below for more information.

Income/(Loss) Before Income Taxes and Equity in Net Income of Affiliates

Loss was $882 million for the year ended December 31, 2018 compared to income of $828 million for the year ended December 31, 2017 due primarily to the consolidated results mentioned above.

Income Taxes

The effective tax rates for the years ended December 31, 2018 and 2017 were 21% and 47%, respectively.

Our effective tax rate benefit of 21% for the year ended December 31, 2018 was higher than the UK statutory rate as a result of the impact of goodwill impairment, tax rate differences in other jurisdictions where the Company files tax returns, the effect of global licensing activities, withholding and foreign taxes as well as state and local income taxes, changes in estimates for uncertain tax positions, and increases in valuation allowances offset by the favorable impact of the TCJA adjustments, certain financing activities, and intercompany restructuring. Our effective tax rate for the year ended December 31, 2017 was higher than the UK statutory rate as a result of the impact of the TCJA as well as tax rate differences in other jurisdictions where the Company files tax returns, the effect of global licensing activities, withholding and foreign taxes as well as state and local income taxes, offset by the favorable impact of certain financing activities and releases of valuation allowances.

At December 31, 2018 and 2017, we had gross uncertain tax positions of $572 million and $452 million, respectively. We also have accrued interest and penalties associated with these uncertain tax positions as of December 31, 2018 and 2017 of $70 million and $53 million, respectively.

Estimated interest and penalties related to the underpayment of income taxes is classified as a component of our provision or benefit for income taxes. It is reasonably possible that within the next 12 months certain tax examinations will close, which could result in a change in unrecognized tax benefits, along with related interest and penalties. Furthermore, the amounts ultimately paid may differ from the amounts accrued. An estimate of any possible change cannot be made at this time.

Our future effective tax rates could be adversely affected by earnings being lower than anticipated in countries where statutory rates are lower and earnings being higher than anticipated in countries where statutory rates are higher, or by changes in tax laws, regulations, accounting principles, or interpretations thereof. Other factors that may affect our effective income tax rate include, but are not limited to, losses in jurisdictions where no income tax benefit can be recognized, changes in the valuation of deferred tax assets and liabilities, the establishment of valuation allowances against deferred income tax assets if we determined that it is more likely than not that future income tax benefits will not be realized, and audits by taxing authorities.

Adjusted EBITDA

Adjusted EBITDA decreased 8.6% to $1,850 million for the year ended December 31, 2018 from $2,024 million for the year ended December 31, 2017, or 7.9% on a constant currency basis. Our Adjusted EBITDA margin decreased to 28.40% for the year ended December 31, 2018 from 30.80% for the year ended December 31, 2017. See “Results of Operations – Years Ended December 31, 2018, 2017 and 2016” for the reconciliation of net income/(loss) to Adjusted EBITDA.
Business Segment Results for the Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

Revenues

The table below sets forth our segment revenue performance data for the year ended December 31, 2019 compared to the year ended December 31, 2018, both on an as-reported and constant currency basis.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Year Ended December 31, 2019</th>
<th>Year Ended December 31, 2018</th>
<th>% Variance 2019 vs. 2018</th>
<th>Year Ended December 31, 2018 Constant Currency</th>
<th>% Variance 2019 vs. 2018 Constant Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$2,161</td>
<td>$2,211</td>
<td>(2.3)%</td>
<td>$2,131</td>
<td>(1.4)%</td>
</tr>
<tr>
<td>Connect Segment</td>
<td>$3,057</td>
<td>$3,138</td>
<td>(2.6)%</td>
<td>$3,035</td>
<td>0.7%</td>
</tr>
<tr>
<td>Audience Measurement</td>
<td>$2,471</td>
<td>$2,411</td>
<td>2.5%</td>
<td>$2,399</td>
<td>3.0%</td>
</tr>
<tr>
<td>Plan/Optimize</td>
<td>970</td>
<td>966</td>
<td>0.4%</td>
<td>955</td>
<td>1.6%</td>
</tr>
<tr>
<td>Media Segment</td>
<td>3,441</td>
<td>3,377</td>
<td>1.9%</td>
<td>3,354</td>
<td>2.6%</td>
</tr>
<tr>
<td>Total</td>
<td>6,498</td>
<td>6,515</td>
<td>(0.3)%</td>
<td>6,389</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Connect Segment Revenues

Revenues decreased 2.6% to $3,057 million for the year ended December 31, 2019 from $3,138 million for the year ended December 31, 2018, or an increase of 0.7% on a constant currency basis. Revenues from Measure decreased 2.3% to $2,161 million, or an increase of 1.4% on a constant currency basis. Revenue growth on a constant currency basis was driven by stronger performance in our retail measurement services and improved trends in Emerging Markets. Revenues from Predict/Activate decreased 3.3% to $896 million, or a decrease of 0.9% on a constant currency basis. Revenues decreased as a result of pressure in innovation and custom insights, partially offset by improvement in custom analytics.

Media Segment Revenues

Revenues increased 1.9% to $3,441 million for the year ended December 31, 2019 from $3,377 million for the year ended December 31, 2018, or an increase of 2.6% on a constant currency basis. Revenue growth was primarily driven by growth in Audience Measurement, which increased 2.5%, or an increase of 3.0% on a constant currency basis, primarily due to continued client adoption of our Total Audience Measurement system, partly offset by pressure in local television measurement. Plan/Optimize revenues increased 0.4%, or an increase of 1.6% on a constant currency basis, primarily driven by growth in Gracenote and outcome-based solutions, partially offset by pressure in Telecom.
**Business Segment Profitability**

We do not allocate items below operating income/(loss) to our business segments and therefore the tables below set forth a reconciliation of operating income/(loss) at the business segment level for the years ended December 31, 2019 and 2018, adjusting for certain items affecting operating income/(loss), such as restructuring charges, depreciation and amortization, impairment of goodwill and other long-lived assets, share-based compensation expense and certain other items described below resulting in a presentation of our non-GAAP business segment profitability. Non-GAAP business segment profitability provides useful supplemental information to management and investors regarding financial and business trends related to our results of operations. When this non-GAAP financial information is viewed with our GAAP financial information, investors are provided with a meaningful understanding of our ongoing operating performance. It is important to note that the non-GAAP business segment profitability corresponds in total to our consolidated Adjusted EBITDA described within our consolidated results of operations above, which our chief operating decision maker and other members of management use to measure our performance from period to period both at the consolidated level as well as within our operating segments, to evaluate and fund incentive compensation programs and to compare our results to those of our competitors. These non-GAAP measures should not be considered as an alternative to net income/(loss), operating income/(loss), cash flows from operating activities or any other performance measures derived in accordance with GAAP as measures of operating performance or cash flows as measures of liquidity. These non-GAAP measures may differ from similarly-titled measures used by others and have important limitations as analytical tools. Accordingly, they should not be considered in isolation or as a substitute for analysis of our results as reported under GAAP.

**YEAR ENDED DECEMBER 31, 2019 (IN MILLIONS)**

<table>
<thead>
<tr>
<th></th>
<th>Operating Income/(Loss)</th>
<th>Restructuring Charges</th>
<th>Depreciation and Amortization</th>
<th>Impairment of goodwill and other long-lived assets</th>
<th>Share-based Compensation Expense</th>
<th>Other Items</th>
<th>Non-GAAP Business Segment Income/(Loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect</td>
<td>(877)</td>
<td>49</td>
<td>231</td>
<td>1,004</td>
<td>15</td>
<td>—</td>
<td>422</td>
</tr>
<tr>
<td>Media</td>
<td>930</td>
<td>15</td>
<td>518</td>
<td>—</td>
<td>13</td>
<td>—</td>
<td>1,476</td>
</tr>
<tr>
<td>Corporate and Eliminations</td>
<td>(146)</td>
<td>16</td>
<td>7</td>
<td>—</td>
<td>22</td>
<td>56</td>
<td>(45)</td>
</tr>
<tr>
<td>Total Nielsen</td>
<td>(93)</td>
<td>80</td>
<td>756</td>
<td>1,004</td>
<td>50</td>
<td>56</td>
<td>1,853</td>
</tr>
</tbody>
</table>

**YEAR ENDED DECEMBER 31, 2018 (IN MILLIONS)**

<table>
<thead>
<tr>
<th></th>
<th>Operating Income/(Loss)</th>
<th>Restructuring Charges</th>
<th>Depreciation and Amortization</th>
<th>Impairment of goodwill and other long-lived assets</th>
<th>Share-based Compensation Expense</th>
<th>Other Items</th>
<th>Non-GAAP Business Segment Income/(Loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect</td>
<td>(1,329)</td>
<td>101</td>
<td>223</td>
<td>1,411</td>
<td>14</td>
<td>—</td>
<td>420</td>
</tr>
<tr>
<td>Media</td>
<td>998</td>
<td>23</td>
<td>444</td>
<td>—</td>
<td>11</td>
<td>—</td>
<td>1,476</td>
</tr>
<tr>
<td>Corporate and Eliminations</td>
<td>(144)</td>
<td>15</td>
<td>8</td>
<td>2</td>
<td>10</td>
<td>63</td>
<td>(46)</td>
</tr>
<tr>
<td>Total Nielsen</td>
<td>(475)</td>
<td>139</td>
<td>675</td>
<td>1,413</td>
<td>35</td>
<td>63</td>
<td>1,850</td>
</tr>
</tbody>
</table>

(1) For the years ended December 31, 2019 and 2018 other items primarily consists of business optimization costs, including strategic review costs and transaction related costs.

**Non-GAAP Business Segment Income/(Loss)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect</td>
<td>$ 422</td>
<td>$ 420</td>
<td>0.5%</td>
<td>$ 402</td>
<td>5.0%</td>
</tr>
<tr>
<td>Media</td>
<td>1,476</td>
<td>1,476</td>
<td>0.0%</td>
<td>1,470</td>
<td>0.4%</td>
</tr>
<tr>
<td>Corporate and Eliminations</td>
<td>(45)</td>
<td>(46)</td>
<td>NA</td>
<td>(45)</td>
<td>NA</td>
</tr>
<tr>
<td>Total Nielsen</td>
<td>$ 1,853</td>
<td>$ 1,850</td>
<td>0.2%</td>
<td>$ 1,827</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

**Connect Segment Profitability**

Operating loss was $877 million for the year ended December 31, 2019 as compared to operating loss of $1,329 million for the year ended December 31, 2018. The increase was primarily driven by lower goodwill impairment as compared to prior year and lower restructuring costs, partially offset by the revenue performance discussed above, higher depreciation and amortization expense and our continued global investments in our services, including retailer investments. Non-GAAP business segment income increased 5.0% on a constant currency basis.
**Media Segment Profitability**

Operating income was $930 million for the year ended December 31, 2019 as compared to $998 million for the year ended December 31, 2018. The decrease was driven by higher depreciation and amortization expense and investments in our services, partially offset by the revenue performance discussed above and lower restructuring costs. Non-GAAP business segment income increased 0.4% on a constant currency basis.

**Corporate Expenses and Eliminations**

Operating expenses were $146 million for the year ended December 31, 2019 as compared to $144 million for the year ended December 31, 2018, primarily due to an increase in share-based compensation expense, partially offset by lower business optimization costs and transaction related costs, lower depreciation and amortization expense and lower restructuring charges.

**Business Segment Results for the Year Ended December 31, 2018 Compared to the Year Ended December 31, 2017**

**Revenues**

The table below sets forth our segment revenue performance data for the year ended December 31, 2018 compared to the year ended December 31, 2017, both on an as-reported and constant currency basis.

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Year Ended</th>
<th>Year Ended</th>
<th>% Variance</th>
<th>Year Ended</th>
<th>% Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>December 31, 2018</td>
<td>December 31, 2017</td>
<td>2018 vs. 2017</td>
<td>Constant Currency</td>
<td>2018 vs. 2017</td>
</tr>
<tr>
<td>Measure</td>
<td>$2,211</td>
<td>$2,233</td>
<td>(1.0)%</td>
<td>$2,221</td>
<td>(0.5)%</td>
</tr>
<tr>
<td>Predict/Activate</td>
<td>927</td>
<td>1,045</td>
<td>(11.3)%</td>
<td>1,040</td>
<td>(10.9)%</td>
</tr>
<tr>
<td>Connect Segment</td>
<td>$3,138</td>
<td>$3,278</td>
<td>(4.3)%</td>
<td>$3,261</td>
<td>(3.8)%</td>
</tr>
<tr>
<td>Audience Measurement</td>
<td>$2,411</td>
<td>$2,321</td>
<td>3.9%</td>
<td>$2,323</td>
<td>3.8%</td>
</tr>
<tr>
<td>Plan/Optimize</td>
<td>966</td>
<td>973</td>
<td>(0.7)%</td>
<td>975</td>
<td>(0.9)%</td>
</tr>
<tr>
<td>Media Segment</td>
<td>$3,377</td>
<td>$3,294</td>
<td>2.5%</td>
<td>$3,298</td>
<td>2.4%</td>
</tr>
<tr>
<td>Total</td>
<td>$6,515</td>
<td>$6,572</td>
<td>(0.9)%</td>
<td>$6,559</td>
<td>(0.7)%</td>
</tr>
</tbody>
</table>

**Connect Segment Revenues**

Revenues decreased 4.3% to $3,138 million for the year ended December 31, 2018 from $3,278 million for the year ended December 31, 2017, or a decrease of 3.8% on a constant currency basis. Revenues from Measure decreased 1.0% to $2,211 million, or a decrease of 0.5% on a constant currency basis, primarily driven by pressure on spending from large multinational clients and competitive impacts in the U.S. Revenues from Predict/Activate decreased 11.3% to $927 million, or a decrease of 10.9% on a constant currency basis. Revenues decreased as a result of softness in areas such as innovation and custom analytics.

**Media Segment Revenues**

Revenues increased 2.5% to $3,377 million for the year ended December 31, 2018 from $3,294 million for the year ended December 31, 2017, or an increase of 2.4% on a constant currency basis. Revenue growth was primarily driven by growth in Audience Measurement, which increased 3.9%, or an increase of 3.8% on a constant currency basis, primarily due to continued client adoption of our Total Audience Measurement system, partly offset by pressure in local television measurement. Plan/Optimize revenues decreased 0.7%, or a decrease of 0.9% on a constant currency basis. Revenues decreased as a result of pressure in Telecom and a historical data sale related to an exited product category in the fourth quarter of 2017. These were partially offset by investments including Gracenote and audience-based solutions that help advertisers and publishers measure the return on investment in media spend.
Business Segment Profitability

We do not allocate items below operating income/(loss) to our business segments and therefore the tables below set forth a reconciliation of operating income/(loss) at the business segment level for the years ended December 31, 2018 and 2017, adjusting for certain items affecting operating income/(loss), such as restructuring charges, depreciation and amortization, impairment of goodwill and other long-lived assets, share-based compensation expense and certain other items described below resulting in a presentation of our non-GAAP business segment profitability. Non-GAAP business segment profitability provides useful supplemental information to management and investors regarding financial and business trends related to our results of operations. When this non-GAAP financial information is viewed with our GAAP financial information, investors are provided with a meaningful understanding of our ongoing operating performance. It is important to note that the non-GAAP business segment profitability corresponds in total to our consolidated Adjusted EBITDA described within our consolidated results of operations above, which our chief operating decision maker and other members of management use to measure our performance from period to period both at the consolidated level as well as within our operating segments, to evaluate and fund incentive compensation programs and to compare our results to those of our competitors. These non-GAAP measures should not be considered as an alternative to net income/(loss), operating income/(loss), cash flows from operating activities or any other performance measures derived in accordance with GAAP as measures of operating performance or cash flows as measures of liquidity. These non-GAAP measures may differ from similarly-titled measures used by others and have important limitations as analytical tools. Accordingly, they should not be considered in isolation or as a substitute for analysis of our results as reported under GAAP.

### Year Ended December 31, 2018 (In Millions)

<table>
<thead>
<tr>
<th>Segment</th>
<th>Operating Income/(Loss)</th>
<th>Restructuring Charges</th>
<th>Depreciation and Amortization</th>
<th>Impairment of Goodwill and Other Long-Lived Assets</th>
<th>Share-based Compensation Expense</th>
<th>Other Items</th>
<th>Non-GAAP Business Segment Income/(Loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect</td>
<td>$(1,329)</td>
<td>$101</td>
<td>$223</td>
<td>$1,411</td>
<td>$14</td>
<td>$ —</td>
<td>$420</td>
</tr>
<tr>
<td>Media</td>
<td>998</td>
<td>23</td>
<td>444</td>
<td>—</td>
<td>11</td>
<td>—</td>
<td>1,476</td>
</tr>
<tr>
<td>Corporate and Eliminations</td>
<td>(144)</td>
<td>15</td>
<td>8</td>
<td>2</td>
<td>10</td>
<td>63</td>
<td>(46)</td>
</tr>
<tr>
<td>Total Nielsen</td>
<td>$(475)</td>
<td>$139</td>
<td>$675</td>
<td>$1,413</td>
<td>$35</td>
<td>$63</td>
<td>$1,850</td>
</tr>
</tbody>
</table>

(1) For the year ended December 31, 2018, other items primarily consists of business optimization costs, including strategic review costs, and transaction related costs. For the year ended December 31, 2017, other items primarily consists of transaction related costs and business optimization costs.

### Year Ended December 31, 2017 (In Millions)

<table>
<thead>
<tr>
<th>Segment</th>
<th>Operating Income/(Loss)</th>
<th>Restructuring Charges</th>
<th>Depreciation and Amortization</th>
<th>Impairment of Goodwill and Other Long-Lived Assets</th>
<th>Share-based Compensation Expense</th>
<th>Other Items</th>
<th>Non-GAAP Business Segment Income/(Loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect</td>
<td>$336</td>
<td>$43</td>
<td>$208</td>
<td>—</td>
<td>$13</td>
<td>$ —</td>
<td>$600</td>
</tr>
<tr>
<td>Media</td>
<td>1,021</td>
<td>13</td>
<td>425</td>
<td>—</td>
<td>11</td>
<td>—</td>
<td>1,470</td>
</tr>
<tr>
<td>Corporate and Eliminations</td>
<td>(143)</td>
<td>24</td>
<td>7</td>
<td>—</td>
<td>21</td>
<td>45</td>
<td>(46)</td>
</tr>
<tr>
<td>Total Nielsen</td>
<td>$1,214</td>
<td>$80</td>
<td>$640</td>
<td>—</td>
<td>$45</td>
<td>$45</td>
<td>$2,024</td>
</tr>
</tbody>
</table>

Connect Segment Profitability

Operating loss was $1,329 million for the year ended December 31, 2018 as compared to operating income of $336 million for the year ended December 31, 2017. The decrease was driven by the revenue performance discussed above, the goodwill impairment, higher restructuring costs, higher depreciation and amortization expense and our continued global investments in our services, including retailer investments. Non-GAAP business segment income decreased 28.2% on a constant currency basis.
Media Segment Profitability

Operating income was $998 million for the year ended December 31, 2018 as compared to $1,021 million for the year ended December 31, 2017. The decrease was driven by higher restructuring costs, higher depreciation and amortization expense and investments in our services, partially offset by the revenue performance discussed above. Non-GAAP business segment income increased 0.5% on a constant currency basis.

Corporate Expenses and Eliminations

Operating expenses were $144 million for the year ended December 31, 2018 as compared to $143 million for the year ended December 31, 2017, primarily due to an increase in transaction related costs and business optimization costs and depreciation and amortization expense partially offset by lower share-based compensation expense and lower restructuring charges.

Liquidity and Capital Resources

Cash flows from operations provided a source of funds of $1,066 million, $1,058 million and $1,310 million during the years ended December 31, 2019, 2018 and 2017, respectively. This increase was driven primarily by lower employee annual incentive payments, lower retailer investments and lower restructuring payments, partially offset by working capital timing and higher interest and tax payments during the year ended December 31, 2019.

We provide for additional liquidity through several sources, including maintaining an adequate cash balance, access to global funding sources and a committed revolving credit facility. The following table provides a summary of the major sources of liquidity for the years ended December 31, 2019, 2018 and 2017:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net cash from operating activities</td>
<td>$1,066</td>
<td>$1,058</td>
<td>$1,310</td>
</tr>
<tr>
<td>Cash and short-term marketable securities</td>
<td>$454</td>
<td>$524</td>
<td>$656</td>
</tr>
<tr>
<td>Revolving credit facility</td>
<td>$850</td>
<td>$850</td>
<td>$575</td>
</tr>
</tbody>
</table>

Of the $454 million in cash and cash equivalents at December 31, 2019, approximately $383 million was held in jurisdictions outside the U.S. We regularly review the amount of cash and cash equivalents held outside of the U.S. to determine the amounts necessary to fund the current operations of our foreign operations and their growth initiatives and amounts needed to service our U.S. indebtedness and related obligations.

The below table illustrates our weighted average interest rate and cash paid for interest over the last three years.

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighted average interest rate</td>
<td>4.40%</td>
<td>4.67%</td>
<td>4.32%</td>
</tr>
<tr>
<td>Cash paid for interest, net of amounts capitalized (in millions)</td>
<td>$386</td>
<td>$380</td>
<td>$352</td>
</tr>
</tbody>
</table>

Our contractual obligations, commitments and debt service requirements over the next several years are significant. We believe we will have available resources to meet both our short-term and long-term liquidity requirements, including our senior secured debt service. We expect the cash flow from our operations, combined with existing cash and amounts available under the revolving credit facility, will provide sufficient liquidity to fund our current obligations, projected working capital requirements, restructuring obligations, dividend payments and capital spending over the next year. In addition, we may, from time to time, purchase, repay, redeem or retire any of our outstanding debt securities (including any publicly issued debt securities) in privately negotiated or open market transactions, by tender offer or otherwise.
Long-term borrowings

The following table provides a summary of our outstanding long-term borrowings as of December 31, 2019:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Weighted Interest Rate</th>
<th>Carrying Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,125 million Senior secured term loan (LIBOR based variable rate of 3.46%) due 2023</td>
<td></td>
<td>$1,086</td>
</tr>
<tr>
<td>$2,303 million Senior secured term loan (LIBOR based variable rate of 3.71%) due 2023</td>
<td></td>
<td>2,263</td>
</tr>
<tr>
<td>€545 million Senior secured term loan (Euro LIBOR based variable rate of 2.50%) due 2023</td>
<td></td>
<td>603</td>
</tr>
<tr>
<td>$850 million senior secured revolving credit facility (Euro LIBOR or LIBOR based variable rate) due 2023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total senior secured credit facilities (with weighted average interest rate)</td>
<td>3.52%</td>
<td>$3,952</td>
</tr>
<tr>
<td>$800 million 4.50% senior debenture loan due 2020</td>
<td></td>
<td>799</td>
</tr>
<tr>
<td>$625 million 5.50% senior debenture loan due 2021</td>
<td></td>
<td>622</td>
</tr>
<tr>
<td>$2,300 million 5.00% senior debenture loan due 2022</td>
<td></td>
<td>2,293</td>
</tr>
<tr>
<td>$500 million 5.00% senior debenture loan due 2025</td>
<td></td>
<td>497</td>
</tr>
<tr>
<td>Total debenture loans (with weighted average interest rate)</td>
<td>5.22%</td>
<td>$4,211</td>
</tr>
<tr>
<td>Other loans</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total long-term debt</td>
<td>4.40%</td>
<td>$8,164</td>
</tr>
<tr>
<td>Finance lease and other financing obligations</td>
<td></td>
<td>145</td>
</tr>
<tr>
<td>Bank Overdrafts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total debt and other financing arrangements</td>
<td></td>
<td>$8,309</td>
</tr>
<tr>
<td>Less: Current portion of long-term debt, finance lease and other financing obligations and other short-term borrowings</td>
<td></td>
<td>914</td>
</tr>
<tr>
<td>Non-current portion of long-term debt and finance lease and other financing obligations</td>
<td></td>
<td>$7,395</td>
</tr>
</tbody>
</table>

Our $800 million senior debenture loan matures in October 2020 and, as of December 31, 2019, there was approximately $808 million of outstanding principal and interest payable thereunder. We believe that it is probable that we will be able to refinance this debt prior to maturity.

Term Loan Facilities

In June 2018, we entered into an Amendment Agreement to amend and restate our Fourth Amended and Restated Credit Agreement (the “Prior Credit Agreement”) in the form of the Fifth Amended and Restated Credit Agreement (the “Amended Credit Agreement”). Among other things, the Amendment Agreement provided for: (i) the refinancing and replacement of the prior Tranche A Revolving Credit Facility with a new Tranche A Revolving Credit Facility having commitments in an aggregate principal amount of $850,000,000; (ii) the refinancing and replacement of the prior Class A Term Loans with new Class A Term Loans in an aggregate principal amount of $1,125,000,000; (iii) the refinancing and replacement of the prior Class B-2 Euro Term Loans with new Class B-2 Euro Term Loans in an aggregate principal amount of € 545,245,518; and (iv) incurring incremental term loans in the form of Class B-4 Term Loans in an aggregate principal amount of $75,000,000.

The proceeds of loans under each replacement facility were used to replace or refinance the entire outstanding principal amount of loans under the prior facility that was replaced, and the proceeds of the incremental Class B-4 Term Loans, together with a portion of the proceeds of the Class B-2 Euro Term Loans in excess of the amount of the prior Class B-2 Euro Term Loans that were replaced, were used to prepay the amount of prior Class A Term Loans in excess of the amount of new Class A Term Loans.
The new Class A Term Loans will mature in full on July 9, 2023 and are required to be repaid in quarterly installments in an aggregate amount equal to 0.63% of the original principal amount of the Class A Term Loans for each of the first eight quarters following the effective date of the Amendment Agreement, 1.25% of the original principal amount of the Class A Term Loans for each of the subsequent eight quarters and 2.50% of the original principal amount of the Class A Term Loans for each of the subsequent three quarters, with the balance payable on July 9, 2023. The new Class B-2 Euro Term Loans will mature in full on October 4, 2023 and are required to be repaid in equal quarterly installments in an aggregate amount equal to 0.25% of the original principal amount of the Class B-2 Euro Term Loans, with the balance payable on October 4, 2023. The Class B-4 Term Loans will mature in full on October 4, 2023 and are required to be repaid in equal quarterly installments in an aggregate amount equal to 0.25% of the original principal amount of the Class B-4 Term Loans, with the balance payable on October 4, 2023. The new Tranche A Revolving Credit Facility matures on July 9, 2023.

The new Class A Term Loans and loans under the new Tranche A Revolving Credit Facility bear interest at a rate per annum equal to, at our election, (i) a base rate or eurocurrency rate, plus (ii) an applicable margin determined by reference to the Total Leverage Ratio (as defined in the Amended Credit Agreement), which varies from 0.25% to 1.00%, in the case of base rate loans, and from 1.25% to 2.00%, in the case of eurocurrency rate loans. The Class B-2 Euro Term Loans bear interest at a rate per annum equal to (i) a eurocurrency rate plus (ii) an applicable margin equal to 2.50%. The Class B-4 Term Loans bear interest at a rate per annum equal to, at our election, (i) a base rate or eurocurrency rate, plus (ii) an applicable margin, which is equal to 2.00%, in the case of eurocurrency loans, or 1.00%, in the case of base rate loans.

The Amended Credit Agreement contains substantially the same affirmative and negative covenants as those of the Prior Credit Agreement, except the exceptions to the restrictions on restricted payments and investments that are determined by reference to the Total Leverage Ratio were amended to increase the applicable limits.

Obligations under the Amended Credit Agreement are guaranteed by TNC B.V., substantially all of the wholly-owned U.S. subsidiaries of TNC B.V. and certain of the non-U.S. wholly-owned subsidiaries of TNC B.V., and are secured by substantially all of the existing and future property and assets of the U.S. subsidiaries of TNC B.V. and by a pledge of substantially all of the capital stock of the guarantors, the capital stock of substantially all of the U.S. subsidiaries of TNC B.V., and up to 65% of the capital stock of certain of the non-U.S. subsidiaries of TNC B.V. Under a separate security agreement, substantially all of the assets of TNC B.V. are pledged as collateral for amounts outstanding under the Amended Credit Agreement.

Covenants

The Amended Credit Agreement contains a number of covenants that, among other things, restrict, subject to certain exceptions, the ability of Nielsen Holding and Finance B.V. and its restricted subsidiaries (which together constitute most of our subsidiaries) to incur additional indebtedness or guarantees, incur liens and engage in sale and leaseback transactions, make certain loans and investments, declare dividends, make payments or redeem or repurchase capital stock, engage in certain mergers, acquisitions and other business combinations, prepay, redeem or purchase certain indebtedness, amend or otherwise alter terms of certain indebtedness, sell certain assets, transact with affiliates, enter into agreements limiting subsidiary distributions and alter the business they conduct. These entities are restricted, subject to certain exceptions, in their ability to transfer their net assets to us. Such restricted net assets amounted to approximately $2.1 billion at December 31, 2019. In addition, these entities are subject to a total leverage covenant. The leverage ratio requires that we not permit the ratio of total net debt (as defined in the Amended Credit Agreement) at the end of any calendar quarter to Consolidated EBITDA (as defined in the Amended Credit Agreement) for the four quarters then ended to exceed a specified threshold. The maximum permitted ratio is 5.50 to 1.00. Neither we nor TNC B.V. is currently bound by any financial or negative covenants contained in the Amended Credit Agreement. The Amended Credit Agreement also contains certain customary affirmative covenants and events of default. Certain significant financial covenants are described further below.

Failure to comply with this financial covenant would result in an event of default under our Amended Credit Agreement unless waived by certain of our term lenders and our revolving lenders. An event of default under our Amended Credit Agreement can result in the acceleration of our indebtedness under the facilities, which in turn would result in an event of default and possible acceleration of indebtedness under the agreements governing our debt securities as well. As our failure to comply with the financial covenant described above can cause us to go into default under the agreements governing our indebtedness, management believes that our Amended Credit Agreement and this covenant are material to us. As of December 31, 2019, we were in full compliance with the financial covenant described above.

Pursuant to our Amended Credit Agreement, we are subject to making mandatory prepayments on the term loans within our Amended Credit Agreement to the extent in any full calendar year we generate Excess Cash Flow (“ECF”), as defined in the Amended Credit Agreement. The percentage of ECF that must be applied as a repayment is a function of several factors, including our ratio of total net debt to Covenant EBITDA, as well other adjustments, including any voluntary term loan repayments made in the course of the calendar year. To the extent any mandatory repayment is required pursuant to this ECF clause; such payment must generally occur on or around the time of the delivery of the annual consolidated financial statements to the lenders. At December 31, 2019, our ratio of total net debt to Covenant EBITDA was less than 5.00 to 1.00 and therefore no mandatory repayment was required. Our next ECF measurement date will occur upon completion of the 2020 results, and although we do not expect to be required to issue any mandatory repayments in 2020 or beyond, it is uncertain at this time if any such payments will be required in future periods.
Revolving Credit Facility

The Amended Credit Agreement contains a senior secured revolving credit facility with aggregate revolving credit commitments of $850 million and a final maturity of July 2023 under which Nielsen Finance LLC, TNC (US) Holdings, Inc., and Nielsen Holding and Finance B.V. can borrow revolving loans. The revolving credit facility can also be used for letters of credit, guarantees and swingline loans.

The senior secured revolving credit facility is provided under the Amended Credit Agreement and so contains covenants and restrictions as noted above with respect to the Amended Credit Agreement. Obligations under the revolving credit facility are guaranteed by the same entities that guarantee obligations under the Amended Credit Agreement.

As of December 31, 2019, we had zero borrowings outstanding and outstanding letters of credit of $17 million. As of December 31, 2018, we had zero borrowings outstanding and outstanding letters of credit of $16 million. As of December 31, 2019, we had $833 million available for borrowing under the revolving credit facility.

Debenture Loans

The indentures governing certain of our debenture loans limit the majority of our subsidiaries’ ability to incur additional indebtedness, pay dividends or make other distributions or repurchase our capital stock, make certain investments, enter into certain types of transactions with affiliates, use assets as security in other transactions and sell certain assets or merge with or into other companies subject to certain exceptions. Upon a change in control, we are required to make an offer to redeem all of the Senior Notes at a redemption price equal to the 101% of the aggregate accreted principal amount plus accrued and unpaid interest. The Senior Notes are jointly and severally guaranteed by Nielsen Holdings plc, substantially all of the wholly owned U.S. subsidiaries of Nielsen Holdings plc, and certain of the non-U.S. wholly-owned subsidiaries of Nielsen Holdings plc.

Dividends and Share Repurchase Program

We continue to drive shareholder value through our quarterly cash dividend policy which was adopted by our Board of Directors ("Board" in 2013. Under this plan we have paid $395 million and $494 million in cash dividends during the years ended December 31, 2019 and 2018, respectively. On November 3, 2019, the Board approved a plan to reduce the quarterly cash dividend, with the goal of strengthening our balance sheet and providing added flexibility to invest for growth. Any decision to declare and pay dividends in the future will be made at the discretion of our Board and will be subject to the Board’s continuing determination that the dividend policy and the declaration of dividends thereunder are in the best interests of our shareholders, and are in compliance with all laws and agreements to which we are subject. The below table summarizes the dividends declared on our common stock during 2018 and 2019.

<table>
<thead>
<tr>
<th>Declaration Date</th>
<th>Record Date</th>
<th>Payment Date</th>
<th>Dividend Per Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 21, 2018</td>
<td>March 7, 2018</td>
<td>March 21, 2018</td>
<td>$0.34</td>
</tr>
<tr>
<td>April 19, 2018</td>
<td>June 6, 2018</td>
<td>June 20, 2018</td>
<td>$0.35</td>
</tr>
<tr>
<td>July 19, 2018</td>
<td>August 22, 2018</td>
<td>September 5, 2018</td>
<td>$0.35</td>
</tr>
<tr>
<td>October 18, 2018</td>
<td>November 21, 2018</td>
<td>December 5, 2018</td>
<td>$0.35</td>
</tr>
<tr>
<td>February 21, 2019</td>
<td>March 7, 2019</td>
<td>March 21, 2019</td>
<td>$0.35</td>
</tr>
<tr>
<td>April 18, 2019</td>
<td>June 5, 2019</td>
<td>June 19, 2019</td>
<td>$0.35</td>
</tr>
<tr>
<td>July 18, 2019</td>
<td>August 22, 2019</td>
<td>September 5, 2019</td>
<td>$0.35</td>
</tr>
<tr>
<td>November 3, 2019</td>
<td>November 21, 2019</td>
<td>December 5, 2019</td>
<td>$0.06</td>
</tr>
</tbody>
</table>

On February 20, 2020, our Board declared a cash dividend of $0.06 per share on our common stock. The dividend is payable on March 19, 2020 to shareholders of record at the close of business on March 5, 2020.

Our Board approved a share repurchase program, as included in the below table, for up to $2 billion of our outstanding common stock. The primary purpose of the program is to return value to shareholders and to mitigate dilution associated with our equity compensation plans.

<table>
<thead>
<tr>
<th>Board Approval</th>
<th>Share Repurchase Authorization ($ in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 25, 2013</td>
<td>$500</td>
</tr>
<tr>
<td>October 23, 2014</td>
<td>1,000</td>
</tr>
<tr>
<td>December 11, 2015</td>
<td>500</td>
</tr>
<tr>
<td>Total Share Repurchase Authorization</td>
<td>$2,000</td>
</tr>
</tbody>
</table>

Repurchases under these plans will be made in accordance with applicable securities laws from time to time in the open market or otherwise depending on our evaluation of market conditions and other factors. This program has been executed within the limitations of the authority granted by our shareholders.
As of December 31, 2019, there have been 39,426,521 shares of our common stock purchased at an average price of $44.95 per share (total consideration of approximately $1,772 million) under this program. There were no share repurchases for the year ended December 31, 2019.

Cash Flows 2019 versus 2018

Operating activities. Net cash provided by operating activities was $1,066 million for the year ended December 31, 2019, compared to $1,058 million for the year ended December 31, 2018. This increase was driven primarily by lower employee annual incentive payments, lower retailer investments and lower restructuring payments, partially offset by working capital timing and higher interest and tax payments during the year ended December 31, 2019. Our key collections performance measure, days billing outstanding (DBO), decreased by 3 days as compared to the same period last year.

Investing activities. Net cash used in investing activities was $582 million for the year ended December 31, 2019, compared to $506 million for the year ended December 31, 2018. The increase was primarily driven by increased acquisition payments, a decrease in proceeds received from the sale of subsidiaries and affiliates, and the purchase of an equity investment during the year ended December 31, 2019, as compared to 2018.

Financing activities. Net cash used in financing activities was $544 million for the year ended December 31, 2019, compared to $676 million for the year ended December 31, 2018. The decrease in cash used in financing activities was primarily due to lower dividend payments and share repurchasing, as described in the “Dividends and Share Repurchase Program” section above, partially offset by an increase in net payments from the repayment and issuance of debt during the year ended December 31, 2019, as compared to the same period of 2018.

Cash Flows 2018 versus 2017

Operating activities. Net cash provided by operating activities was $1,058 million for the year ended December 31, 2018, compared to $1,310 million for the year ended December 31, 2017. This decrease was driven primarily by the Adjusted EBITDA performance discussed above, higher interest payments during the year ended December 31, 2018 related to the full year impact of a 2017 bond issuance and higher USD LIBOR senior secured term loan interest rates, partially offset by lower tax payments. Our key collections performance measure, days billing outstanding (DBO), stayed consistent for the year ended December 31, 2018 and 2017.

Investing activities. Net cash used in investing activities was $506 million for the year ended December 31, 2018, compared to $1,236 million for the year ended December 31, 2017. The decrease was primarily driven by decreased acquisition payments, partially offset by an increase in capital expenditures during the year ended December 31, 2018, as compared to 2017.

Financing activities. Net cash used in financing activities was $676 million for the year ended December 31, 2018, compared to $215 million for the year ended December 31, 2017. The increase in cash used in financing activities was primarily due to decreased net proceeds from the issuance and repayment of debt during the year ended December 31, 2018, higher dividend payments, as described in the “Dividends and Share Repurchase Program” section above, and an increase in finance lease financing, partially offset by lower share repurchasing, as described in the “Dividends and Share Repurchase Program” section above during the year ended December 31, 2018, as compared to the same period of 2017.

Capital Expenditures

Investments in property, plant, equipment, software and other assets totaled $519 million, $520 million and $489 million in 2019, 2018 and 2017, respectively. In addition, the Company received zero, $4 million and $42 million of proceeds from the sale of certain property, plant and equipment and other assets during the years ended December 31, 2019, 2018 and 2017, respectively.

Commitments and Contingencies

Outsourced Services Agreements

In July 2019, we amended our Second Amended and Restated Master Services Agreement (the “MSA”), dated as of October 1, 2017 and effective as of January 1, 2017 (the “Effective Date”), with Tata America International Corporation and Tata Consultancy Services Limited (jointly, “TCS”) by executing Amendment Number One (the “Amendment”) with TCS, dated as of July 1, 2019 and effective as of January 1, 2019 (the “Amendment Effective Date”). The Amendment reduces the amount of services we have committed to purchase from TCS from the Amendment Effective Date through the remaining term of the MSA (the “Minimum Commitment”) to $1.413 billion, including a commitment to purchase at least $275 million in services during 2019, at least $250 million in services during 2020, $184.3 million in services per year from 2021 through 2024, and $137.8 million in services in 2025 (in each of the foregoing cases, the “Annual Commitment”). TCS’s charges under existing and future statements of work (“SOW”) pursuant to the MSA will continue to be credited against the Minimum Commitment and the Annual Commitment and the occurrence of certain events, some of which also provide us with the right to terminate the Agreement or SOWs, as applicable, will continue to be available to reduce the Minimum and Annual
Commitment Amounts as they occur. The parties also agreed to certain other commercial terms. However, the other material terms of the MSA as reflected in the MSA and as previously disclosed remain unchanged. As of December 31, 2019, the remaining TCS commitment was approximately $1.1 billion.

**Other Contractual Obligations**

Our other contractual obligations include finance lease obligations (including interest portion), facility leases, leases of certain computer and other equipment, agreements to purchase data and telecommunication services, the payment of principal and interest on debt and pension fund obligations.

At December 31, 2019, the minimum annual payments under these agreements and other contracts that had initial or remaining non-cancelable terms in excess of one year are as listed in the following table. Due to the uncertainty with respect to the timing of future cash flows associated with our unrecognized tax positions at December 31, 2019, we are unable to make reasonably reliable estimates of the timing of any potential cash settlements with the respective taxing authorities. Therefore, $189 million in uncertain tax positions (which includes interest and penalties of $25 million) have been excluded from the contractual obligations table below. See Note 15 – “Income Taxes” – to the consolidated financial statements for a discussion on income taxes.

<table>
<thead>
<tr>
<th>Payments due by period</th>
<th>Total</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>Thereafter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance lease obligations(a)</td>
<td>$162</td>
<td>$61</td>
<td>$42</td>
<td>$29</td>
<td>$15</td>
<td>$7</td>
<td>$8</td>
</tr>
<tr>
<td>Operating leases(b)</td>
<td>574</td>
<td>136</td>
<td>99</td>
<td>75</td>
<td>53</td>
<td>40</td>
<td>171</td>
</tr>
<tr>
<td>Other contractual obligations(c)</td>
<td>1,639</td>
<td>627</td>
<td>295</td>
<td>203</td>
<td>190</td>
<td>185</td>
<td>139</td>
</tr>
<tr>
<td>Long-term debt, including current portion(d)</td>
<td>8,164</td>
<td>854</td>
<td>702</td>
<td>2,399</td>
<td>3,710</td>
<td>---</td>
<td>499</td>
</tr>
<tr>
<td>Interest(e)</td>
<td>1,038</td>
<td>354</td>
<td>315</td>
<td>216</td>
<td>115</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>Pension fund obligations(f)</td>
<td>28</td>
<td>28</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Total</td>
<td>$11,605</td>
<td>$2,060</td>
<td>$1,453</td>
<td>$2,922</td>
<td>$4,083</td>
<td>$257</td>
<td>$830</td>
</tr>
</tbody>
</table>

(a) Our short-term and long-term debt obligations are described in Note 12 – “Long-Term Debt and Other Financing Arrangements” and our short-term and long-term finance lease obligations are described in Note 5 “Leases”, – to our consolidated financial statements.

(b) Our operating lease obligations are described in Note 17 – “Commitments and Contingencies” – to our consolidated financial statements.

(c) Other contractual obligations represent obligations under agreements, which are not unilaterally cancelable by us, are legally enforceable and specify fixed or minimum amounts or quantities of goods or services at fixed or minimum prices. We generally require purchase orders for vendor and third party spending. The amounts presented above represent the minimum future annual services covered by purchase obligations including data processing, building maintenance, equipment purchasing, photocopiers, land and mobile telephone service, computer software and hardware maintenance, and outsourcing. Our remaining commitments as of December 31, 2019, under the outsourced services agreement with TCS have been included above based on the Annual Commitment minimum required payments. As of December 31, 2019, the remaining TCS commitment was approximately $1.1 billion.

(d) Interest payments consists of interest on both fixed-rate and variable-rate debt based on LIBOR as of December 31, 2019.

(e) Our contributions to pension and other post-retirement defined benefit plans were $28 million, $29 million and $21 million during 2019, 2018 and 2017, respectively. Future minimum pension and other post-retirement benefits contributions are not determinable for time periods after 2020. See Note 11 – “Pensions and Other Post-Retirement Benefits” – to our consolidated financial statements for a discussion on plan obligations.
Guarantees and Other Contingent Commitments

At December 31, 2019, we were committed under the following significant guarantee arrangements:

**Sub-lease guarantees.** We provide sub-lease guarantees in accordance with certain agreements pursuant to which we guarantee all rental payments upon default of rental payment by the sub-lessee. To date, we have not been required to perform under such arrangements, and do not anticipate making any significant payments related to such guarantees and, accordingly, no amounts have been recorded.

**Letters of credit.** Letters of credit issued and outstanding amount to $17 million at December 31, 2019.

Legal Proceedings and Contingencies

In August 2018, a putative shareholder class action lawsuit was filed in the Southern District of New York, naming as defendants Nielsen, former Chief Executive Officer Dwight Mitchell Barns, and former Chief Financial Officer Jamere Jackson. Another lawsuit, which alleged similar facts but also named other Nielsen officers, was filed in the Northern District of Illinois in September 2018 and transferred to the Southern District of New York in December 2018. The actions were consolidated on April 22, 2019, and the Public Employees’ Retirement System of Mississippi was appointed lead plaintiff for the putative class. The operative complaint was filed on September 27, 2019, and asserts violations of certain provisions of the Securities Exchange Act of 1934, as amended, based on allegedly false and materially misleading statements relating to the outlook of our Buy (now “Connect”) segment, our preparedness for changes in global data privacy laws and our reliance on third-party data. We moved to dismiss the operative complaint on November 26, 2019. Briefing of our motion is scheduled to conclude on February 26, 2020. In addition, in January 2019, a shareholder derivative lawsuit was filed in New York Supreme Court against a number of our current and former officers and directors. The derivative lawsuit alleges that the named officers and directors breached their fiduciary duties to us in connection with factual assertions substantially similar to those in the putative class action complaints. The derivative lawsuit further alleges that certain officers and directors engaged in trading our stock based on material, nonpublic information. By agreement dated June 26, 2019, the derivative lawsuit has been stayed pending resolution of our motion to dismiss the aforementioned securities litigation. We intend to defend these lawsuits vigorously. Based on currently available information, we believe that we have meritorious defenses to these actions and that their resolution is not likely to have a material adverse effect on our business, financial position, or results of operations.

We are subject to litigation and other claims in the ordinary course of business, some of which include claims for substantial sums. Accruals have been recorded when the outcome is probable and can be reasonably estimated. While the ultimate results of claims and litigation cannot be determined, we expect that the ultimate disposition of these matters will not have a material adverse effect on our operations or financial condition. However, depending on the amount and the timing, an unfavorable resolution of some or all of these matters could materially affect our future results of operations or cash flows in a particular period.

Off-Balance Sheet Arrangements

Except as disclosed above, we have no off-balance sheet arrangements that currently have or are reasonably likely to have a material effect on our consolidated financial condition, changes in financial condition, results of operations, liquidity, capital expenditure or capital resources.

Summary of Recent Accounting Pronouncements

**Leases**

Effective January 1, 2019, we adopted the new lease accounting standard using the transition method approved by the FASB on July 30, 2018, which allows companies to apply the provisions of the new leasing standard as of January 1, 2019, without adjusting the comparative periods presented. In addition, we elected the package of practical expedients permitted under the transition guidance within the new standard. This allowed us to carry forward the historical lease classification. Adoption of this standard resulted in the recording of net operating lease right-of-use (“ROU”) assets of $0.5 billion (amount is net of lease incentives and ASC 420 cease-use liabilities) and corresponding operating lease liabilities of $0.6 billion. Financial position for reporting periods beginning on or after January 1, 2019 are presented under the new guidance, while prior periods amounts are not adjusted and continue to be reported in accordance with previous guidance. See Note 5 (“Leases”) for further discussion.

**Income taxes**

In February 2018, the FASB issued an ASU, “Reclassification of Certain Tax Effects From Accumulated Comprehensive Income”. The new standard gives companies the option to reclassify stranded tax effects caused by the TCJA from accumulated other comprehensive income (“AOCI”) to retained earnings. The new standard became effective for us on January 1, 2019. We are electing to not reclassify stranded income tax effects of the TCJA from AOCI to retained earnings.
Financial Instruments – Credit Losses

In June 2016, the FASB issued an ASU, “Financial Instruments – Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments”. The standard significantly changes how entities will measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. The standard will replace today’s “incurred loss” approach with an “expected loss” model for instruments measured at amortized cost. For available-for-sale debt securities, entities will be required to record allowances rather than reduce the carrying amount, as they do today under the other-than-temporary impairment model. It also simplifies the accounting model for purchased credit-impaired debt securities and loans. The new standard is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2019. We do not expect the adoption of this ASU to have a material impact on our consolidated financial statements.

Compensation-Retirement Benefits-Defined Benefit Plans-General

In August 2018, the FASB issued ASU No. 2018-14, Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20), which amends the current disclosure requirements regarding defined benefit pensions and other post retirement plans, and allows for the removal of certain disclosures, while adding certain new disclosure requirements. This standard is effective for fiscal years beginning after December 15, 2020 and allows for early adoption. We do not expect this new standard to have a significant impact to our disclosures.

Income Taxes (Topic 740): Simplifying the Accounting for Income taxes

In December 2019, the FASB issued ASU No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes which amends and aims to simplify accounting disclosure requirements regarding a number of topics including: intraperiod tax allocation, accounting for deferred taxes when there are changes in consolidation of certain investments, tax basis step up in an acquisition and the application of effective rate changes during interim periods, amongst other improvements. This standard is effective for fiscal years beginning after December 15, 2020 and allows for early adoption. We are assessing the impact of this new standard on our consolidated balance sheets, statements of operations and our future disclosures.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk is the potential loss arising from adverse changes in market rates and market prices such as interest rates, foreign currency exchange rates, and changes in the market value of equity instruments. We are exposed to market risk, primarily related to foreign exchange and interest rates. We actively monitor these exposures. Historically, in order to manage the volatility relating to these exposures, we entered into a variety of derivative financial instruments, mainly interest rate swaps, cross-currency swaps and forward rate agreements. Currently we only employ basic contracts, that is, without options, embedded or otherwise. Our objective is to reduce, where it is deemed appropriate to do so, fluctuations in earnings, cash flows and the value of our net investments in subsidiaries resulting from changes in interest rates and foreign currency rates. It is our policy not to trade in financial instruments.

Foreign Currency Exchange Rate Risk

We operate globally and we predominantly generate revenues and expenses in local currencies. Because of fluctuations (including possible devaluations) in currency exchange rates or the imposition of limitations on conversion of foreign currencies into our reporting currency, we are subject to currency translation exposure on the profits of our operations, in addition to transaction exposure.

For the years ended December 31, 2019 and 2018, we recorded a net gain of $1 million and a net loss of $2 million, respectively, associated with foreign currency derivative financial instruments within foreign currency exchange transactions gains/(losses), net in our consolidated statements of operations. As of December 31, 2019 and 2018, the notional amounts of outstanding foreign currency derivative financial instruments were $125 million and $76 million, respectively.

The table below details the percentage of revenues and expenses by currency for the years ended December 31, 2019 and 2018:

<table>
<thead>
<tr>
<th>Year ended December 31, 2019</th>
<th>U.S. Dollars</th>
<th>Euro</th>
<th>Other Currencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>58%</td>
<td>10%</td>
<td>32%</td>
</tr>
<tr>
<td>Operating costs</td>
<td>56%</td>
<td>11%</td>
<td>33%</td>
</tr>
<tr>
<td>Year ended December 31, 2018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenues</td>
<td>57%</td>
<td>11%</td>
<td>32%</td>
</tr>
<tr>
<td>Operating costs</td>
<td>57%</td>
<td>11%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Based on the year ended December 31, 2019, a one cent change in the U.S. dollar/Euro exchange rate would have impacted revenues by approximately $6 million annually, with an immaterial impact on operating income/(loss).
We have operations in both the Connect and Media segments in Argentina and the functional currency for those operations is the Argentine Peso. In accordance with U.S. GAAP, Argentina’s currency has been considered hyperinflationary since July 1, 2018, and, accordingly, local currency transactions have been denominated in U.S. dollars since July 1, 2018, and will continue to be denominated in U.S. dollars until Argentina’s currency is no longer deemed to be hyperinflationary. We will continue to assess the appropriate conversion rate based on events in Argentina and our Argentina operations. This event has had an immaterial impact on our consolidated financial statements.

We continually review our fixed and variable rate debt along with related hedging opportunities in order to ensure our portfolio is appropriately balanced as part of our overall interest rate risk management strategy and through this process we consider both short-term and long-term considerations in the U.S. and global financial markets in making adjustments to our tolerable exposures to interest rate risk. At December 31, 2019, we had $3,952 million of floating-rate debt under our senior secured credit facilities, of which $2,050 million was subject to effective floating-fixed interest rate swaps. A one percent increase in interest rates applied to our floating rate indebtedness would therefore increase annual interest expense by approximately $19 million ($40 million without giving effect to any of our interest rate swaps).

In May 2019, the Company entered into a $150 million aggregate notional amount four-year forward interest rate swap agreement with a starting date of July 9, 2019. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 1.82%. This derivative has been designated as an interest rate cash flow hedge.

In March 2019, the Company entered into a $150 million aggregate notional amount four-year forward interest rate swap agreement with a starting date of April 9, 2019. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 2.26%. This derivative has been designated as an interest rate cash flow hedge.

In March 2019, the Company entered into a $250 million aggregate notional amount four-year forward interest rate swap agreement with a starting date of June 9, 2019. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 2.07%. This derivative has been designated as an interest rate cash flow hedge.

In May 2018, the Company entered into $250 million aggregate notional amount of a five-year interest rate swap agreement with a starting date of May 9, 2018. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 2.72%. This derivative has been designated as an interest rate cash flow hedge.

In August 2017, the Company entered into $250 million in aggregate notional amount of a four-year forward interest rate swap agreement with a starting date of October 10, 2017. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 1.60%. This derivative has been designated as an interest rate cash flow hedge.

In July 2017, the Company entered into $250 million in aggregate notional amount of a three-year forward interest rate swap agreement with a starting date of October 10, 2017. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 1.66%. This derivative has been designated as an interest rate cash flow hedge.

In April 2017, the Company entered into $250 million in aggregate notional amount of a three-year forward interest rate swap agreement with a starting date of July 10, 2017. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 1.63%. This derivative has been designated as an interest rate cash flow hedge.

In March 2017, the Company entered into $250 million in aggregate notional amount of a five-year forward interest rate swap agreement with a starting date of July 10, 2017. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 2.00%. This derivative has been designated as an interest rate cash flow hedge.

In February 2017, the Company entered into $250 million in aggregate notional amount of a three-year forward interest rate swap agreement with a starting date of July 10, 2017. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 1.73%. This derivative has been designated as an interest rate cash flow hedge.

Derivative instruments involve, to varying degrees, elements of non-performance, or credit risk. We do not believe that we currently face a significant risk of loss in the event of non-performance by the counterparties associated with these instruments, as these transactions were executed with a diversified group of major financial institutions with a minimum investment-grade or better credit rating. Our credit risk exposure is managed through the continuous monitoring of our exposures to such counterparties.
Item 8. Financial Statements and Supplementary Data

Nielsen Holdings plc
Index to Consolidated Financial Statements

Management’s Annual Report on Internal Controls Over Financial Reporting................................................................. 63
Reports of Independent Registered Public Accounting Firm .................................................................................................. 64
Consolidated Statements of Operations............................................................................................................................... 67
Consolidated Statements of Comprehensive Income/(Loss) ................................................................................................. 68
Consolidated Balance Sheets .................................................................................................................................................. 69
Consolidated Statements of Cash Flows ................................................................................................................................. 70
Consolidated Statements of Changes in Equity ...................................................................................................................... 71
Notes to Consolidated Financial Statements....................................................................................................................... 74
Schedule I – Consolidated Financial Information of Registrant............................................................................................. 127
Schedule II – Valuation and Qualifying Accounts .................................................................................................................. 130
Management’s Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company as defined in Rules 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934, as amended. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements.

Management has performed an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019, based on the framework and criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework).

Based on this evaluation, management has concluded that our internal controls over financial reporting were effective as of December 31, 2019.

Ernst & Young LLP, independent registered public accounting firm, has provided an attestation report on the Company’s internal control over financial reporting. The Company’s financial statements included in this annual report on Form 10-K also have been audited by Ernst & Young LLP. Their reports follow.

/s/ David Kenny /s/ Linda Zukauckas
David Kenny Linda Zukauckas
Chief Executive Officer Chief Financial Officer

February 27, 2020 February 27, 2020
To the Board of Directors and Shareholders of Nielsen Holdings plc

Opinion on Internal Control over Financial Reporting

We have audited Nielsen Holdings plc’s internal control over financial reporting as of December 31, 2019, based on the criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Nielsen Holdings plc (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income/(loss), shareholders’ equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and financial statement schedules listed in the Index to Financial Statements in Item 8 and our report dated February 27, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management’s Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ Ernst & Young LLP

New York, New York

February 27, 2020
To the Board of Directors and Shareholders of Nielsen Holdings plc

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Nielsen Holdings plc (the Company) as of December 31, 2019 and 2018, and the related consolidated statements of operations, comprehensive income/(loss), shareholders’ equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and financial statement schedules listed in the Index to Financial Statements in Item 8 (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 27, 2020 expressed an unqualified opinion thereon.

Adoption of Accounting Standards Update (ASU) No. 2016-02

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for leases in 2019 due to the adoption of ASU No. 2016-02, Leases (Topic 842).

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

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

Valuation of Goodwill – Connect Reporting Unit

At December 31, 2019, the Company’s Connect reporting unit goodwill balance is $331 million. As discussed in Note 6 to the consolidated financial statements, goodwill is tested for impairment at least annually or more frequently if an event occurs or circumstances change that require the performance of an interim impairment assessment. During 2019, the Company identified events and circumstances that suggested the carrying value of the Connect reporting unit exceeded its fair value. As a result, the Company performed an interim impairment assessment, concluded that the reporting unit was impaired and recorded a $1 billion impairment charge. Subsequently, the Company performed its annual impairment test as of October 1, 2019 and concluded that there was no impairment.

Auditing management’s goodwill impairment test involved especially complex and subjective auditor judgment due to the significant estimation required in determining the fair value of the reporting unit. The estimate of fair value of the Connect reporting unit is determined using a combination of valuation techniques, primarily an income approach using a discounted cash flow analysis supplemented by a market-based approach. The fair value estimate was sensitive to significant assumptions such as the Company’s business projections, long term revenue and EBITDA growth rates and discount rate. Specifically, the Company’s growth assumptions can be affected adversely by changes in expectations about future market or economic conditions.
How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company’s goodwill impairment review process. For example, we tested controls over the Company’s business projections process as well as controls over the review of the significant assumptions including the long-term revenue and EBITDA growth rates and discount rate.

To test the estimated fair value of the Connect reporting unit, we performed audit procedures that included, among others, assessing methodologies and testing the significant assumptions discussed above and the underlying data used by the Company in its analysis. We compared the significant assumptions used by management to current industry and economic trends, changes to the Company’s business model, customer base or product mix. We assessed the historical accuracy of management’s estimates and performed sensitivity analyses of the significant assumptions to evaluate the changes in the fair value of the reporting unit. In addition, we reviewed the reconciliation of the fair value of reporting unit to the market capitalization of the Company. For the market-based approach, we tested the Company’s calculation of implied multiples and compared them to guideline companies. We involved valuation specialists to assist in our evaluation of the Company’s model, valuation methodology and significant assumptions.

Internally Developed Software

Description of the Matter

As more fully described in Note 6 to the consolidated financial statements, the Company internally develops software to facilitate its global information processing, financial reporting and client access needs. Costs that are related to the conceptual formulation and design of software programs are expensed as incurred; costs incurred to produce the finished product after technological feasibility are capitalized as an intangible asset. At December 31, 2019, the net book value of internally developed software is approximately $1.3 billion.

Auditing the Company’s accounting for the capitalization of its internally developed software involves especially challenging and subjective auditor judgment because of the degree of subjectivity involved in assessing which projects met the applicable accounting requirements.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls. For example, we tested controls over the Company’s process to ensure that projects met applicable requirements for capitalization, that costs being capitalized were appropriate, and that the determination of technological feasibility was appropriate.

Our audit procedures included, among others, testing a sample of projects to verify proper approval and that the timing and nature of costs being capitalized is appropriate. This included performing inquiries with the project managers to understand the purpose and nature of each project. Testing was also performed to verify that technological feasibility was met. This included testing of third-party costs and internal personnel related costs (i.e., payroll) for employees directly associated with the projects. For projects placed into service, we verified the appropriate transfer of the work-in-process asset to an amortizable asset account.

Recoverability of Deferred Tax Asset

Description of the Matter

As more fully described in Note 15 to the consolidated financial statements, the Company records a valuation allowance based on the assessment of the realizability of the Company’s deferred tax assets. At December 31, 2019, the Company had deferred tax assets before valuation allowances of $1.4 billion.

Auditing management’s assessment of recoverability of deferred tax assets involved especially challenging and subjective auditor judgment in determining whether the combination of the timing of deferred tax liability reversal and the generation of sufficient future taxable income supports the realization of the Company’s existing deferred tax assets before expiration.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of internal controls. For example, we tested controls over management’s process of evaluating the realizability of deferred tax assets including the scheduling of the reversal of existing temporary differences and estimates of future taxable income.

Among other audit procedures performed, we tested the Company’s scheduling of the reversal of existing temporary taxable differences. We also evaluated the assumptions used by the Company to develop estimates of future taxable income by jurisdiction and tested the completeness and accuracy of the underlying data. For example, we compared the estimates of future taxable income with the actual results of prior periods, as well as management’s consideration of other future market conditions. We also assessed the accuracy of management’s historical estimates and compared the estimate of future taxable income with other forecasted financial information prepared by the Company.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 2006.

New York, New York

February 27, 2020
## Nielsen Holdings plc

### Consolidated Statements of Operations

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td>$6,498</td>
<td>$6,515</td>
<td>$6,572</td>
</tr>
<tr>
<td><strong>Cost of revenues</strong>, exclusive of depreciation and amortization shown separately**</td>
<td>2,822</td>
<td>2,805</td>
<td>2,765</td>
</tr>
<tr>
<td>Selling, general and administrative expenses, exclusive of depreciation and amortization shown separately</td>
<td>1,929</td>
<td>1,958</td>
<td>1,873</td>
</tr>
<tr>
<td><strong>Depreciation and amortization</strong></td>
<td>756</td>
<td>675</td>
<td>640</td>
</tr>
<tr>
<td><strong>Impairment of goodwill and other long-lived assets</strong></td>
<td>1,004</td>
<td>1,413</td>
<td>—</td>
</tr>
<tr>
<td><strong>Restructuring charges</strong></td>
<td>80</td>
<td>139</td>
<td>80</td>
</tr>
<tr>
<td><strong>Operating income/(loss)</strong></td>
<td>(93)</td>
<td>(475)</td>
<td>1,214</td>
</tr>
<tr>
<td><strong>Interest income</strong></td>
<td>6</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td><strong>Interest expense</strong></td>
<td>(397)</td>
<td>(394)</td>
<td>(374)</td>
</tr>
<tr>
<td>Foreign currency exchange transaction gains/(losses), net</td>
<td>(10)</td>
<td>(16)</td>
<td>(10)</td>
</tr>
<tr>
<td><strong>Other income/(expense), net</strong></td>
<td>(169)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td><strong>Income/(loss) from continuing operations before income taxes</strong></td>
<td>(663)</td>
<td>(882)</td>
<td>828</td>
</tr>
<tr>
<td><strong>Benefit/(provision) for income taxes</strong></td>
<td>260</td>
<td>182</td>
<td>388</td>
</tr>
<tr>
<td><strong>Net income/(loss)</strong></td>
<td>(403)</td>
<td>(700)</td>
<td>440</td>
</tr>
<tr>
<td><strong>Net income/(loss) attributable to noncontrolling interests</strong></td>
<td>12</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td><strong>Net income/(loss) attributable to Nielsen shareholders</strong></td>
<td>$ (415)</td>
<td>$ (712)</td>
<td>$ 429</td>
</tr>
<tr>
<td><strong>Net income/(loss) per share of common stock, basic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.17)</td>
<td>(2.00)</td>
<td>1.20</td>
</tr>
<tr>
<td><strong>Net income/(loss) per share of common stock, diluted</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.17)</td>
<td>(2.00)</td>
<td>1.20</td>
</tr>
<tr>
<td><strong>Weighted-average shares of common stock outstanding, basic</strong></td>
<td>355,731,862</td>
<td>355,601,564</td>
<td>356,714,940</td>
</tr>
<tr>
<td><strong>Dilutive shares of common stock</strong></td>
<td>—</td>
<td>—</td>
<td>1,337,493</td>
</tr>
<tr>
<td><strong>Weighted-average shares of common stock outstanding, diluted</strong></td>
<td>355,731,862</td>
<td>355,601,564</td>
<td>358,052,433</td>
</tr>
<tr>
<td><strong>Dividends declared per common share</strong></td>
<td>$1.11</td>
<td>$1.39</td>
<td>$1.33</td>
</tr>
</tbody>
</table>

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

Consolidated Statements of Comprehensive Income/(Loss)

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Net income/(loss)</td>
<td>$ (403)</td>
</tr>
<tr>
<td>Other comprehensive income/(loss), net of tax</td>
<td></td>
</tr>
<tr>
<td>Foreign currency translation adjustments</td>
<td>5</td>
</tr>
<tr>
<td>Changes in the fair value of cash flow hedges</td>
<td>(30)</td>
</tr>
<tr>
<td>Defined benefit pension plan adjustments</td>
<td>132</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss)</td>
<td>107</td>
</tr>
<tr>
<td>Total comprehensive income/(loss)</td>
<td>(296)</td>
</tr>
<tr>
<td>Less: comprehensive income/(loss) attributable to noncontrolling interests</td>
<td>14</td>
</tr>
<tr>
<td>Total comprehensive income/(loss) attributable to Nielsen shareholders</td>
<td>$ (310)</td>
</tr>
</tbody>
</table>

(1) Net of tax of $(4) million, $(6) million and $23 million for the year ended December 31, 2019, 2018 and 2017 respectively.

(2) Net of tax of $11 million, $(1) million and $(7) million for the year ended December 31, 2019, 2018 and 2017 respectively.

(3) Net of tax of $(8), zero and $(2) million for the year ended December 31, 2019, 2018 and 2017 respectively.

The accompanying notes are an integral part of these consolidated financial statements
### Nielsen Holdings plc

**Consolidated Balance Sheets**

(IN MILLIONS, EXCEPT SHARE AND PER SHARE DATA)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$ 454</td>
<td>$ 524</td>
</tr>
<tr>
<td>Trade and other receivables, net of allowances for doubtful accounts and sales returns of $28 and $31 as of December 31, 2019 and 2018, respectively</td>
<td>$ 1,103</td>
<td>$ 1,118</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>$ 420</td>
<td>$ 361</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>$ 1,977</td>
<td>$ 2,003</td>
</tr>
<tr>
<td><strong>Non-current assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment, net</td>
<td>$ 466</td>
<td>$ 468</td>
</tr>
<tr>
<td>Operating lease right-of-use asset</td>
<td>$ 393</td>
<td>$ —</td>
</tr>
<tr>
<td>Goodwill</td>
<td>$ 5,993</td>
<td>$ 6,987</td>
</tr>
<tr>
<td>Other intangible assets, net</td>
<td>$ 4,881</td>
<td>$ 5,024</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>$ 276</td>
<td>$ 333</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>$ 333</td>
<td>$ 364</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$ 14,319</td>
<td>$ 15,179</td>
</tr>
</tbody>
</table>

| **Liabilities and equity:** |            |            |
| **Current liabilities:** |            |            |
| Accounts payable and other current liabilities | $ 1,182    | $ 1,119    |
| Deferred revenues | $ 345     | $ 355      |
| Income tax liabilities | $ 60      | $ 76       |
| Current portion of long-term debt, finance lease obligations and short-term borrowings | $ 914      | $ 107      |
| **Total current liabilities** | $ 2,501    | $ 1,657    |
| **Non-current liabilities:** |            |            |
| Long-term debt and finance lease obligations | $ 7,395    | $ 8,280    |
| Deferred tax liabilities | $ 1,052    | $ 1,108    |
| Operating lease liabilities | $ 370     | $ —        |
| Other non-current liabilities | $ 613     | $ 1,091    |
| **Total liabilities** | $ 11,931   | $ 12,136   |

Commitments and contingencies (Note 16)

Equity:

**Nielsen shareholders’ equity**

- Common stock, €0.07 par value, 1,185,800,000 and 1,185,800,000 shares authorized; 356,158,879 and 355,323,822 shares issued and 356,149,883 and 355,271,737 shares outstanding at December 31, 2019 and 2018, respectively | 32         | 32         |
- Additional paid-in capital | $ 4,378    | $ 4,720    |
- Retained earnings/(accumulated deficit) | (1,210)    | (795)      |
- Accumulated other comprehensive loss, net of income taxes | (1,005)    | (1,110)    |
| **Total Nielsen shareholders’ equity** | $ 2,195    | $ 2,847    |

**Noncontrolling interests** | $ 193      | $ 196      |

**Total equity** | $ 2,388    | $ 3,043    |

**Total liabilities and equity** | $ 14,319   | $ 15,179   |

The accompanying notes are an integral part of these consolidated financial statements.
Nielsen Holdings plc
Consolidated Statements of Cash Flows

(IN MILLIONS)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Activities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net income/(loss)</td>
<td>(403)</td>
<td>(700)</td>
<td>440</td>
</tr>
<tr>
<td>Adjustments to reconcile net income/(loss) to net cash provided by operating activities:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share-based compensation expense</td>
<td>50</td>
<td>35</td>
<td>45</td>
</tr>
<tr>
<td>Deferred income tax</td>
<td>5</td>
<td>(514)</td>
<td>162</td>
</tr>
<tr>
<td>Currency exchange rate differences on financial transactions and other (gains)/losses</td>
<td>178</td>
<td>17</td>
<td>(20)</td>
</tr>
<tr>
<td>Equity in net income/(loss) of affiliates, net of dividends received</td>
<td>1</td>
<td>—</td>
<td>2</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>756</td>
<td>675</td>
<td>640</td>
</tr>
<tr>
<td>Impairment of goodwill and other long-lived assets</td>
<td>1,004</td>
<td>1,413</td>
<td>—</td>
</tr>
<tr>
<td>Changes in operating assets and liabilities, net of effect of businesses acquired and divested:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade and other receivables, net</td>
<td>4</td>
<td>95</td>
<td>10</td>
</tr>
<tr>
<td>Prepaid expenses and other assets</td>
<td>64</td>
<td>(76)</td>
<td>(28)</td>
</tr>
<tr>
<td>Accounts payable and other current liabilities and deferred revenues</td>
<td>(20)</td>
<td>(21)</td>
<td>41</td>
</tr>
<tr>
<td>Other non-current liabilities</td>
<td>(95)</td>
<td>(6)</td>
<td>2</td>
</tr>
<tr>
<td>Interest payable</td>
<td>11</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>Income taxes</td>
<td>(489)</td>
<td>126</td>
<td>(6)</td>
</tr>
<tr>
<td><strong>Net cash provided by operating activities</strong></td>
<td>1,066</td>
<td>1,058</td>
<td>1,310</td>
</tr>
<tr>
<td><strong>Investing Activities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition of subsidiaries and affiliates, net of cash acquired</td>
<td>(61)</td>
<td>(43)</td>
<td>(778)</td>
</tr>
<tr>
<td>Proceeds from the sale of subsidiaries and affiliates, net</td>
<td>17</td>
<td>51</td>
<td>2</td>
</tr>
<tr>
<td>Additions to property, plant and equipment and other assets</td>
<td>(116)</td>
<td>(106)</td>
<td>(119)</td>
</tr>
<tr>
<td>Additions to intangible assets</td>
<td>(403)</td>
<td>(414)</td>
<td>(370)</td>
</tr>
<tr>
<td>Proceeds from the sale of property, plant and equipment and other assets</td>
<td>—</td>
<td>4</td>
<td>42</td>
</tr>
<tr>
<td>Other investing activities</td>
<td>(19)</td>
<td>2</td>
<td>(13)</td>
</tr>
<tr>
<td><strong>Net cash used in by investing activities</strong></td>
<td>(582)</td>
<td>(506)</td>
<td>(1,236)</td>
</tr>
<tr>
<td><strong>Financing Activities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net borrowings under revolving credit facility</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Proceeds from issuances of debt, net of issuance costs</td>
<td>—</td>
<td>781</td>
<td>2,745</td>
</tr>
<tr>
<td>Repayment of debt</td>
<td>(57)</td>
<td>(819)</td>
<td>(2,296)</td>
</tr>
<tr>
<td>Cash dividends paid to shareholders</td>
<td>(395)</td>
<td>(494)</td>
<td>(474)</td>
</tr>
<tr>
<td>Repurchase of common stock</td>
<td>—</td>
<td>(70)</td>
<td>(140)</td>
</tr>
<tr>
<td>Activity from share-based compensation plans</td>
<td>(8)</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>Proceeds from employee stock purchase plan</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Finance leases</td>
<td>(60)</td>
<td>(76)</td>
<td>(55)</td>
</tr>
<tr>
<td>Other financing activities</td>
<td>(28)</td>
<td>(18)</td>
<td>(22)</td>
</tr>
<tr>
<td><strong>Net cash used in financing activities</strong></td>
<td>(544)</td>
<td>(676)</td>
<td>(215)</td>
</tr>
<tr>
<td><strong>Effect of exchange-rate changes on cash and cash equivalents</strong></td>
<td>(10)</td>
<td>(8)</td>
<td>43</td>
</tr>
<tr>
<td><strong>Net increase/(decrease) in cash and cash equivalents</strong></td>
<td>(70)</td>
<td>(132)</td>
<td>(98)</td>
</tr>
<tr>
<td>Cash and cash equivalents at beginning of period</td>
<td>524</td>
<td>656</td>
<td>754</td>
</tr>
<tr>
<td><strong>Cash and cash equivalents at end of period</strong></td>
<td>454</td>
<td>524</td>
<td>656</td>
</tr>
</tbody>
</table>

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

Consolidated Statements of Changes in Equity

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Common Stock</th>
<th>Additional Paid-in Capital</th>
<th>Retained Earnings</th>
<th>Accumulated Other Comprehensive Income (Loss), Net</th>
<th>Total Nielsen Shareholders' Equity</th>
<th>Noncontrolling Interests</th>
<th>Total Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, December 31, 2016</td>
<td>$32</td>
<td>$4,825</td>
<td>$456</td>
<td>$ (856)</td>
<td>$ (1)</td>
<td>$ (354)</td>
<td>$4,102</td>
</tr>
<tr>
<td>Net income/(loss)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>$429</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Currency translation adjustments, net of tax of $23</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>246</td>
<td>—</td>
<td>—</td>
<td>246</td>
</tr>
<tr>
<td>Cash flow hedges, net of tax of $(7)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>11</td>
<td>—</td>
<td>11</td>
</tr>
<tr>
<td>Defined benefit pension plan adjustments, net of tax of $(2)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Capital contribution by a non-controlling partner</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Acquisition of an interest in a consolidated subsidiary</td>
<td>—</td>
<td>(12)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(12)</td>
<td>(12)</td>
</tr>
<tr>
<td>Employee stock purchase plan</td>
<td>—</td>
<td>6</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>6</td>
</tr>
<tr>
<td>Dividends to shareholders</td>
<td>—</td>
<td>—</td>
<td>(474)</td>
<td>—</td>
<td>—</td>
<td>(474)</td>
<td>(12)</td>
</tr>
<tr>
<td>Common stock activity from share-based compensation plans</td>
<td>—</td>
<td>21</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>21</td>
</tr>
<tr>
<td>Repurchase of common stock</td>
<td>—</td>
<td>(140)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(140)</td>
<td>—</td>
</tr>
<tr>
<td>Share-based compensation expense</td>
<td>—</td>
<td>42</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>42</td>
<td>—</td>
</tr>
<tr>
<td>Balance, December 31, 2017</td>
<td>$32</td>
<td>$4,742</td>
<td>$411</td>
<td>$ (610)</td>
<td>$10</td>
<td>$ (340)</td>
<td>$4,245</td>
</tr>
</tbody>
</table>
Consolidated Statements of Changes in Equity

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Common</th>
<th>Additional</th>
<th>Retained Earnings</th>
<th>Accumulated Other Comprehensive Income (Loss), Net</th>
<th>Total Nielsen Shareholders' Equity</th>
<th>Noncontrolling Interests</th>
<th>Total Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stock</td>
<td>Paid-in</td>
<td>(Accumulated)</td>
<td>Translation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Capital</td>
<td>Deficit</td>
<td>Adjustments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance, December 31, 2017</td>
<td>$32</td>
<td>$4,742</td>
<td>$411</td>
<td>$(610)</td>
<td>$10</td>
<td>$(340)</td>
<td>$4,245</td>
</tr>
<tr>
<td>Net income/(loss)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(712)</td>
<td>—</td>
<td>(712)</td>
</tr>
<tr>
<td>Currency translation adjustments, net of tax of $(6)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(169)</td>
<td>—</td>
<td>(169)</td>
</tr>
<tr>
<td>Cash flow hedges, net of tax of (1)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>—</td>
<td>1</td>
</tr>
<tr>
<td>Defined benefit pension plan adjustments net of tax of zero</td>
<td>—</td>
<td>5</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(2)</td>
<td>(2)</td>
</tr>
<tr>
<td>Employee stock purchase plan</td>
<td>—</td>
<td>—</td>
<td>(494)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(494)</td>
</tr>
<tr>
<td>Dividends to shareholders</td>
<td>—</td>
<td>15</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>15</td>
</tr>
<tr>
<td>Common stock activity from share-based compensation plans</td>
<td>—</td>
<td>(70)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(70)</td>
<td>—</td>
</tr>
<tr>
<td>Repurchase of common stock &amp; share-based compensation expense</td>
<td>—</td>
<td>28</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>28</td>
</tr>
<tr>
<td>Balance, December 31, 2018</td>
<td>$32</td>
<td>$4,720</td>
<td>$(795)</td>
<td>$(779)</td>
<td>$11</td>
<td>$(342)</td>
<td>$2,847</td>
</tr>
</tbody>
</table>
## Consolidated Statements of Changes in Equity

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, December 31, 2018...........................</td>
<td>$ 32</td>
<td>$ 4,720</td>
<td>$(795)</td>
<td>$(779)</td>
<td>$ 11</td>
<td>$(342)</td>
<td>$ 2,847</td>
<td>$ 196</td>
<td>$ 3,043</td>
</tr>
<tr>
<td>Net income/(loss) ........................................</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Currency translation adjustments, net of tax of $(4) ..........................................................</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Cash flow hedges, net of tax of 11 ......................</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(30)</td>
<td>—</td>
<td>—</td>
<td>(30)</td>
<td>—</td>
</tr>
<tr>
<td>Defined benefit pension plan adjustments, net of tax of (8).........................................................</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>132</td>
<td>—</td>
<td>132</td>
<td>—</td>
</tr>
<tr>
<td>Capital contribution by a non-controlling partner..........................................................</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Divestiture of a non-controlling interest in a consolidated subsidiary .........................................</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(2)</td>
<td>(2)</td>
</tr>
<tr>
<td>Employee stock purchase plan ............................</td>
<td>—</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>4</td>
<td>—</td>
</tr>
<tr>
<td>Dividends to shareholders ..................................</td>
<td>—</td>
<td>(395)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(395)</td>
<td>(17)</td>
</tr>
<tr>
<td>Common stock activity from share-based compensation plans ..........................................................</td>
<td>—</td>
<td>(8)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(8)</td>
<td>—</td>
</tr>
<tr>
<td>Share-based compensation expense ....................</td>
<td>—</td>
<td>57</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>57</td>
<td>—</td>
</tr>
<tr>
<td>Balance, December 31, 2019.............................</td>
<td>$ 32</td>
<td>$ 4,378</td>
<td>$(1,210)</td>
<td>$(776)</td>
<td>$(19)</td>
<td>$(210)</td>
<td>$ 2,195</td>
<td>$ 193</td>
<td>$ 2,388</td>
</tr>
</tbody>
</table>

The accompanying notes are an integral part of these consolidated financial statements.
1. Description of Business, Basis of Presentation and Significant Accounting Policies

Nielsen Holdings plc (“Nielsen” or the “Company”), together with its subsidiaries, is a leading global information and measurement company that provides clients with a comprehensive understanding of consumers and consumer behavior. Nielsen’s approach marries the Company’s proprietary data with other data sources to help clients around the world understand what's happening now, what's happening next, and how to best act on this knowledge. For more than 90 years Nielsen has provided data and analytics based on scientific rigor and innovation, continually developing new ways to answer the most important questions facing the media, advertising, retail and fast-moving consumer goods industries.

Prior to February 2019, Nielsen was aligned into two reporting segments: what consumers buy (“Buy”) and what consumers read, watch and listen to (“Watch”). In February 2019, Nielsen realigned its business segments from Buy and Watch to Nielsen Global Connect (“Connect”) and Nielsen Global Media (“Media”). Each segment operates as a complete unit—from the conception of a product, through the collection of the data, into the technology and operations, all the way to the data being sold and delivered to the client. These changes better align Nielsen’s external view to the Company’s go-forward internal view. The Company’s reportable segments are stated on the new basis and such changes were retrospectively applied. The impact of these changes had an insignificant impact on Nielsen’s condensed consolidated financial statements or segment results. See Note 18- “Segments” for a discussion of the Company’s reportable segments.

Nielsen has a presence in more than 100 countries, with its registered office located in Oxford, the United Kingdom and headquarters located in New York, United States.

On August 31, 2015, Nielsen N.V., a Dutch public company listed on the New York Stock Exchange, merged with Nielsen Holdings plc, by way of a cross-border merger under the European Cross-Border Merger Directive, with Nielsen Holdings plc being the surviving company (the “Merger”). The Merger effectively changed the place of incorporation of Nielsen’s publically traded parent holding company from the Netherlands to England and Wales, with no changes made to the business being conducted by Nielsen prior to the Merger. Due to the fact that the Merger was a business combination between entities under common control, the exchange of assets and liabilities were made at carrying value. Therefore, there were no direct accounting implications in the Company’s consolidated financial statements.

The accompanying consolidated financial statements are presented in conformity with U.S. generally accepted accounting principles (“GAAP”). All amounts are presented in U.S. Dollars (“$”), except for share and per share data or where expressly stated as being in other currencies, e.g., Euros (“€”). The consolidated financial statements include the accounts of Nielsen and all subsidiaries and other controlled entities. The Company has evaluated events occurring subsequent to December 31, 2019 for potential recognition or disclosure in the consolidated financial statements and concluded there were no subsequent events that required recognition or disclosure other than those provided.

Consolidation

The consolidated financial statements include the accounts of Nielsen and all subsidiaries and other controlled entities. Noncontrolling interests in subsidiaries are reported as a component of equity in the consolidated financial statements with disclosure on the face of the consolidated statements of operations of the amounts of consolidated net income/(loss) attributable to Nielsen shareholders and to the noncontrolling interests. The equity method of accounting is used for investments in affiliates and joint ventures where Nielsen has significant influence but not control, usually supported by a shareholding of between 20% and 50% of the voting rights. In addition, the Company records changes in the fair value of non-equity method equity investments with readily determinable fair values in net income rather than in accumulated other comprehensive income/(loss). Investments that do not have readily determinable fair values are recognized at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. The adjustments related to the observable price changes will also be recognized in net income. Intercompany accounts and transactions between consolidated companies have been eliminated in consolidation.

Foreign Currency Translation

Nielsen has significant investments outside the U.S., primarily in the Euro-zone, Canada and the United Kingdom. Therefore, changes in the value of foreign currencies affect the consolidated financial statements when translated into U.S. Dollars. The functional currency for substantially all subsidiaries outside the U.S. is the local currency. Financial statements for these subsidiaries are translated into U.S. Dollars at period-end exchange rates as to the assets and liabilities and monthly average exchange rates as to revenues, expenses and cash flows. For these countries, currency translation adjustments are recognized in shareholders’ equity as a component of accumulated other comprehensive income/(loss), net, whereas transaction gains and losses are recognized in foreign exchange transaction losses, net in the consolidated statement of operations.
Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

Research and Development Costs

Research and development costs, which were not material for any periods presented, are expensed as incurred.

Deferred Costs

Incremental direct costs incurred related to establishing or significantly expanding a panel in a designated market are deferred at the point when Nielsen determines them to be recoverable. Prior to this point, these cost are expensed as incurred. These deferred costs are typically amortized through cost of revenues over the original contract period beginning when the panel or infrastructure to service new clients is ready for its intended use.

Advertising and Marketing Costs

Advertising and marketing costs are expensed as incurred and are reflected as selling, general and administrative expenses in the consolidated statements of operations. These costs include all brand advertising, telemarketing, direct mail and other sales promotion associated with marketing/media research services. Advertising and marketing costs totaled $18 million, $18 million and $21 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Computation of Net Income per Share

Basic net income per share is computed using the weighted-average number of common stock outstanding during the period. Diluted net income per share is computed using the weighted-average number of shares of common stock and dilutive potential shares of common stock outstanding during the period. Dilutive potential shares of common stock primarily consist of employee stock options and restricted stock.

Employee stock options, restricted stock and similar equity instruments granted by the Company are treated as potential common stock outstanding in computing diluted earnings per share. Diluted stock outstanding includes nonvested restricted stock units and the dilutive effect of in-the-money options which is calculated based on the average share price for each period using the treasury stock method. Under the treasury stock method, the amount the employee must pay for exercising stock options, the amount of compensation cost for future service that the Company has not yet recognized are assumed to be used to repurchase stock.

The effect of 8,181,944, 8,519,133 and 4,351,564 shares of common stock equivalents under stock compensation plans were excluded from the calculation of diluted earnings per share for the years ended December 31, 2019, 2018 and 2017, respectively, as such shares would have been anti-dilutive.

Comprehensive Income/(Loss)

Comprehensive income/(loss) is reported in the accompanying consolidated statements of comprehensive income/(loss) and consists of net income/(loss) and other gains and losses, net of tax, affecting equity that are excluded from net income/(loss).

Cash and Cash Equivalents

Cash and cash equivalents include cash and short-term, highly liquid investments with an original maturity date of three months or less. Cash and cash equivalents are carried at fair value.

Accounts Receivable

The Company extends non-interest bearing trade credit to its customers in the ordinary course of business. To minimize credit risk, ongoing credit evaluations of client’s financial condition are performed. An estimate of the allowance for doubtful accounts is made when collection of the full amount is no longer probable or returns are expected.
During the years ended December 31, 2019, 2018 and 2017, the Company sold $360 million, $295 million and $202 million, respectively, of accounts receivables to third parties and recorded an immaterial loss on the sale to interest expense, net in the consolidated statement of operations. As of December 31, 2019, 2018 and 2017, $85 million, $105 million and $110 million, respectively, of previously sold receivables, remained outstanding. The sales were accounted for as true sales, without recourse. Nielsen maintains servicing responsibilities of the majority of the receivables sold during the year, for which the related costs are not significant. The proceeds of $360 million, $295 million and $202 million from the sales were reported as a component of the changes in trade and other receivables, net within operating activities in the consolidated statement of cash flows.

Other Significant Accounting Policies

The following table includes other significant accounting policies that are described in other notes to the financial statements, including the related note:

<table>
<thead>
<tr>
<th>Significant Accounting Policy</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue recognition</td>
<td>3</td>
</tr>
<tr>
<td>Leases</td>
<td>5</td>
</tr>
<tr>
<td>Goodwill and Other Intangible Assets</td>
<td>6</td>
</tr>
<tr>
<td>Impairment of Long-Lived Assets</td>
<td>6 &amp; 8</td>
</tr>
<tr>
<td>Property, Plant and Equipment</td>
<td>8</td>
</tr>
<tr>
<td>Investments</td>
<td>9</td>
</tr>
<tr>
<td>Financial Instruments</td>
<td>9</td>
</tr>
<tr>
<td>Derivative Financial Instruments</td>
<td>9</td>
</tr>
<tr>
<td>Pensions and Other Post Retirement Benefits</td>
<td>11</td>
</tr>
<tr>
<td>Share-Based Compensation</td>
<td>14</td>
</tr>
<tr>
<td>Income Taxes</td>
<td>15</td>
</tr>
</tbody>
</table>

2. Summary of Recent Accounting Pronouncements

Leases

Effective January 1, 2019, the Company adopted the new lease accounting standard using the transition method approved by the FASB on July 30, 2018, which allows companies to apply the provisions of the new leasing standard as of January 1, 2019, without adjusting the comparative periods presented. In addition, we elected the package of practical expedients permitted under the transition guidance within the new standard. This allowed us to carry forward the historical lease classification. Adoption of this standard resulted in the recording of net operating lease right-of-use (“ROU”) assets of $0.5 billion (amount is net of lease incentives and ASC 420 cease-use liabilities) and corresponding operating lease liabilities of $0.6 billion. Financial position for reporting periods beginning on or after January 1, 2019 are presented under the new guidance, while prior period amounts are not adjusted and continue to be reported in accordance with previous guidance. See Note 5 (“Leases”) for further discussion.

Income taxes

In February 2018, the FASB issued an ASU, “Reclassification of Certain Tax Effects From Accumulated Comprehensive Income”. The new standard gives companies the option to reclassify stranded tax effects caused by the newly-enacted US Tax Cuts and Jobs Act (“TCJA”) from accumulated other comprehensive income (“AOCI”) to retained earnings. The new standard became effective for Nielsen on January 1, 2019. Nielsen elected to not reclassify stranded income tax effects of the TCJA from AOCI to retained earnings.

Financial Instruments – Credit Losses

In June 2016, the FASB issued an ASU, “Financial Instruments – Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments”. The standard significantly changes how entities will measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. The standard will replace today’s “incurred loss” approach with an “expected loss” model for instruments measured at amortized cost. For available-for-sale debt securities, entities will be required to record allowances rather than reduce the carrying amount, as they do today under the other-than-temporary impairment model. It also simplifies the accounting model for purchased credit-impaired debt securities and loans. The new standard is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2019. Nielsen does not expect the adoption of this ASU to have a material impact on the Company’s consolidated financial statements.
Compensation—Retirement Benefits—Defined Benefit Plans—General

In August 2018, the FASB issued ASU No. 2018-14, Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20), which amends the current disclosure requirements regarding defined benefit pensions and other post retirement plans, and allows for the removal of certain disclosures, while adding certain new disclosure requirements. This standard is effective for fiscal years beginning after December 15, 2020 and allows for early adoption. The Company does not expect this new standard to have a significant impact to our disclosures.

Income Taxes (Topic 740): Simplifying the Accounting for Income taxes

In December 2019, the FASB issued ASU No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes which amends and aims to simplify accounting disclosure requirements regarding a number of topics including: intraperiod tax allocation, accounting for deferred taxes when there are changes in consolidation of certain investments, tax basis step up in an acquisition and the application of effective rate changes during interim periods, amongst other improvements. This standard is effective for fiscal years beginning after December 15, 2020 and allows for early adoption. Nielsen is assessing the impact of this new standard on the Company’s consolidated balance sheets, statements of operations and its future disclosures.

3. Revenue Recognition

Revenue is measured based on the consideration specified in a contract with a customer. The Company recognizes revenue when it satisfies a performance obligation by transferring control of a product or service to a customer, which generally occurs over time. Substantially all of the Company’s customer contracts are non-cancelable and non-refundable.

The following is a description of principal activities, by reportable segment, from which the Company generates its revenues.

Revenue from the Connect segment consists primarily of measurement services, which include the Company’s core tracking and scan data (primarily transactional measurement data and consumer behavior information) to businesses in the consumer packaged goods industry. Nielsen’s data is used by its clients to measure their market share, tracking billions of sales transactions per month in retail outlets around the world. Revenues for these services are recognized over the period during which the performance obligations are satisfied as the customer receives and consumes the benefits provided by the Company and control of the services is transferred to the customer.

The Company also provides consumer intelligence and analytical services that help clients make smarter business decisions throughout their product development and marketing cycles. The Company’s performance under these arrangements do not create an asset with an alternative use to the company and generally include an enforceable right to payment for performance completed to date, as such, revenue for these services is typically recognized over time. Revenue for contracts that do not include an enforceable right to payment for performance completed to date is recognized at a point in time when the performance obligation is satisfied, generally upon delivery of the services, and when control of the service is transferred to the customer.

Revenue from Nielsen’s Media segment is primarily generated from television, radio, digital and mobile audience measurement services and analytics which are used by the Company’s media clients to establish the value of airtime and more effectively schedule and promote their programming and the Company’s advertising clients to plan and optimize their spending. As the customer simultaneously receives and consumes the benefits provided by the Company’s performance, revenues for these services are recognized over the period during which the performance obligations are satisfied and control of the service is transferred to the customer.

The Company enters into cooperation arrangements with certain customers, under which the customer provides Nielsen with its data in exchange for Nielsen’s services. Nielsen records these transactions at fair value, which is determined based on the fair value of goods or services received, if reasonably estimable. If not reasonably estimable, the Company considers the fair value of the goods or services surrendered.
The table below sets forth the Company’s revenue disaggregated within each segment by major product offerings and timing of revenue recognition.

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Connect Segment</td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td>$2,161</td>
</tr>
<tr>
<td>Predict/Activate</td>
<td>896</td>
</tr>
<tr>
<td>Connect</td>
<td>$3,057</td>
</tr>
<tr>
<td>Media Segment</td>
<td></td>
</tr>
<tr>
<td>Audience Measurement</td>
<td>$2,471</td>
</tr>
<tr>
<td>Plan/Optimize</td>
<td>970</td>
</tr>
<tr>
<td>Media</td>
<td>$3,441</td>
</tr>
<tr>
<td>Total</td>
<td>$6,498</td>
</tr>
</tbody>
</table>

**Timing of revenue recognition**

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Products transferred at a point in time</td>
<td>$576</td>
</tr>
<tr>
<td>Products and services transferred over time</td>
<td>5,922</td>
</tr>
<tr>
<td>Total</td>
<td>$6,498</td>
</tr>
</tbody>
</table>

**Contract Assets and Liabilities**

Contract assets represent the Company’s rights to consideration in exchange for services transferred to a customer that have not been billed as of the reporting date. While the Company’s rights to consideration are generally unconditional at the time its performance obligations are satisfied, under certain circumstances the related billing occurs in arrears, generally within one month of the services being rendered.

At the inception of a contract, the Company generally expects the period between when it transfers its services to its customers and when the customer pays for such services will be one year or less.

Contract liabilities relate to advance consideration received or the right to consideration that is unconditional from customers for which revenue is recognized when the performance obligation is satisfied and control transferred to the customer.

The table below sets forth the Company’s contract assets and contract liabilities from contracts with customers.

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Contract assets</td>
<td>$218</td>
</tr>
<tr>
<td>Contract liabilities</td>
<td>$346</td>
</tr>
</tbody>
</table>

The increase in the contract assets balance during the period was primarily due to $203 million of revenue recognized that was not billed, in accordance with the terms of the contracts, as of December 31, 2019, offset by $193 million of contract assets included in the December 31, 2018 balance that were invoiced to Nielsen’s clients and therefore transferred to trade receivables.

The decrease in the contract liability balance during the period was primarily due to $326 million of advance consideration received or the right to consideration that is unconditional from customers for which revenue was not recognized during the period, offset by $337 million of revenue recognized during the period that had been included in the December 31, 2018 contract liability balance.

**Transaction Price Allocated to the Remaining Performance Obligations**

As of December 31, 2019, approximately $5.9 billion of revenue is expected to be recognized from remaining performance obligations that are unsatisfied (or partially unsatisfied) for Nielsen’s services. This amount excludes variable consideration allocated to performance obligations related to sales and usage based royalties on licenses of intellectual property.
The Company expects to recognize revenue on approximately 82% of these remaining performance obligations through December 31, 2021, with the balance recognized thereafter.

Deferred Costs

Incremental direct costs incurred to build the infrastructure to service new contracts are capitalized as a contract cost. As of December 31, 2019 and 2018, the balances of such capitalized costs were $11 million and $18 million, respectively. These costs are typically amortized through cost of revenues over the original contract period beginning when the infrastructure to service new clients is ready for its intended use. The amortization of these costs for the year ended December 31, 2019 and 2018 was $8 million and $23 million, respectively. There was no impairment loss recorded in any of the periods recorded.

4. Business Acquisitions and Dispositions

Gracenote

For the year ended December 31, 2019, Nielsen paid cash consideration of $61 million associated with current period acquisitions, net of cash acquired. Had these 2019 acquisitions occurred as of January 1, 2019, the impact on Nielsen’s consolidated results of operations would not have been material.

For the year ended December 31, 2018, Nielsen paid cash consideration of $43 million associated with both current period and previously executed acquisitions, net of cash acquired. Had these 2018 acquisitions occurred as of January 1, 2018, the impact on Nielsen’s consolidated results of operations would not have been material.

On February 1, 2017, Nielsen completed the acquisition of Gracenote Inc., Gracenote Canada, Inc., Gracenote Netherlands Holdings B.V., Tribune Digital Ventures, LLC, and Tribune International Holdco, LLC (each, a “Gracenote Company” and together “Gracenote”) through the purchase of 100% of Gracenote’s outstanding common stock for a total purchase price of $585 million. Nielsen acquired the data and technology that underpins the programming guides and personnel user experience for major video, music, audio and sports content. This acquisition expands Nielsen’s footprint with major clients including Gracenote’s global content database which spans across platforms including multichannel video programming distributors (MVPD’s), smart television, streaming music services, connected devices, media players and in-car infotainment systems.

For the year ended December 31, 2017, excluding Gracenote, Nielsen paid cash consideration of $210 million associated with both current period and previously executed acquisitions, net of cash acquired. Had these 2017 acquisitions occurred as of January 1, 2017, the impact on Nielsen’s consolidated results of operations would not have been material.

There were no discontinued operations for the years ended December 31, 2019, 2018 and 2017.

5. Leases

All significant lease arrangements are generally recognized at lease commencement. Operating lease right-of-use (“ROU”) assets and lease liabilities are recognized at commencement. An ROU asset and corresponding lease liability are not recorded for leases with an initial term of 12 months or less (short term leases) and Nielsen recognizes lease expense for these leases as incurred over the lease term. ROU assets represent the Company’s right to use an underlying asset during the reasonably certain lease term and lease liabilities represent its obligation to make lease payments arising from the lease. Nielsen’s lease terms may include options to extend or terminate the lease when it is reasonably certain that Nielsen will exercise that option. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. Nielsen uses the rate implicit in the lease for the discount rate when determining the present value of lease payments whenever that rate is readily determinable. If the rate is not readily determinable, Nielsen uses its incremental borrowing rate, which is updated periodically, based on the information available at commencement date. The operating lease ROU asset also includes any lease payments related to initial direct cost and prepayments and excludes lease incentives. Lease expense is recognized on a straight-line basis over the lease term. Nielsen has lease agreements with lease and non-lease components, which are generally accounted for together.

Nielsen has operating and finance leases for real estate facilities, servers, computer hardware, and other equipment. Nielsen’s leases have remaining lease terms of 1 year to 30 years, some of which include options to extend the leases for up to 5 years, and some of which include options to terminate the leases within 1 year.
The components of lease expense were as follows:

<table>
<thead>
<tr>
<th>Lease cost</th>
<th>Year Ended December 31, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance lease cost:</td>
<td></td>
</tr>
<tr>
<td>Amortization of right-of-use assets</td>
<td>$62</td>
</tr>
<tr>
<td>Interest on lease liabilities</td>
<td>9</td>
</tr>
<tr>
<td>Total finance lease cost</td>
<td>71</td>
</tr>
<tr>
<td>Operating lease cost</td>
<td>123</td>
</tr>
<tr>
<td>Short-term lease costs</td>
<td>5</td>
</tr>
<tr>
<td>Sublease income</td>
<td>(3)</td>
</tr>
<tr>
<td>Total lease cost</td>
<td>$196</td>
</tr>
</tbody>
</table>

Nielsen recognized rental income received under subleases from operating leases of $3 million, $6 million and $6 million for the years ended December 31, 2019, 2018 and 2017, respectively. At December 31, 2019, Nielsen had aggregate future proceeds to be received under operating lease sub-lease guarantees of $8 million.

Supplemental balance sheet information related to leases was as follows:

<table>
<thead>
<tr>
<th>(in millions, except lease term and discount rate)</th>
<th>December 31, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating leases</strong></td>
<td></td>
</tr>
<tr>
<td>Operating lease right-of-use assets</td>
<td>$393</td>
</tr>
<tr>
<td>Other current liabilities</td>
<td>110</td>
</tr>
<tr>
<td>Operating lease liabilities</td>
<td>370</td>
</tr>
<tr>
<td>Total operating lease liabilities</td>
<td>$480</td>
</tr>
<tr>
<td><strong>Finance leases</strong></td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment, gross</td>
<td>$393</td>
</tr>
<tr>
<td>Accumulated depreciation</td>
<td>(213)</td>
</tr>
<tr>
<td>Property, plant and equipment, net</td>
<td>180</td>
</tr>
<tr>
<td>Other intangible assets, gross</td>
<td>24</td>
</tr>
<tr>
<td>Accumulated amortization</td>
<td>(13)</td>
</tr>
<tr>
<td>Other intangible assets, net</td>
<td>11</td>
</tr>
<tr>
<td>Accounts payable and other current liabilities</td>
<td>53</td>
</tr>
<tr>
<td>Long-term debt and finance lease obligations</td>
<td>92</td>
</tr>
<tr>
<td>Total finance lease liabilities</td>
<td>$145</td>
</tr>
</tbody>
</table>

**Other information**

Cash paid for amounts included in the measurement of lease liabilities:
- Operating cash flows used in finance leases: (9)
- Operating cash flows used in operating leases: (126)
- Financing cash flows used in finance leases: (60)
- Right-of-use assets obtained in exchange for new finance lease liabilities: 40
- Right-of-use assets obtained in exchange for new operating lease liabilities: 43
- Weighted-average remaining lease term--finance leases: 4 years
- Weighted-average remaining lease term--operating leases: 8 years
- Weighted-average discount rate--finance leases: 6.2%
- Weighted-average discount rate--operating leases: 4.5%
Annual maturities of Nielsen’s lease liabilities are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Operating Leases</th>
<th>Finance Leases</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$ 136</td>
<td>$ 61</td>
</tr>
<tr>
<td>2021</td>
<td>99</td>
<td>42</td>
</tr>
<tr>
<td>2022</td>
<td>75</td>
<td>29</td>
</tr>
<tr>
<td>2023</td>
<td>53</td>
<td>15</td>
</tr>
<tr>
<td>2024</td>
<td>40</td>
<td>7</td>
</tr>
<tr>
<td>Thereafter</td>
<td>171</td>
<td>8</td>
</tr>
<tr>
<td>Total lease payments</td>
<td>574</td>
<td>162</td>
</tr>
<tr>
<td>Less imputed interest</td>
<td>(94)</td>
<td>(17)</td>
</tr>
<tr>
<td>Total</td>
<td>$ 480</td>
<td>$ 145</td>
</tr>
</tbody>
</table>

6. Goodwill and Other Intangible Assets

Goodwill

Goodwill and other indefinite-lived intangible assets, consisting of certain trade names and trademarks, are each tested for impairment on an annual basis and whenever events or circumstances indicate that the carrying amount of such asset may not be recoverable. Nielsen has designated October 1st as the date in which the annual assessment is performed as this timing corresponds with the development of the Company’s formal budget and business plan review. Nielsen reviews the recoverability of its goodwill by comparing the estimated fair values of reporting units with their respective carrying amounts. The Company established, and continues to evaluate, its reporting units based on its internal reporting structure and defines such reporting units at its operating segment level or one level below. The estimates of fair value of a reporting unit are determined using a combination of valuation techniques, primarily an income approach using a discounted cash flow analysis supplemented by a market-based approach.

A discounted cash flow analysis requires the use of various assumptions, including expectations of future cash flows, growth rates, discount rates and tax rates in developing the present value of future cash flow projections. The market-based approach utilizes available market comparisons such as indicative industry multiples that are applied to current year revenue and earnings as well as recent comparable transactions.
Nielsen conducted the annual assessment as of October 1, 2019 and concluded that there was no impairment.

Prior to the annual assessment date, in connection with Nielsen’s ongoing strategic review, Nielsen considered various alternatives for the Company including the potential sale of the Connect business. During this process, there were indications that the fair value of the Connect reporting unit was lower than the carrying value. Nielsen considered this as well as other factors to be interim indicators of impairment and determined that it was more likely than not that the Connect reporting unit was impaired. Management performed an impairment analysis of Connect as of September 30, 2019. As a result of this analysis, Nielsen concluded that the fair value was less than the carrying value and recorded a non-cash goodwill impairment charge of $1,004 million for the Connect reporting unit. The primary inputs for determining the estimated fair value were inputs from the strategic review process, market values for comparable entities and updated intrinsic values.

During the first quarter of 2019, Nielsen updated its reporting structure in a manner that changed the composition of the Company’s reporting units. The result of this change was combining two of Nielsen’s reporting units into one. Both of these reporting units were in the former Watch reportable segment. The current reporting units are Media and Connect (formerly Watch and Buy), which is the same as Nielsen’s reportable segments. As a result of this change in reporting units, Nielsen performed an interim goodwill impairment analysis during the first quarter immediately prior to the change and after the change, and determined that the estimated fair values of the reporting units exceeded their carrying values (including goodwill). As such, there was no impairment as a result of this change.

Goodwill is stated at historical cost less accumulated impairments losses, if any.

The table below summarizes the changes in the carrying amount of goodwill by reportable segment for the years ended December 31, 2019 and 2018, respectively.

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Connect</th>
<th>Media</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, December 31, 2017</td>
<td>$2,844</td>
<td>$5,651</td>
<td>$8,495</td>
</tr>
<tr>
<td>Acquisitions, divestitures and other adjustments</td>
<td>11</td>
<td>15</td>
<td>26</td>
</tr>
<tr>
<td>Impairment</td>
<td>(1,411)</td>
<td>—</td>
<td>(1,411)</td>
</tr>
<tr>
<td>Effect of foreign currency translation</td>
<td>(107)</td>
<td>(16)</td>
<td>(123)</td>
</tr>
<tr>
<td>Balance, December 31, 2018</td>
<td>$1,337</td>
<td>$5,650</td>
<td>$6,987</td>
</tr>
<tr>
<td>Acquisitions, divestitures and other adjustments</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Impairment</td>
<td>(1,004)</td>
<td>—</td>
<td>(1,004)</td>
</tr>
<tr>
<td>Effect of foreign currency translation</td>
<td>(10)</td>
<td>—</td>
<td>(10)</td>
</tr>
<tr>
<td>Balance, December 31, 2019</td>
<td>$331</td>
<td>$5,662</td>
<td>$5,993</td>
</tr>
<tr>
<td>Cumulative impairments</td>
<td>$2,415</td>
<td>$376</td>
<td>$2,791</td>
</tr>
</tbody>
</table>

At December 31, 2019, $45 million of goodwill is expected to be deductible for income tax purposes.
Other Intangible Assets

Intangible assets with finite lives are stated at historical cost, less accumulated amortization and impairment losses. These intangible assets are amortized on a straight-line basis over the following estimated useful lives, which are reviewed annually.

Nielsen has purchased and internally developed software to facilitate its global information processing, financial reporting and client access needs. Costs that are related to the conceptual formulation and design of software programs are expensed as incurred. Costs that are incurred to produce the finished product after technological feasibility has been established are capitalized as an intangible asset and are amortized over the estimated useful life. If events or changes in circumstances indicate that the carrying value of software may not be recovered, a recoverability analysis is performed based on estimated undiscounted cash flows to be generated from the software in the future. If the analysis indicates that the carrying value is not recoverable from the future cash flows, the software cost is written down to estimated fair value and an impairment is recognized. These estimates are subject to revision as market conditions and as the Company’s assessments change. At December 31, 2019, the net book value of purchased and internally developed software was $36 million and $1,330 million, respectively.

Certain of the trade names associated with Nielsen are deemed indefinite-lived intangible assets, as their associated Nielsen brand awareness and recognition has existed for over 50 years and the Company intends to continue to utilize these trade names. There are also no legal, regulatory, contractual, competitive, economic or other factors that may limit their estimated useful lives. Nielsen reconsiders the remaining estimated useful life of indefinite-lived intangible assets each reporting period.

The impairment test for other indefinite-lived intangible assets consists of a comparison of the fair value of the intangible asset with its carrying amount. If the carrying amount of the intangible asset exceeds its fair value, an impairment loss is recognized in an amount equal to that excess. The estimates of fair value of trade names and trademarks are determined using a “relief from royalty” discounted cash flow valuation methodology. Significant assumptions inherent in this methodology include estimates of royalty rates and discount rates. Discount rate assumptions are based on an assessment of the risk inherent in the respective intangible assets. Assumptions about royalty rates are based on the rates at which comparable trade names and trademarks are being licensed in the marketplace. There was no impairment noted in any period presented with respect to the Company’s indefinite-lived intangible assets. As of the October 1, 2019 assessment, one of Nielsen’s indefinite-lived intangible assets had a fair value that exceeded its carrying value by less than 10%.

Nielsen is required to assess whether the value of the Company’s amortizable intangible assets have been impaired whenever events or changes in circumstances indicate that the carrying amount of the assets might not be recoverable. Nielsen does not perform a periodic assessment of assets for impairment in the absence of such information or indicators. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset, a significant change in the extent or manner in which an asset is used or a significant adverse change that would indicate that the carrying amount of an asset or group of assets is not recoverable. Recoverability of assets that are held and used is measured by comparing the sum of the future undiscounted cash flows expected to be derived from an asset (or a group of assets) to their carrying value. If the carrying value of the asset (or the group of assets) exceeds the sum of the future undiscounted cash flows, impairment is considered to exist. If impairment is considered to exist based on undiscounted cash flows, the impairment charge is measured using an estimation of the assets’ fair value, typically using a discounted cash flow method. The identification of impairment indicators, the estimation of future cash flows and the determination of fair values for assets (or groups of assets) requires Nielsen to make significant judgments concerning the identification and validation of impairment indicators, expected cash flows and applicable discount rates. These estimates are subject to revision as market conditions and the Company’s assessments change.

The Company’s impairment assessments resulted in the recognition of a non-cash self-developed software asset impairment charge of $2 million during the fourth quarter of 2018.

There was no impairment or indicators of impairment noted in 2019 with respect to the Company’s amortizable intangible assets.
The table below summarizes the carrying value of such intangible assets and their estimated useful lives:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Estimated Useful Lives</th>
<th>Weighted Average</th>
<th>Gross Amounts</th>
<th>Accumulated Amortization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>December 31, 2019</td>
<td>December 31, 2018</td>
</tr>
<tr>
<td>Indefinite-lived intangibles:</td>
<td></td>
<td></td>
<td>$ 1,921</td>
<td>$ 1,921</td>
</tr>
<tr>
<td>Trade names and trademarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amortized intangibles:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade names and trademarks</td>
<td>5-20 years</td>
<td>12 years</td>
<td>144</td>
<td>140</td>
</tr>
<tr>
<td>Customer-related intangibles</td>
<td>6-25 years</td>
<td>21 years</td>
<td>3,153</td>
<td>3,145</td>
</tr>
<tr>
<td>Covenants-not-to-compete</td>
<td>1-7 years</td>
<td>3 years</td>
<td>37</td>
<td>39</td>
</tr>
<tr>
<td>Content databases</td>
<td>12-16 years</td>
<td>12 years</td>
<td>168</td>
<td>167</td>
</tr>
<tr>
<td>Computer software</td>
<td>3-10 years</td>
<td>5 years</td>
<td>2,626</td>
<td>3,029</td>
</tr>
<tr>
<td>Patents and other</td>
<td>3-10 years</td>
<td>6 years</td>
<td>182</td>
<td>173</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$ 6,310</td>
<td>$ 6,693</td>
</tr>
</tbody>
</table>

The amortization expense for the years ended December 31, 2019, 2018 and 2017 was $580 million, $490 million and $454 million, respectively. These amounts include amortization expense associated with computer software of $384 million, $283 million and $250 million for the years ended December 31, 2019, 2018 and 2017, respectively.

All other intangible assets are subject to amortization. Future amortization expense is estimated to be as follows:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the year ending December 31:</td>
</tr>
<tr>
<td>2020..................................................</td>
</tr>
<tr>
<td>2021..................................................</td>
</tr>
<tr>
<td>2022..................................................</td>
</tr>
<tr>
<td>2023..................................................</td>
</tr>
<tr>
<td>2024..................................................</td>
</tr>
<tr>
<td>Thereafter..........................................</td>
</tr>
<tr>
<td>Total................................................</td>
</tr>
</tbody>
</table>

7. Changes in and Reclassification out of Accumulated Other Comprehensive Income/(Loss) by Component

The table below summarizes the changes in accumulated other comprehensive income/(loss), net of tax, by component for the years ended December 31, 2019 and 2018, respectively.

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Currency Translation Adjustments</th>
<th>Cash Flow Hedges</th>
<th>Post Employment Benefits</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance December 31, 2018</td>
<td>$ (779)</td>
<td>$ 11</td>
<td>$ (342)</td>
<td>$ (1,110)</td>
</tr>
<tr>
<td>Other comprehensive income/(loss) before reclassifications</td>
<td>$ 5</td>
<td>$ (23)</td>
<td>$ (42)</td>
<td>$ (60)</td>
</tr>
<tr>
<td>Amounts reclassified from accumulated other comprehensive (income)/loss</td>
<td>—</td>
<td>(7)</td>
<td>174</td>
<td>167</td>
</tr>
<tr>
<td>Net current period other comprehensive income/(loss)</td>
<td>5</td>
<td>(30)</td>
<td>132</td>
<td>107</td>
</tr>
<tr>
<td>Net current period other comprehensive income/(loss) attributable to noncontrolling interest</td>
<td>2</td>
<td>—</td>
<td>—</td>
<td>2</td>
</tr>
<tr>
<td>Net current period other comprehensive income/(loss) attributable to Nielsen shareholders</td>
<td>3</td>
<td>(30)</td>
<td>132</td>
<td>105</td>
</tr>
<tr>
<td>Balance December 31, 2019 shareholders</td>
<td>$ (776)</td>
<td>(19)</td>
<td>(210)</td>
<td>(1,005)</td>
</tr>
</tbody>
</table>
The table below summarizes the reclassification of accumulated other comprehensive loss by component for the years ended December 31, 2019 and 2018, respectively.

<table>
<thead>
<tr>
<th>Amount Reclassified from Accumulated Other Comprehensive Income/(Loss)</th>
<th>Year Ended December 31, 2019</th>
<th>Year Ended December 31, 2018</th>
<th>Affected Line Item in the Consolidated Statement of Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flow hedges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest rate contracts</td>
<td>$(9)</td>
<td>$(7)</td>
<td>Interest (income)/expense</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Benefit)/provision for income taxes</td>
</tr>
<tr>
<td></td>
<td>$2</td>
<td>$2</td>
<td>Total, net of tax</td>
</tr>
<tr>
<td>Total</td>
<td>$(7)</td>
<td>$(5)</td>
<td></td>
</tr>
<tr>
<td>Post-Employment Benefits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amortization of actuarial loss</td>
<td>$12</td>
<td>$19</td>
<td>(a)</td>
</tr>
<tr>
<td></td>
<td>$6</td>
<td>$19</td>
<td>(Benefit)/provision for income taxes</td>
</tr>
<tr>
<td></td>
<td>$18</td>
<td>$19</td>
<td>Total, net of tax</td>
</tr>
<tr>
<td>Pension settlements</td>
<td>$170</td>
<td>$19</td>
<td>(b)</td>
</tr>
<tr>
<td></td>
<td>$(14)</td>
<td>$19</td>
<td>(Benefit)/provision for income taxes</td>
</tr>
<tr>
<td>Total Post-Employment Benefits reclassified from accumulated other comprehensive income/loss</td>
<td>$174</td>
<td>$19</td>
<td>Total, net of tax</td>
</tr>
<tr>
<td>Total reclassification for the period</td>
<td>$167</td>
<td>$14</td>
<td>Net of tax</td>
</tr>
</tbody>
</table>

(a) This accumulated other comprehensive loss component is included in the computation of net periodic pension cost.

(b) See Note 11 “Pensions and Other Post-Retirement Benefits” for more information on the pension plan non-cash settlements referenced in this note.
8. Property, Plant and Equipment

Property, plant and equipment are carried at historical cost less accumulated depreciation and impairment losses. Property, plant and equipment are depreciated on a straight-line basis over the estimated useful lives.

Nielsen is required to assess whether the value of our long-lived assets, including the Company’s buildings, improvements, technical and other equipment have been impaired whenever events or changes in circumstances indicate that the carrying amount of the assets might not be recoverable. Nielsen does not perform a periodic assessment of assets for impairment in the absence of such information or indicators. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset, a significant change in the extent or manner in which an asset is used or a significant adverse change that would indicate that the carrying amount of an asset or group of assets is not recoverable. Recoverability of assets that are held and used is measured by comparing the sum of the future undiscounted cash flows expected to be derived from an asset (or a group of assets) to their carrying value. If the carrying value of the asset (or the group of assets) exceeds the sum of the future undiscounted cash flows, impairment is considered to exist. If impairment is considered to exist based on undiscounted cash flows, the impairment charge is measured using an estimation of the assets’ fair value, typically using a discounted cash flow method. The identification of impairment indicators, the estimation of future cash flows and the determination of fair values for assets (or groups of assets) requires Nielsen to make significant judgments concerning the identification and validation of impairment indicators, expected cash flows and applicable discount rates. These estimates are subject to revision as market conditions and our assessments change. There was no impairment or indicators of impairment noted in any period presented with respect to the Company’s finite long-lived assets.

The following tables summarizes the carrying value of our property, plant and equipment including the associated useful lives:

<table>
<thead>
<tr>
<th></th>
<th>Estimated Useful Life</th>
<th>December 31, 2019</th>
<th>December 31, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land and buildings</td>
<td>25-50 years</td>
<td>$383</td>
<td>$378</td>
</tr>
<tr>
<td>Information and communication equipment</td>
<td>3-10 years</td>
<td>1,108</td>
<td>1,014</td>
</tr>
<tr>
<td>Furniture, equipment and other</td>
<td>3-10 years</td>
<td>103</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,594</td>
<td>1,501</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1,128)</td>
<td>(1,033)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$466</td>
<td>$468</td>
</tr>
</tbody>
</table>

Depreciation and amortization expense from operations related to property, plant and equipment was $158 million, $169 million and $171 million for the years ended December 31, 2019, 2018 and 2017, respectively.

The above amounts include amortization expense on assets under finance leases and other financing obligations of $62 million, $49 million and $47 million for the years ended December 31, 2019, 2018 and 2017, respectively. Finance leases and other financing obligations are comprised primarily of land and buildings and information and communication equipment. See Note 5 “Leases” for further information on finance leases.

9. Fair Value Measurements

Nielsen’s financial instruments include cash and cash equivalents, investments, long-term debt and derivative financial instruments. These financial instruments potentially subject Nielsen to concentrations of credit risk. To minimize the risk of credit loss, these financial instruments are primarily held with acknowledged financial institutions. The carrying value of Nielsen’s financial instruments approximate fair value, except for differences with respect to long-term, fixed and variable-rate debt. The fair value of financial instruments is generally determined by reference to market values resulting from trading on a national securities exchange or in an over-the-counter market. In cases where quoted market prices are not available, fair value is based on estimates using present value or other valuation techniques. Cash equivalents have original maturities of three months or less.

In addition, the Company has accounts receivable that are not collateralized. The Connect and Media segments service high quality clients dispersed across many geographic areas. The Company analyzes the aging of accounts receivable, historical bad debts, customer creditworthiness and current economic trends in determining the allowance for doubtful accounts.

Investments include investments in affiliates and a trading asset portfolio maintained to generate returns to offset changes in certain liabilities related to deferred compensation arrangements. Nielsen assesses declines in the value of individual investments to determine whether such decline is other than temporary and thus the investment is impaired by considering available evidence. No impairment charge was recorded for the years ended December 31, 2019, 2018 and 2017.
Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining fair value, the Company considers the principal or most advantageous market in which the Company would transact, and also considers assumptions that market participants would use when pricing the asset or liability, such as inherent risk, transfer restrictions, and risk of non-performance.

There are three levels of inputs that may be used to measure fair value:

- **Level 1**: Quoted market prices available in active markets for identical assets or liabilities as of the reporting date.
- **Level 2**: Pricing inputs other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reporting date.
- **Level 3**: Pricing inputs that are generally unobservable and may not be corroborated by market data.

### Financial Assets and Liabilities Measured on a Recurring Basis

The Company’s financial assets and liabilities are measured and recorded at fair value, except for equity method investments and long-term debt. Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurements. The Company’s assessment of the significance of a particular input to the fair value measurements requires judgment, and may affect the valuation of the assets and liabilities being measured and their placement within the fair value hierarchy. In addition, the Company records changes in the fair value of equity investments with readily determinable fair values in net income rather than in accumulated other comprehensive income/(loss). Investments that do not have readily determinable fair values are recognized at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. The adjustments related to the observable price changes will also be recognized in net income.

The following table summarizes the valuation of the Company’s material financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2019 and 2018:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>December 31, 2019</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan assets for deferred compensation</td>
<td>$26</td>
<td>$26</td>
<td></td>
<td>$—</td>
</tr>
<tr>
<td>Investment in mutual funds</td>
<td>$2</td>
<td>$2</td>
<td></td>
<td>$—</td>
</tr>
<tr>
<td>Interest rate swap arrangements</td>
<td>$23</td>
<td></td>
<td></td>
<td>$22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$28</td>
<td>$28</td>
<td></td>
<td>$22</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest rate swap arrangements</td>
<td>$22</td>
<td></td>
<td></td>
<td>$22</td>
</tr>
<tr>
<td>Deferred compensation liabilities</td>
<td>$26</td>
<td>$26</td>
<td></td>
<td>$—</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$48</td>
<td>$26</td>
<td></td>
<td>$22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>December 31, 2018</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan assets for deferred compensation</td>
<td>$25</td>
<td>$25</td>
<td></td>
<td>$—</td>
</tr>
<tr>
<td>Investment in mutual funds</td>
<td>$2</td>
<td>$2</td>
<td></td>
<td>$—</td>
</tr>
<tr>
<td>Interest rate swap arrangements</td>
<td>$23</td>
<td></td>
<td></td>
<td>$23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$50</td>
<td>$27</td>
<td></td>
<td>$23</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest rate swap arrangements</td>
<td>$3</td>
<td></td>
<td></td>
<td>$3</td>
</tr>
<tr>
<td>Deferred compensation liabilities</td>
<td>$27</td>
<td>$27</td>
<td></td>
<td>$3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$30</td>
<td>$27</td>
<td></td>
<td>$3</td>
</tr>
</tbody>
</table>

(1) Plan assets are comprised of investments in mutual funds, which are intended to fund liabilities arising from deferred compensation plans. These investments are carried at fair value, which is based on quoted market prices at period end in active markets. These investments are classified as equity securities with any gains or losses resulting from changes in fair value recorded in other income/(expense), net in the consolidated statement of operations.

(2) Investments in mutual funds are money-market accounts held with the intention of funding certain specific retirement plans.
(3) Derivative financial instruments include interest rate swap arrangements recorded at fair value based on externally-developed valuation models that use readily observable market parameters and the consideration of counterparty risk.

(4) The Company offers certain employees the opportunity to participate in a deferred compensation plan. A participant’s deferrals are invested in a variety of participant directed stock and bond mutual funds and are classified as equity securities. Changes in the fair value of these securities are measured using quoted prices in active markets based on the market price per unit multiplied by the number of units held exclusive of any transaction costs. A corresponding adjustment for changes in fair value of the equity securities is also reflected in the changes in fair value of the deferred compensation obligation.

**Derivative Financial Instruments**

Nielsen primarily uses interest rate swap derivative instruments to manage the risk that changes in interest rates will affect the cash flows of its underlying debt obligations.

To qualify for hedge accounting, the hedging relationship must meet several conditions with respect to documentation, probability of occurrence, hedge effectiveness and reliability of measurement. Nielsen documents the relationship between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions as well as the hedge effectiveness assessment, both at the hedge inception and on an ongoing basis. Nielsen recognizes all derivatives at fair value either as assets or liabilities in the consolidated balance sheets and changes in the fair values of such instruments are recognized currently in earnings unless specific hedge accounting criteria are met. If specific cash flow hedge accounting criteria are met, Nielsen recognizes the changes in fair value of these instruments in accumulated other comprehensive income/(loss).

Nielsen manages exposure to possible defaults on derivative financial instruments by monitoring the concentration of risk that Nielsen has with any individual bank and through the use of minimum credit quality standards for all counterparties. Nielsen does not require collateral or other security in relation to derivative financial instruments. A derivative contract entered into between Nielsen or certain of its subsidiaries and a counterparty that was also a lender under Nielsen’s senior secured credit facilities at the time the derivative contract was entered into is guaranteed under the senior secured credit facilities by Nielsen and certain of its subsidiaries (see Note 12 – (“Long-term Debt and Other Financing Arrangements”) for more information). Since it is Nielsen’s policy to only enter into derivative contracts with banks of internationally acknowledged standing, Nielsen considers the counterparty risk to be remote.

Interest Rate Risk

Nielsen is exposed to cash flow interest rate risk on the floating-rate U.S. Dollar and Euro Term Loans, and uses floating-to-fixed interest rate swaps to hedge this exposure. For these derivatives, Nielsen reports the after-tax gain or loss from the effective portion of the hedge as a component of accumulated other comprehensive income/(loss) and reclassifies it into earnings in the same period or periods in which the hedged transaction affects earnings, and within the same income statement line item as the impact of the hedged transaction.

In May 2019, the Company entered into a $150 million aggregate notional amount four-year forward interest rate swap agreement with a starting date of July 9, 2019. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 1.82%. This derivative has been designated as an interest rate cash flow hedge.
In March 2019, the Company entered into a $150 million aggregate notional amount four-year forward interest rate swap agreement with a starting date of April 9, 2019. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 2.26%. This derivative has been designated as an interest rate cash flow hedge.

In March 2019, the Company entered into a $250 million aggregate notional amount four-year forward interest rate swap agreement with a starting date of June 9, 2019. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate-debt at an average rate of 2.07%. This derivative has been designated as an interest rate cash flow hedge.

In May 2018, the Company entered into $250 million aggregate notional amount of a five-year interest rate swap agreement with a starting date of May 9, 2018. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate debt at an average rate of 2.72%. This derivative has been designated as an interest rate cash flow hedge.

In August 2017, the Company entered into $250 million in aggregate notional amount of a four-year forward interest rate swap agreement with a starting date of October 10, 2017. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate debt at an average rate of 1.60%. This derivative has been designated as an interest rate cash flow hedge.

In July 2017, the Company entered into $250 million in aggregate notional amount of a three-year forward interest rate swap agreement with a starting date of October 10, 2017. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate debt at an average rate of 1.66%. This derivative has been designated as an interest rate cash flow hedge.

In April 2017, the Company entered into $250 million in aggregate notional amount of a three-year forward interest rate swap agreement with a starting date of July 10, 2017. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate debt at an average rate of 1.63%. This derivative has been designated as an interest rate cash flow hedge.

In March 2017, the Company entered into $250 million in aggregate notional amount of a five-year forward interest rate swap agreement with a starting date of July 10, 2017. This agreement fixes the LIBOR-related portion of interest rates of a corresponding amount of the Company’s variable-rate debt at an average rate of 2.00%. This derivative has been designated as an interest rate cash flow hedge.

As of December 31, 2019 the Company had the following outstanding interest rate swaps utilized in the management of its interest rate risk:

<table>
<thead>
<tr>
<th>Interest rate swaps designated as hedging instruments</th>
<th>Notional Amount</th>
<th>Maturity Date</th>
<th>Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Dollar term loan floating-to-fixed rate swaps........</td>
<td>$250,000,000</td>
<td>July 2020</td>
<td>US Dollar</td>
</tr>
<tr>
<td>US Dollar term loan floating-to-fixed rate swaps........</td>
<td>$250,000,000</td>
<td>July 2020</td>
<td>US Dollar</td>
</tr>
<tr>
<td>US Dollar term loan floating-to-fixed rate swaps........</td>
<td>$250,000,000</td>
<td>October 2020</td>
<td>US Dollar</td>
</tr>
<tr>
<td>US Dollar term loan floating-to-fixed rate swaps........</td>
<td>$250,000,000</td>
<td>October 2021</td>
<td>US Dollar</td>
</tr>
<tr>
<td>US Dollar term loan floating-to-fixed rate swaps........</td>
<td>$250,000,000</td>
<td>July 2022</td>
<td>US Dollar</td>
</tr>
<tr>
<td>US Dollar term loan floating-to-fixed rate swaps........</td>
<td>$150,000,000</td>
<td>April 2023</td>
<td>US Dollar</td>
</tr>
<tr>
<td>US Dollar term loan floating-to-fixed rate swaps........</td>
<td>$250,000,000</td>
<td>May 2023</td>
<td>US Dollar</td>
</tr>
<tr>
<td>US Dollar term loan floating-to-fixed rate swaps........</td>
<td>$250,000,000</td>
<td>June 2023</td>
<td>US Dollar</td>
</tr>
<tr>
<td>US Dollar term loan floating-to-fixed rate swaps........</td>
<td>$150,000,000</td>
<td>July 2023</td>
<td>US Dollar</td>
</tr>
</tbody>
</table>

The effect of cash flow hedge accounting on the consolidated statement of operations for the years ended December 31, 2019, 2018 and 2017:
Interest Expense

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td>(IN MILLIONS)</td>
</tr>
<tr>
<td>Interest expense (Location in</td>
</tr>
<tr>
<td>the consolidated statement of</td>
</tr>
<tr>
<td>operations in which</td>
</tr>
<tr>
<td>the effects of cash flow hedges</td>
</tr>
<tr>
<td>are recorded)........................ $ 397 $ 394 $ 374</td>
</tr>
<tr>
<td>Amount of (gain)/loss reclassified from accumulated other comprehensive income/(loss) into income, net of tax................................................................. $ (7) $ (5) $ 3</td>
</tr>
<tr>
<td>Amount of income/(loss) reclassified from accumulated other comprehensive income/(loss) into income as a result that a forecasted transaction is no longer probable of occurring, net of tax................................................................. $ — $ — $ —</td>
</tr>
</tbody>
</table>

Nielsen expects to recognize approximately $6 million of net pre-tax losses from accumulated other comprehensive loss to interest expense in the next 12 months associated with its interest-related derivative financial instruments.

Foreign Currency Exchange Risk

During the years ended December 31, 2019 and 2018, Nielsen recorded a net gain of $1 million and a net loss of $2 million respectively, associated with foreign currency derivative financial instruments within foreign currency exchange transactions losses, net in Nielsen’s consolidated statements of operations. As of December 31, 2019 and 2018, the notional amounts of the outstanding foreign currency derivative financial instruments were $125 million and $76 million, respectively.

See Note 12 – “Long-term Debt and Other Financing Arrangements” for more information on the long-term debt transactions referenced in this note.

Fair Values of Derivative Instruments in the Consolidated Balance Sheets

The fair values of the Company’s derivative instruments as of December 31, 2019 and 2018 were as follows:

<table>
<thead>
<tr>
<th>Derivatives</th>
<th>December 31, 2019</th>
<th>December 31, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rate swaps</td>
<td>$ —</td>
<td>$ —</td>
</tr>
<tr>
<td>Prepaid Expense and Other Current Assets</td>
<td>$ —</td>
<td>$ 3</td>
</tr>
<tr>
<td>Other Non-Current Assets</td>
<td>$ —</td>
<td>$ —</td>
</tr>
<tr>
<td>Other Non-Current Liabilities</td>
<td>$ —</td>
<td>$ —</td>
</tr>
</tbody>
</table>

Derivatives in Cash Flow Hedging Relationships

The pre-tax effect of derivative instruments in cash flow hedging relationships for the years ended December 31, 2019, 2018 and 2017 was as follows (amounts in millions):

<table>
<thead>
<tr>
<th>Derivatives in Cash Flow Hedging Relationships</th>
<th>Amount of (Gain)/Loss Recognized in OCI on Derivatives (Effective Portion)</th>
<th>Location of (Gain)/Loss Reclassified from OCI into Income (Effective Portion)</th>
<th>Amount of (Gain)/Loss Reclassified from OCI into Income (Effective Portion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rate swaps</td>
<td>$ 33 $ 9 $ (13)</td>
<td>Interest expense</td>
<td>$ (9) $ (7) $ 5</td>
</tr>
</tbody>
</table>

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

The Company is required, on a nonrecurring basis, to adjust the carrying value for certain assets using fair value measurements. The Company’s equity method investments, and non-financial assets, such as goodwill, intangible assets, and property, plant and equipment, are measured at fair value when there is an indicator of impairment and recorded at fair value only when an impairment charge is recognized.

The Company did not measure any material non-financial assets or liabilities at fair value during the years ended December 31, 2019 and 2018.
10. Restructuring Activities

Productivity Initiatives

Restructuring charges are primarily related to programs associated with Nielsen’s plans to reduce selling, general and administrative expenses, consolidate operating centers, as well as automation initiatives. These charges primarily relate to employee separation packages. The amounts are calculated based on salary levels and past service periods. Severance costs are generally charged to earnings when planned employee terminations are approved.

A summary of the changes in the liabilities for restructuring activities is provided below:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Total Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at December 31, 2016..........................</td>
<td>$ 73</td>
</tr>
<tr>
<td>Charges..................................................</td>
<td>80</td>
</tr>
<tr>
<td>Non cash charges and other adjustments ..............</td>
<td>2</td>
</tr>
<tr>
<td>Payments................................................</td>
<td>(97)</td>
</tr>
<tr>
<td>Balance at December 31, 2017..........................</td>
<td>58</td>
</tr>
<tr>
<td>Charges..................................................</td>
<td>139</td>
</tr>
<tr>
<td>Non cash charges and other adjustments ..............</td>
<td>(2)</td>
</tr>
<tr>
<td>Payments................................................</td>
<td>(127)</td>
</tr>
<tr>
<td>Balance at December 31, 2018..........................</td>
<td>68</td>
</tr>
<tr>
<td>Reclassification of ASC 420 real estate restructuring to right-of-use asset (1)</td>
<td>(22)</td>
</tr>
<tr>
<td>Charges (2).............................................</td>
<td>62</td>
</tr>
<tr>
<td>Payments................................................</td>
<td>(74)</td>
</tr>
<tr>
<td>Non cash charges and other adjustments ..............</td>
<td>1</td>
</tr>
<tr>
<td>Balance at December 31, 2019..........................</td>
<td>$ 35</td>
</tr>
</tbody>
</table>

(1) Upon adoption of ASC 842, the real estate operating lease ASC 420 liabilities were reclassified and presented as a reduction of the related operating lease right-of-use asset.

(2) Excludes charges related to operating lease right-of-use assets of $18 million. Includes $6 million of adjustments related to changes in previous productivity initiatives.

Of the $35 million in remaining liabilities for restructuring actions, $30 million is expected to be paid within one year and is classified as a current liability within the consolidated financial statements as of December 31, 2019.
11. Pensions and Other Post-Retirement Benefits

Nielsen sponsors both funded and unfunded defined benefit pension plans (the “Pension Plans”) and post-retirement medical plans for some of its employees in the Netherlands, the U.S. and other international locations. Pension costs, in respect of defined benefit pension plans, primarily represent the increase in the actuarial present value of the obligation for pension benefits based on employee service during the year and the interest on this obligation in respect of employee service in previous years, net of the expected return on plan assets. Differences between this expected return and the actual return on these plan assets and actuarial changes are not recognized in the statement of operations, unless the accumulated differences and changes exceed a certain threshold. Nielsen recognizes obligations for contributions to defined contribution pension plans as expenses in the statement of operations as they are incurred.

The determination of benefit obligations and expenses is based on actuarial models. In order to measure benefit costs and obligations using these models, critical assumptions are made with regard to the discount rate, the expected return on plan assets and the assumed rate of compensation increases. Nielsen provides retiree medical benefits to a limited number of participants in the U.S. Therefore, retiree medical care cost trend rates are not a significant driver of our post-retirement costs. Management reviews these critical assumptions at least annually. Other assumptions involve demographic factors such as turnover, retirement and mortality rates. Management reviews these assumptions periodically and updates them as necessary.

The discount rate is the rate at which the benefit obligations could be effectively settled. For Nielsen’s U.S. plans, the discount rate is based on a bond portfolio that includes only long-term bonds with an Aa rating, or equivalent, from a major rating agency. For the Dutch and other non-U.S. plans, the discount rate is set by reference to market yields on high-quality corporate bonds. Nielsen believes the timing and amount of cash flows related to the bonds in these portfolios are expected to match the estimated payment benefit streams of our plans.

The Company uses the spot rate approach to calculate the discount rate for its retirement benefit plans. Under the spot-rate approach, the Company uses individual spot rates along the yield curve that correspond with the timing of each future cash outflow for benefit payments in order to calculate interest cost and service cost within net periodic benefit costs.

To determine the expected long-term rate of return on pension plan assets, Nielsen considers, for each country, the structure of the asset portfolio and the expected rates of return for each of the components. For Nielsen’s U.S. plans, a 50 basis point decrease in the expected return on assets would increase pension expense on our principal plans by approximately $1 million per year. A similar 50 basis point decrease in the expected return on assets for the Company’s principal Dutch plan would also increase pension expense by approximately $1 million per year. The Company assumed that the weighted-averages of long-term returns on our pension plans were 4.3% for the year ended December 31, 2019, 4.4% for the year ended December 31, 2018 and 4.6% for the year ended December 31, 2017. The expected long-term rate of return is applied to the fair value of pension plan assets. The actual return on plan assets will vary year to year from this assumption. Although the actual return on plan assets will vary from year to year, it is appropriate to use long-term expected forecasts in selecting Nielsen’s expected return on plan assets. As such, there can be no assurance that the Company’s actual return on plan assets will approximate the long-term expected forecasts.

During 2019, certain of the Company’s pension plans contracted with insurance companies and transferred $632 million of outstanding defined benefit pension obligations and related pension assets for approximately 6,000 retirees and beneficiaries in the Netherlands and UK to the insurance companies. The insurance companies are now required to pay and administer the retirement benefits owed to these retirees and beneficiaries. These transactions have no impact on the amount, timing, or form of the monthly retirement benefit payments to the covered retirees and beneficiaries. These transactions resulted in a non-cash charge to other income/expense of $170 million in our consolidated statements of operations and did not impact cash flows in 2019.
A summary of the activity for the Pension Plans follows:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Change in projected benefit obligation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefit obligation at beginning of period</td>
<td>$647</td>
<td>$338</td>
<td>$613</td>
<td>$1,598</td>
</tr>
<tr>
<td>Service cost</td>
<td>3</td>
<td>—</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Interest cost</td>
<td>9</td>
<td>14</td>
<td>13</td>
<td>36</td>
</tr>
<tr>
<td>Plan participants’ contributions</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Actuarial (gain)/loss</td>
<td>42</td>
<td>43</td>
<td>71</td>
<td>156</td>
</tr>
<tr>
<td>Benefits paid</td>
<td>(29)</td>
<td>(17)</td>
<td>(24)</td>
<td>(70)</td>
</tr>
<tr>
<td>Settlements</td>
<td>(573)</td>
<td>—</td>
<td>(59)</td>
<td>(632)</td>
</tr>
<tr>
<td>Curtailments</td>
<td>(3)</td>
<td>—</td>
<td>—</td>
<td>(3)</td>
</tr>
<tr>
<td>Amendments</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Effect of foreign currency translation</td>
<td>(14)</td>
<td>—</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Benefit obligation at end of period</td>
<td>82</td>
<td>378</td>
<td>636</td>
<td>1,096</td>
</tr>
<tr>
<td><strong>Change in plan assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair value of plan assets at beginning of period</td>
<td>637</td>
<td>231</td>
<td>528</td>
<td>1,396</td>
</tr>
<tr>
<td>Actual return on plan assets</td>
<td>50</td>
<td>46</td>
<td>80</td>
<td>176</td>
</tr>
<tr>
<td>Employer contributions</td>
<td>4</td>
<td>10</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Plan participants’ contributions</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Benefits paid</td>
<td>(29)</td>
<td>(17)</td>
<td>(24)</td>
<td>(70)</td>
</tr>
<tr>
<td>Settlements</td>
<td>(573)</td>
<td>—</td>
<td>(59)</td>
<td>(632)</td>
</tr>
<tr>
<td>Effect of foreign currency translation</td>
<td>(14)</td>
<td>—</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Fair value of plan assets at end of period</td>
<td>75</td>
<td>270</td>
<td>556</td>
<td>901</td>
</tr>
<tr>
<td><strong>Funded status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net amount recognized</td>
<td>$7</td>
<td>(108)</td>
<td>(80)</td>
<td>(195)</td>
</tr>
<tr>
<td><strong>Amounts recognized in the Consolidated Balance Sheets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net (gain)/loss</td>
<td>5</td>
<td>15</td>
<td>15</td>
<td>35</td>
</tr>
<tr>
<td>Settlement loss</td>
<td>(164)</td>
<td>—</td>
<td>(6)</td>
<td>(170)</td>
</tr>
<tr>
<td>Curtailment gain recognized</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>1</td>
</tr>
<tr>
<td>Amortization of net loss</td>
<td>(5)</td>
<td>(6)</td>
<td>(2)</td>
<td>(13)</td>
</tr>
<tr>
<td>Total recognized in other comprehensive income/(loss)</td>
<td>$163</td>
<td>9</td>
<td>7</td>
<td>(147)</td>
</tr>
<tr>
<td><strong>Amounts not yet reflected in net periodic benefit cost and included in Accumulated Other Comprehensive Income/(Loss), before tax</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unrecognized losses</td>
<td>$27</td>
<td>$123</td>
<td>$136</td>
<td>$286</td>
</tr>
</tbody>
</table>
### Change in projected benefit obligation

<table>
<thead>
<tr>
<th></th>
<th>Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service cost</td>
<td>$3</td>
<td>6</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Interest cost</td>
<td>10</td>
<td>12</td>
<td>13</td>
<td>35</td>
</tr>
<tr>
<td>Plan participants’ contributions</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
</tr>
<tr>
<td>Actuarial (gain)/loss</td>
<td>(29)</td>
<td>(29)</td>
<td>(28)</td>
<td>(86)</td>
</tr>
<tr>
<td>Benefits paid</td>
<td>(30)</td>
<td>(15)</td>
<td>(24)</td>
<td>(69)</td>
</tr>
<tr>
<td>Expenses paid</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Premiums paid</td>
<td>—</td>
<td>(1)</td>
<td>—</td>
<td>(1)</td>
</tr>
<tr>
<td>Settlements</td>
<td>—</td>
<td>(4)</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>Combinations</td>
<td>—</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Amendments</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Effect of foreign currency translation</td>
<td>(31)</td>
<td>—</td>
<td>(31)</td>
<td>(62)</td>
</tr>
<tr>
<td>Benefit obligation at end of period</td>
<td>647</td>
<td>338</td>
<td>613</td>
<td>1,598</td>
</tr>
</tbody>
</table>

### Change in plan assets

<table>
<thead>
<tr>
<th></th>
<th>Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair value of plan assets at beginning of period</td>
<td>718</td>
<td>260</td>
<td>581</td>
<td>1,559</td>
</tr>
<tr>
<td>Actual return on plan assets</td>
<td>(25)</td>
<td>(23)</td>
<td>(14)</td>
<td>(62)</td>
</tr>
<tr>
<td>Employer contributions</td>
<td>5</td>
<td>9</td>
<td>15</td>
<td>29</td>
</tr>
<tr>
<td>Plan participants’ contributions</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
</tr>
<tr>
<td>Benefits paid</td>
<td>(30)</td>
<td>(15)</td>
<td>(24)</td>
<td>(69)</td>
</tr>
<tr>
<td>Expenses paid</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Premiums paid</td>
<td>—</td>
<td>—</td>
<td>(1)</td>
<td>(1)</td>
</tr>
<tr>
<td>Settlements</td>
<td>—</td>
<td>—</td>
<td>(4)</td>
<td>(4)</td>
</tr>
<tr>
<td>Combinations</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Effect of foreign currency translation</td>
<td>(31)</td>
<td>—</td>
<td>(28)</td>
<td>(59)</td>
</tr>
<tr>
<td>Fair value of plan assets at end of period</td>
<td>637</td>
<td>231</td>
<td>528</td>
<td>1,396</td>
</tr>
<tr>
<td>Funded status</td>
<td>$ (10)</td>
<td>$ (107)</td>
<td>$ (85)</td>
<td>$ (202)</td>
</tr>
</tbody>
</table>

### Amounts recognized in the Consolidated Balance Sheets

<table>
<thead>
<tr>
<th></th>
<th>Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pension assets included in other non-current assets</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>17</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>—</td>
<td>(1)</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Accrued benefit liability included in other non-current liabilities</td>
<td>(10)</td>
<td>(106)</td>
<td>(101)</td>
<td>(217)</td>
</tr>
<tr>
<td>Net amount recognized</td>
<td>$ (10)</td>
<td>$ (107)</td>
<td>$ (85)</td>
<td>$ (202)</td>
</tr>
</tbody>
</table>

### Amounts recognized in Other Comprehensive Income/(Loss), before tax

|                                                              | Netherlands | United States | Other | Total |
|                                                              | $ 11        | $ 10          | $ 1   | $ 22  |
| Settlement loss                                               | —           | —             | (1)   | (1)   |
| Amortization of prior service cost                            | —           | —             | 1     | 1     |
| Amortization of net loss                                      | (6)         | (9)           | (4)   | (19)  |
| Total recognized in other comprehensive income/(loss)         | $ 5         | $ 1           | (3)   | $ 3   |

### Amounts not yet reflected in net periodic benefit cost and included in
Accumulated Other Comprehensive Income/(Loss), before tax

|                                                              | $ 190       | $ 114         | $ 129 | $ 433 |

Unrecognized losses

The total accumulated benefit obligation and minimum liability changes for the Pension Plans were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31, 2019</th>
<th>Year Ended December 31, 2018</th>
<th>Year Ended December 31, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated benefit obligation</td>
<td>$1,078</td>
<td>$1,579</td>
<td>$1,750</td>
</tr>
</tbody>
</table>

94
### Pension Plans with Accumulated Benefit Obligation in Excess of Plan Assets at December 31, 2019

<table>
<thead>
<tr>
<th></th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected benefit obligation</td>
<td>$83</td>
<td>$377</td>
<td>$428</td>
<td>$888</td>
</tr>
<tr>
<td>Accumulated benefit obligation</td>
<td>$83</td>
<td>$377</td>
<td>$414</td>
<td>$874</td>
</tr>
<tr>
<td>Fair value of plan assets</td>
<td>$75</td>
<td>$270</td>
<td>$323</td>
<td>$668</td>
</tr>
</tbody>
</table>

---

### Pension Plans with Projected Benefit Obligation in Excess of Plan Assets at December 31, 2019

<table>
<thead>
<tr>
<th></th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected benefit obligation</td>
<td>$83</td>
<td>$377</td>
<td>$483</td>
<td>$943</td>
</tr>
<tr>
<td>Accumulated benefit obligation</td>
<td>$83</td>
<td>$377</td>
<td>$618</td>
<td>$1,078</td>
</tr>
<tr>
<td>Fair value of plan assets</td>
<td>$75</td>
<td>$270</td>
<td>$378</td>
<td>$723</td>
</tr>
</tbody>
</table>

---

### Pension Plans with Accumulated Benefit Obligation in Excess of Plan Assets at December 31, 2018

<table>
<thead>
<tr>
<th></th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected benefit obligation</td>
<td>$646</td>
<td>$338</td>
<td>$506</td>
<td>$1,490</td>
</tr>
<tr>
<td>Accumulated benefit obligation</td>
<td>$644</td>
<td>$338</td>
<td>$491</td>
<td>$1,473</td>
</tr>
<tr>
<td>Fair value of plan assets</td>
<td>$637</td>
<td>$231</td>
<td>$404</td>
<td>$1,272</td>
</tr>
</tbody>
</table>

---

### Pension Plans with Projected Benefit Obligation in Excess of Plan Assets at December 31, 2018

<table>
<thead>
<tr>
<th></th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected benefit obligation</td>
<td>$646</td>
<td>$338</td>
<td>$506</td>
<td>$1,490</td>
</tr>
<tr>
<td>Accumulated benefit obligation</td>
<td>$644</td>
<td>$338</td>
<td>$597</td>
<td>$1,579</td>
</tr>
<tr>
<td>Fair value of plan assets</td>
<td>$637</td>
<td>$231</td>
<td>$404</td>
<td>$1,272</td>
</tr>
</tbody>
</table>
Net periodic benefit cost for the years ended December 31, 2019, 2018 and 2017, respectively, includes the following components:

<table>
<thead>
<tr>
<th></th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service cost</strong></td>
<td>3</td>
<td>9</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td><strong>Interest cost</strong></td>
<td></td>
<td>25</td>
<td>12</td>
<td>37</td>
</tr>
<tr>
<td><strong>Expected return on plan assets</strong></td>
<td></td>
<td>4</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td><strong>Settlement loss recognized</strong></td>
<td></td>
<td>16</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td><strong>Curtailment gain recognized</strong></td>
<td></td>
<td>10</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td><strong>Amortization of net loss</strong></td>
<td></td>
<td>5</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td><strong>Net periodic pension cost</strong></td>
<td>160</td>
<td>3</td>
<td>4</td>
<td>167</td>
</tr>
</tbody>
</table>

**Year ended December 31, 2018**

<table>
<thead>
<tr>
<th></th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service cost</strong></td>
<td>3</td>
<td>10</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td><strong>Interest cost</strong></td>
<td></td>
<td>43</td>
<td>12</td>
<td>55</td>
</tr>
<tr>
<td><strong>Expected return on plan assets</strong></td>
<td></td>
<td>20</td>
<td>17</td>
<td>37</td>
</tr>
<tr>
<td><strong>Settlement loss recognized</strong></td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Amortization of prior service costs</strong></td>
<td></td>
<td>6</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td><strong>Amortization of net loss</strong></td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Net periodic pension cost</strong></td>
<td>(4)</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**Year ended December 31, 2017**

<table>
<thead>
<tr>
<th></th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service cost</strong></td>
<td>5</td>
<td>9</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td><strong>Interest cost</strong></td>
<td></td>
<td>7</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td><strong>Expected return on plan assets</strong></td>
<td></td>
<td>23</td>
<td>17</td>
<td>40</td>
</tr>
<tr>
<td><strong>Settlement loss recognized</strong></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Amortization of prior service costs</strong></td>
<td></td>
<td>7</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td><strong>Amortization of net loss</strong></td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Net periodic pension cost</strong></td>
<td>(3)</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

The non-cash settlement loss of $170 million resulted from the transfer of defined benefit pension obligations and related assets in the Netherlands ($164 million) and the UK ($6 million) to insurance companies which relieved Nielsen of its obligations related to the plans. The settlement loss of $1 million in 2018 resulted primarily from settling benefit liabilities in Mexico. The settlement loss of $1 million in 2017 resulted primarily from settling benefit liabilities in Canada and Switzerland.

The deferred loss included as a component of accumulated other comprehensive income/(loss) that is expected to be recognized as a component of net periodic benefit cost during 2020 is as follows:

<table>
<thead>
<tr>
<th></th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net actuarial loss</strong></td>
<td>(2)</td>
<td>(11)</td>
<td>(4)</td>
<td>(17)</td>
</tr>
</tbody>
</table>

Actuarial gains and losses are amortized over the average remaining service lives for plans with active participants, and over the average remaining lives for legacy plans with no active participants.
The weighted average assumptions underlying the pension computations were as follows:

<table>
<thead>
<tr>
<th>Pension benefit obligation:</th>
<th>Year Ended December 31, 2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>NL</td>
<td>US</td>
<td>Other</td>
<td>NL</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>------</td>
<td>---</td>
</tr>
<tr>
<td>—discount rate</td>
<td>1.5%</td>
<td>3.4%</td>
<td>1.9%</td>
</tr>
<tr>
<td>—rate of compensation increase</td>
<td>—</td>
<td>—</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

**Net periodic pension costs:**

| —discount rate               | 2.0% | 4.4% | 2.5% | 1.9% | 3.7% | 2.3% | 1.8% | 4.4% | 2.3% |
| —rate of compensation increase | 1.8% | —   | 1.1% | 1.8% | —   | 1.1% | 3.8% | —   | 1.1% |
| —expected long-term return on plan assets | 3.5% | 6.7% | 4.2% | 3.6% | 6.9% | 4.3% | 3.8% | 7.0% | 4.4% |

The assumptions for the expected return on plan assets for the Pension Plans were based on a review of the historical returns of the asset classes in which the assets of the Pension Plans are invested and a long-term economic forecast for the type of investments held by the plans. The historical returns on these asset classes were weighted based on the expected long-term allocation of the assets of the Pension Plans.

Nielsen’s pension plans’ weighted average asset allocations by asset category are as follows:

<table>
<thead>
<tr>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>At December 31, 2019</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity securities</td>
<td>39%</td>
<td>54%</td>
<td>50%</td>
</tr>
<tr>
<td>Fixed income securities</td>
<td>53%</td>
<td>45%</td>
<td>39%</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>1%</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

| At December 31, 2018 |                |       |       |
| Equity securities | 21%           | 52%   | 41%   | 33%   |
| Fixed income securities | 62%         | 47%   | 28%   | 50%   |
| Other            | 17%           | 1%    | 31%   | 17%   |
| Total            | 100%          | 100%  | 100%  | 100%  |

No Nielsen shares are held by the Pension Plans.

Nielsen’s primary objective with regard to the investment of the Pension Plans’ assets is to ensure that in each individual plan, sufficient funds are available to satisfy future benefit obligations. For this purpose, asset and liability management studies are made periodically at each pension fund. For each of the Pension Plans, an appropriate mix is determined on the basis of the outcome of these studies, taking into account the national rules and regulations. The overall target asset allocation among all plans for 2019 was 49% equity securities and 45% long-term interest-earning investments (debt or fixed income securities), and 6% other investments.

Equity securities primarily include investments in U.S. and non-U.S. companies. Fixed income securities include corporate bonds of companies from diversified industries and mortgage-backed securities. Insurance contracts are categorized as level 3 and are valued based on contractual terms.
Assets at fair value (See Note 9 – “Fair Value Measurements” for additional information on fair value measurement and the underlying fair value hierarchy) as of December 31, 2019 and 2018 are as follows:

<table>
<thead>
<tr>
<th>Asset Category</th>
<th>December 31, 2019</th>
<th></th>
<th></th>
<th>Total</th>
<th>December 31, 2018</th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 3</td>
<td></td>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 3</td>
<td></td>
</tr>
<tr>
<td>Cash and equivalents</td>
<td>$11</td>
<td>—</td>
<td>—</td>
<td>$11</td>
<td>$30</td>
<td>—</td>
<td>—</td>
<td>$30</td>
</tr>
<tr>
<td>Equity securities – U.S.</td>
<td>75</td>
<td>4</td>
<td>—</td>
<td>79</td>
<td>53</td>
<td>10</td>
<td>—</td>
<td>63</td>
</tr>
<tr>
<td>Equity securities – Global</td>
<td>36</td>
<td>115</td>
<td>—</td>
<td>151</td>
<td>37</td>
<td>206</td>
<td>—</td>
<td>243</td>
</tr>
<tr>
<td>Equity securities – non-U.S.</td>
<td>9</td>
<td>80</td>
<td>—</td>
<td>89</td>
<td>9</td>
<td>68</td>
<td>—</td>
<td>77</td>
</tr>
<tr>
<td>Real estate</td>
<td>—</td>
<td>—</td>
<td>22</td>
<td>22</td>
<td>—</td>
<td>—</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>112</td>
<td>80</td>
<td>—</td>
<td>192</td>
<td>100</td>
<td>270</td>
<td>—</td>
<td>370</td>
</tr>
<tr>
<td>Debt issued by national, state or local government</td>
<td>—</td>
<td>—</td>
<td>22</td>
<td>22</td>
<td>—</td>
<td>—</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Total assets at fair value, excluding NAV per share practical expedient at December 31, 2019 and December 31, 2018</td>
<td>$281</td>
<td>$324</td>
<td>$22</td>
<td>$627</td>
<td>$260</td>
<td>$750</td>
<td>$174</td>
<td>$1,184</td>
</tr>
</tbody>
</table>

The following presents our total fair value of plan assets including the NAV per share practical expedient:

<table>
<thead>
<tr>
<th>Asset Category</th>
<th>December 31, 2019</th>
<th>December 31, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair value of investments, excluding NAV per share practical expedient</td>
<td>$627</td>
<td>$1,184</td>
</tr>
<tr>
<td>Fair value of investments, using NAV per share practical expedient</td>
<td>$901</td>
<td>$1,396</td>
</tr>
</tbody>
</table>

The following is a summary of changes in the fair value of the Pension Plans’ Level 3 assets for the years ended December 31, 2019 and 2018:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Real Estate</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, end of year December 31, 2017</td>
<td>$47</td>
<td>$149</td>
<td>$196</td>
</tr>
<tr>
<td>Actual return on plan assets:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Sales)/investments</td>
<td>(4)</td>
<td>(8)</td>
<td>(12)</td>
</tr>
<tr>
<td>Unrealized gains</td>
<td>—</td>
<td>(1)</td>
<td>(1)</td>
</tr>
<tr>
<td>Effect of foreign currency translation</td>
<td>(1)</td>
<td>(8)</td>
<td>(9)</td>
</tr>
<tr>
<td>Balance, end of year December 31, 2018</td>
<td>$42</td>
<td>$132</td>
<td>$174</td>
</tr>
<tr>
<td>Actual return on plan assets:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Sales)/Investments</td>
<td>(2)</td>
<td>—</td>
<td>(2)</td>
</tr>
<tr>
<td>Settlements</td>
<td>(18)</td>
<td>(130)</td>
<td>(148)</td>
</tr>
<tr>
<td>Unrealized losses</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Effect of foreign currency translation</td>
<td>—</td>
<td>(2)</td>
<td>(2)</td>
</tr>
<tr>
<td>Balance, end of year December 31, 2019</td>
<td>$22</td>
<td>—</td>
<td>$22</td>
</tr>
</tbody>
</table>
Real estate investment valuations require significant judgment due to the absence of quoted market prices, the inherent lack of liquidity and the long-term nature of such assets. These assets are initially valued at cost and are reviewed periodically utilizing available and relevant market data to determine if the carrying value of these assets should be adjusted. The valuation methodology is applied consistently from period to period.

Other types of investments categorized as Level 3 are primarily insurance contracts and are valued based on contractual terms.

Contributions to the Pension Plans in 2020 are expected to be approximately zero for the Netherlands plan, $11 million for the U.S. plan and $17 million for other plans.

Estimated future benefit payments are as follows:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>The Netherlands</th>
<th>United States</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the years ending December 31,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>$</td>
<td>2</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>2021</td>
<td>2</td>
<td>16</td>
<td>21</td>
<td>39</td>
</tr>
<tr>
<td>2022</td>
<td>2</td>
<td>17</td>
<td>22</td>
<td>41</td>
</tr>
<tr>
<td>2023</td>
<td>2</td>
<td>18</td>
<td>23</td>
<td>43</td>
</tr>
<tr>
<td>2024</td>
<td>2</td>
<td>19</td>
<td>23</td>
<td>44</td>
</tr>
<tr>
<td>2025-2029</td>
<td>12</td>
<td>102</td>
<td>137</td>
<td>251</td>
</tr>
</tbody>
</table>

**Defined Contribution Plans**

Nielsen also offers defined contribution plans to certain participants, primarily in the U.S. Nielsen’s expense related to these plans was $54 million, $59 million and $53 million for the years ended December 31, 2019, 2018 and 2017, respectively. In the U.S., Nielsen contributes cash to each employee’s account in an amount up to 3% of compensation (subject to IRS limitations). No contributions are made in shares of the Company’s common stock.
12. Long-term Debt and Other Financing Arrangements

Unless otherwise stated, interest rates are as of December 31, 2019.

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>December 31, 2019</th>
<th></th>
<th>December 31, 2018</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Weighted Interest Rate</td>
<td>Carrying Amount</td>
<td>Fair Value</td>
<td>Weighted Interest Rate</td>
</tr>
<tr>
<td>$1,125 million Senior secured term loan (LIBOR based variable rate of 3.46%) due 2023</td>
<td>3.46%</td>
<td>$1,086</td>
<td>$1,079</td>
<td>3.46%</td>
</tr>
<tr>
<td>$2,303 million Senior secured term loan (LIBOR based variable rate of 3.71%) due 2023</td>
<td>3.71%</td>
<td>2,263</td>
<td>2,273</td>
<td>2.285</td>
</tr>
<tr>
<td>€545 million Senior secured term loan (Euro LIBOR based variable rate of 2.50%) due 2023</td>
<td>2.50%</td>
<td>603</td>
<td>606</td>
<td>623</td>
</tr>
<tr>
<td>$850 million senior secured revolving credit facility (Euro LIBOR or LIBOR based variable rate) due 2023</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total senior secured credit facilities (with weighted-average interest rate)</td>
<td>3.52%</td>
<td>3,952</td>
<td>3,958</td>
<td>4.09%</td>
</tr>
<tr>
<td>$800 million 4.50% senior debenture loan due 2020</td>
<td>4.50%</td>
<td>799</td>
<td>802</td>
<td>797</td>
</tr>
<tr>
<td>$625 million 5.50% senior debenture loan due 2021</td>
<td>5.50%</td>
<td>622</td>
<td>629</td>
<td>621</td>
</tr>
<tr>
<td>$2,300 million 5.00% senior debenture loan due 2022</td>
<td>5.00%</td>
<td>2,293</td>
<td>2,312</td>
<td>2,290</td>
</tr>
<tr>
<td>$500 million 5.00% senior debenture loan due 2025</td>
<td>5.00%</td>
<td>497</td>
<td>516</td>
<td>496</td>
</tr>
<tr>
<td>Total debenture loans (with weighted-average interest rate)</td>
<td>5.22%</td>
<td>4,211</td>
<td>4,259</td>
<td>5.22%</td>
</tr>
<tr>
<td>Other loans</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total long-term debt</td>
<td>—</td>
<td>4,40%</td>
<td>8,164</td>
<td>8,218</td>
</tr>
<tr>
<td>Finance lease and other financing obligations</td>
<td>—</td>
<td>145</td>
<td>161</td>
<td>—</td>
</tr>
<tr>
<td>Bank overdrafts</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total debt and other financing arrangements</td>
<td>—</td>
<td>8,309</td>
<td>8,387</td>
<td>—</td>
</tr>
<tr>
<td>Less: Current portion of long-term debt, finance lease and other financing obligations and other short-term borrowings</td>
<td>—</td>
<td>914</td>
<td>107</td>
<td>—</td>
</tr>
<tr>
<td>Non-current portion of long-term debt and finance lease and other financing obligations</td>
<td>—</td>
<td>$ 7,395</td>
<td>$ 8,280</td>
<td></td>
</tr>
</tbody>
</table>

The fair value of the Company’s long-term debt instruments was based on the yield on public debt where available or current borrowing rates available for financings with similar terms and maturities and such fair value measurements are considered Level 1 or Level 2 in nature, respectively.

The carrying value of Nielsen’s long-term debt are denominated in the following currencies:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>December 31, 2019</th>
<th>December 31, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Dollars</td>
<td>$ 7,561</td>
<td>$ 7,602</td>
</tr>
<tr>
<td>Euro</td>
<td>603</td>
<td>623</td>
</tr>
<tr>
<td>$ 8,164</td>
<td>$ 8,225</td>
<td></td>
</tr>
</tbody>
</table>

Annual maturities of Nielsen’s long-term debt are as follows:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>December 31, 2019</th>
<th>December 31, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$ 854</td>
<td>—</td>
</tr>
<tr>
<td>2021</td>
<td>$ 702</td>
<td>—</td>
</tr>
<tr>
<td>2022</td>
<td>$ 2,399</td>
<td>—</td>
</tr>
<tr>
<td>2023</td>
<td>$ 3,710</td>
<td>—</td>
</tr>
<tr>
<td>2024</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Thereafter</td>
<td>$ 499</td>
<td>—</td>
</tr>
<tr>
<td>$ 8,164</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>
The Company’s $800 million senior debenture loan matures in October 2020 and, as of December 31, 2019, there was approximately $808 million of outstanding principal and interest payable thereunder. The Company believes that it is probable that it will be able to refinance this debt prior to maturity.

Senior Secured Credit Facilities

Term Loan Facilities

In June 2018, Nielsen entered into an Amendment Agreement to amend and restate its Fourth Amended and Restated Credit Agreement (the “Prior Credit Agreement”) in the form of the Fifth Amended and Restated Credit Agreement (the “Amended Credit Agreement”). Among other things, the Amendment Agreement provided for: (i) the refinancing and replacement of the prior Tranche A Revolving Credit Facility with a new Tranche A Revolving Credit Facility having commitments in an aggregate principal amount of $850,000,000; (ii) the refinancing and replacement of the prior Class A Term Loans with new Class A Term Loans in an aggregate principal amount of $1,125,000,000; (iii) the refinancing and replacement of the prior Class B-2 Euro Term Loans with new Class B-2 Euro Term Loans in an aggregate principal amount of € 545,245,518; and (iv) incurring incremental term loans in the form of Class B-4 Term Loans in an aggregate principal amount of $75,000,000.

The proceeds of loans under each replacement facility were used to replace or refinance the entire outstanding principal amount of loans under the prior facility that was replaced, and the proceeds of the incremental Class B-4 Term Loans, together with a portion of the proceeds of the Class B-2 Euro Term Loans in excess of the amount of the prior Class B-2 Euro Term Loans that were replaced, were used to prepay the amount of prior Class A Term Loans in excess of the amount of new Class A Term Loans.

The new Class A Term Loans will mature in full on July 9, 2023 and are required to be repaid in quarterly installments in an aggregate amount equal to 0.63% of the original principal amount of the Class A Term Loans for each of the first eight quarters following the effective date of the Amendment Agreement, 1.25% of the original principal amount of the Class A Term Loans for each of the subsequent eight quarters and 2.50% of the original principal amount of the Class A Term Loans for each of the subsequent three quarters, with the balance payable on July 9, 2023. The new Class B-2 Euro Term Loans will mature in full on October 4, 2023 and are required to be repaid in equal quarterly installments in an aggregate amount equal to 0.25% of the original principal amount of the Class B-2 Euro Term Loans, with the balance payable on October 4, 2023. The Class B-4 Term Loans will mature in full on October 4, 2023 and are required to be repaid in equal quarterly installments in an aggregate amount equal to 0.25% of the original principal amount of the Class B-4 Term Loans, with the balance payable on October 4, 2023. The new Tranche A Revolving Credit Facility matures on July 9, 2023.

The new Class A Term Loans and loans under the new Tranche A Revolving Credit Facility bear interest at a rate per annum equal to, at our election, (i) a base rate or eurocurrency rate, plus (ii) an applicable margin determined by reference to the Total Leverage Ratio (as defined in the Amended Credit Agreement), which varies from 0.25% to 1.00%, in the case of base rate loans, and from 1.25% to 2.00%, in the case of eurocurrency rate loans. The Class B-2 Euro Term Loans bear interest at a rate per annum equal to (i) a eurocurrency rate plus (ii) an applicable margin equal to 2.50%. The Class B-4 Term Loans bear interest at a rate per annum equal to, at our election, (i) a base rate or eurocurrency rate, plus (ii) an applicable margin, which is equal to 2.00%, in the case of eurocurrency loans, or 1.00%, in the case of base rate loans.

The Amended Credit Agreement contains substantially the same affirmative and negative covenants as those of the Prior Credit Agreement, except the exceptions to the restrictions on restricted payments and investments that are determined by reference to the Total Leverage Ratio were amended to increase the applicable limits.

Nielsen wrote-off certain previously capitalized deferred financing fees of $2 million associated with the June 2018 debt refinancing and incurred certain costs in connection with the refinancing of $5 million.

Obligations under the Amended Credit Agreement are guaranteed by TNC B.V., substantially all of the wholly-owned U.S. subsidiaries of TNC B.V. and certain of the non-U.S. wholly-owned subsidiaries of TNC B.V., and are secured by substantially all of the existing and future property and assets of the U.S. subsidiaries of TNC B.V. and by a pledge of substantially all of the capital stock of the guarantors, the capital stock of substantially all of the U.S. subsidiaries of TNC B.V., and up to 65% of the capital stock of certain of the non-U.S. subsidiaries of TNC B.V. Under a separate security agreement, substantially all of the assets of TNC B.V. are pledged as collateral for amounts outstanding under the Amended Credit Agreement.
**Covenants**

The Amended Credit Agreement contains a number of covenants that, among other things, restrict, subject to certain exceptions, the ability of Nielsen Holding and Finance B.V. and its restricted subsidiaries (which together constitute most of Nielsen’s subsidiaries) to incur additional indebtedness or guarantees, incur liens and engage in sale and leaseback transactions, make certain loans and investments, declare dividends, make payments or redeem or repurchase capital stock, engage in certain mergers, acquisitions and other business combinations, prepay, redeem or purchase certain indebtedness, amend or otherwise alter terms of certain indebtedness, sell certain assets, transact with affiliates, enter into agreements limiting subsidiary distributions and alter the business they conduct. These entities are restricted, subject to certain exceptions, in their ability to transfer their net assets to us. Such restricted net assets amounted to approximately $2.1 billion at December 31, 2019. In addition, these entities are subject to a total leverage covenant. The leverage ratio requires that Nielsen not permit the ratio of total net debt (as defined in the Amended Credit Agreement) at the end of any calendar quarter to Consolidated EBITDA (as defined in the Amended Credit Agreement) for the four quarters then ended to exceed a specified threshold. The maximum permitted ratio is 5.50 to 1.00. Neither Nielsen nor TNC B.V. is currently bound by any financial or negative covenants contained in the Amended Credit Agreement. The Amended Credit Agreement also contains certain customary affirmative covenants and events of default. Certain significant financial covenants are described further below.

Failure to comply with this financial covenant would result in an event of default under Nielsen’s Amended Credit Agreement unless waived by certain of Nielsen’s term lenders and the Company’s revolving lenders. An event of default under Nielsen’s Amended Credit Agreement can result in the acceleration of Nielsen’s indebtedness under the facilities, which in turn would result in an event of default and possible acceleration of indebtedness under the agreements governing Nielsen’s debt securities as well. As Nielsen’s failure to comply with the financial covenant described above can cause the Company to go into default under the agreements governing Nielsen’s indebtedness, management believes that Nielsen’s Amended Credit Agreement and this covenant are material to Nielsen. As of December 31, 2019, Nielsen was in full compliance with the financial covenant described above.

Pursuant to Nielsen’s Amended Credit Agreement, the Company is subject to making mandatory prepayments on the term loans within Nielsen’s Amended Credit Agreement to the extent in any full calendar year Nielsen generate Excess Cash Flow (“ECF”), as defined in the Amended Credit Agreement. The percentage of ECF that must be applied as a repayment is a function of several factors, including Nielsen’s ratio of total net debt to Covenant EBITDA, as well other adjustments, including any voluntary term loan repayments made in the course of the calendar year. To the extent any mandatory repayment is required pursuant to this ECF clause; such payment must generally occur on or around the time of the delivery of the annual consolidated financial statements to the lenders. At December 31, 2019, Nielsen’s ratio of total net debt to Covenant EBITDA was less than 5.00 to 1.00 and therefore no mandatory repayment was required. Nielsen’s next ECF measurement date will occur upon completion of the 2020 results, and although Nielsen do not expect to be required to issue any mandatory repayments in 2020 or beyond, it is uncertain at this time if any such payments will be required in future periods.

**Revolving Credit Facility**

The Amended Credit Agreement contains a senior secured revolving credit facility under which Nielsen Finance LLC, TNC (US) Holdings, Inc., and Nielsen Holding and Finance B.V. can borrow revolving loans. The revolving credit facility can also be used for letters of credit, guarantees and swingline loans. The existing revolving credit facility has commitments of $850 million with a final maturity of July 2023.

The senior secured revolving credit facility is provided under the Amended Credit Agreement and so contains covenants and restrictions as noted under the “Term loan facilities” section above. Obligations under the revolving credit facility are guaranteed by the same entities that guarantee obligations under the Amended Credit Agreement and Senior Secured Loan Agreement.

As of December 31, 2019, Nielsen had zero borrowings outstanding and outstanding letters of credit of $17 million. As of December 31, 2018, Nielsen had zero borrowings outstanding and outstanding letters of credit of $16 million. As of December 31, 2019, Nielsen had $833 million available for borrowing under the revolving credit facility.

**Debenture Loans**

The indentures governing the Senior Notes limit the majority of Nielsen’s subsidiaries’ ability to incur additional indebtedness, pay dividends or make other distributions or repurchase its capital stock, make certain investments, enter into certain types of transactions with affiliates, use assets as security in other transactions and sell certain assets or merge with or into other companies subject to certain exceptions. Upon a change in control, Nielsen is required to make an offer to redeem all of the Senior Notes at a redemption price equal to the 101% of the aggregate accreted principal amount plus accrued and unpaid interest. The Senior Notes are jointly and severally guaranteed by Nielsen, substantially all of the wholly owned U.S. subsidiaries of Nielsen, and certain of the non-U.S. wholly-owned subsidiaries of Nielsen.
Other Transactions

Effective July 1, 2010, the Company designated its Euro denominated variable rate senior secured term loans as non-derivative hedges of its net investment in a European subsidiary. Gains or losses attributable to fluctuations in the Euro as compared to the U.S. Dollar associated with this debenture were recorded to the cumulative translation adjustment within shareholders’ equity, net of income tax.

Debt-Issuance Costs

The costs related to the issuance of debt are presented as a deduction from the corresponding debt liability and amortized to interest expense using the effective interest method over the life of the related debt.

Finance Lease and Other Obligations

Nielsen finances certain computer equipment, software, buildings and automobiles under finance leases and related transactions. These arrangements do not include terms of renewal, purchase options, or escalation clauses.

Assets under finance lease are recorded within property, plant and equipment. See Note 8 “Property, Plant and Equipment.” Liabilities under finance leases are recorded within long-term debt and other financing obligations above. See Note 5 “Leases” for more information on finance leases and other financing obligations referenced in this note.

13. Shareholders’ Equity

Common stock activity is as follows:

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
</tr>
<tr>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>Actual number of shares of common stock outstanding</td>
</tr>
<tr>
<td>Beginning of period.................................</td>
</tr>
<tr>
<td>Shares of common stock issued through compensation plans ........................................</td>
</tr>
<tr>
<td>Employee benefit trust activity .........................</td>
</tr>
<tr>
<td>Repurchases of common stock .................................</td>
</tr>
<tr>
<td>End of period---------------------------------</td>
</tr>
</tbody>
</table>

On January 31, 2013, the Company’s Board of Directors (the “Board”) adopted a cash dividend policy to pay quarterly cash dividends on its outstanding common stock. The following table represents the cash dividends declared by the Board and paid to shareholders for the years ended December 31, 2018 and 2019, respectively.

<table>
<thead>
<tr>
<th>Declaration Date</th>
<th>Record Date</th>
<th>Payment Date</th>
<th>Dividend Per Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 21, 2018</td>
<td>March 7, 2018</td>
<td>March 21, 2018</td>
<td>$0.34</td>
</tr>
<tr>
<td>April 19, 2018</td>
<td>June 6, 2018</td>
<td>June 20, 2018</td>
<td>$0.35</td>
</tr>
<tr>
<td>July 19, 2018</td>
<td>August 22, 2018</td>
<td>September 5, 2018</td>
<td>$0.35</td>
</tr>
<tr>
<td>October 18, 2018</td>
<td>November 21, 2018</td>
<td>December 5, 2018</td>
<td>$0.35</td>
</tr>
<tr>
<td>February 21, 2019</td>
<td>March 7, 2019</td>
<td>March 21, 2019</td>
<td>$0.35</td>
</tr>
<tr>
<td>April 18, 2019</td>
<td>June 5, 2019</td>
<td>June 19, 2019</td>
<td>$0.35</td>
</tr>
<tr>
<td>July 18, 2019</td>
<td>August 22, 2019</td>
<td>September 5, 2019</td>
<td>$0.35</td>
</tr>
<tr>
<td>November 3, 2019</td>
<td>November 21, 2019</td>
<td>December 5, 2019</td>
<td>$0.06</td>
</tr>
</tbody>
</table>

On November 3, 2019 the Board approved a plan to reduce the quarterly cash dividend, with the goal of strengthening Nielsen’s balance sheet and providing added flexibility to invest for growth. On February 20, 2020, the Board declared a cash dividend of $0.06 per share on Nielsen’s common stock. The dividend is payable on March 19, 2020 to shareholders of record at the close of business on March 5, 2020.

The dividend policy and the payment of future cash dividends are subject to the discretion of the Company’s Board of Directors.
Nielsen’s Board approved a share repurchase program, as included in the below table, for up to $2 billion in the aggregate of our outstanding common stock. The primary purpose of the program is to return value to shareholders and to mitigate dilution associated with Nielsen’s equity compensation plans.

<table>
<thead>
<tr>
<th>Board Approval</th>
<th>Share Repurchase Authorization ($ in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 25, 2013</td>
<td>$500</td>
</tr>
<tr>
<td>October 23, 2014</td>
<td>$1,000</td>
</tr>
<tr>
<td>December 11, 2015</td>
<td>$500</td>
</tr>
<tr>
<td>Total Share Repurchase Authorization</td>
<td>$2,000</td>
</tr>
</tbody>
</table>

Repurchases under this program will be made in accordance with applicable securities laws from time to time in the open market or otherwise depending on Nielsen’s evaluation of market conditions and other factors. This program has been executed within the limitations of the authority granted by Nielsen’s shareholders.

As of December 31, 2019, there have been 39,426,521 shares of our common stock purchased at an average price of $44.95 per share (total consideration of approximately $1,772 million) under this program. There were no share repurchases for the year ended December 31, 2019.

14. Share-based Compensation

Nielsen measures the cost of all share-based payments, including stock options, at fair value on the grant date and recognizes such costs within the consolidated statements of operations; however, no expense is recognized for share-based payments that do not ultimately vest. Nielsen recognizes the expense of its options that cliff vest using the straight-line method. For those that vest over time, an accelerated graded vesting is used. The Company recorded $50 million, $35 million and $45 million of expense associated with share-based compensation for the years ended December 31, 2019, 2018 and 2017, respectively. The tax benefit related to the share-based compensation expense was $6 million, $5 million and $13 million for each of the respective periods.

Nielsen has an equity-based, management compensation plan (“Equity Participation Plan” or “EPP”) to align compensation for certain key executives with the performance of the Company. Under this plan, certain of the Company’s executives may be granted stock options, stock appreciation rights, restricted stock, restricted stock units and dividend equivalent rights in the shares of the Company or purchase its shares. In connection with the completion of Nielsen’s initial public offering of common stock on January 31, 2011 (and further amended), the Company implemented the Nielsen 2010 Stock Incentive Plan (the “Prior Plan”) and suspended further grants under the EPP. In 2019, the Company replaced the Nielsen 2010 Stock Incentive Plan with the Nielsen 2019 Stock Incentive Plan (the “Stock Incentive Plan”). The Stock Incentive Plan is the source of new equity-based awards permitting the Company to grant to its key employees, directors and other service providers the following types of awards: incentive stock options, non-qualified stock options, stock appreciation rights, restricted stock, restricted stock units and other awards valued in whole or in part by reference to shares of Nielsen’s common stock and performance-based awards denominated in shares or cash.

Under the Stock Incentive Plan, Nielsen granted zero, 750,000 and 1,000 time-based stock options to purchase shares during the years ended December 31, 2019, 2018 and 2017, respectively. As of December 31, 2019, the total number of shares authorized for award of options or other equity-based awards was 10,420,826 under the Stock Incentive Plan. This includes the 7,200,000 newly authorized shares under the Stock Incentive Plan and the 3,220,826 shares reserved for issuance from the Prior Plan. The 2018 time-based awards become exercisable over a three year vesting period at a rate of 33.3% per year on the anniversary date of the award, and are tied to the executives’ continuing employment. The 2017 time-based awards become exercisable over a four-year vesting period at a rate of 6.25% per quarter, and are tied to the executives’ continuing employment.

The fair values of the granted time-based awards granted during 2018 and 2017 were estimated using the Black-Scholes option pricing model with the expected volatility based on the Company’s historical volatility.
The following assumptions were used for the grants of time-based awards during 2019, 2018 and 2017:

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected life (years)</td>
<td>—</td>
<td>6.00</td>
<td>4.50</td>
</tr>
<tr>
<td>Risk-free interest rate</td>
<td>—</td>
<td>2.87%</td>
<td>2.02%</td>
</tr>
<tr>
<td>Expected dividend yield</td>
<td>—</td>
<td>4.97%</td>
<td>3.76%</td>
</tr>
<tr>
<td>Expected volatility</td>
<td>—</td>
<td>25.96%</td>
<td>22.01%</td>
</tr>
<tr>
<td>Weighted average volatility</td>
<td>—</td>
<td>25.96%</td>
<td>22.01%</td>
</tr>
</tbody>
</table>

Nielsen’s stock option plan activity is summarized below:

<table>
<thead>
<tr>
<th>Stock Option Plan activity</th>
<th>Number of Options (Time Based)</th>
<th>Weighted-Average Exercise Price</th>
<th>Weighted-Average Remaining Contractual Term in Years</th>
<th>Aggregate Intrinsic Value in Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding at December 31, 2016</td>
<td>8,158,168</td>
<td>$40.19</td>
<td>4.43</td>
<td>$43</td>
</tr>
<tr>
<td>Granted</td>
<td>1,000</td>
<td>36.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forfeited</td>
<td>(996,015)</td>
<td>47.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercised</td>
<td>(1,293,850)</td>
<td>28.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding at December 31, 2017</td>
<td>5,869,303</td>
<td>$41.58</td>
<td>3.52</td>
<td>$13</td>
</tr>
<tr>
<td>Granted</td>
<td>750,000</td>
<td>40.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forfeited</td>
<td>(988,826)</td>
<td>46.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expired options</td>
<td>(153,799)</td>
<td>30.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercised</td>
<td>(844,842)</td>
<td>28.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding at December 31, 2018</td>
<td>4,631,836</td>
<td>$43.20</td>
<td>3.66</td>
<td>$—</td>
</tr>
<tr>
<td>Granted</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forfeited</td>
<td>(662,732)</td>
<td>46.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expired options</td>
<td>(445,760)</td>
<td>28.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercised</td>
<td>(9,027)</td>
<td>17.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding at December 31, 2019</td>
<td>3,514,317</td>
<td>$44.60</td>
<td>3.15</td>
<td>$—</td>
</tr>
<tr>
<td>Exercisable at December 31, 2019</td>
<td>2,817,876</td>
<td>$44.77</td>
<td>2.61</td>
<td>$—</td>
</tr>
</tbody>
</table>

During the year ended December 31, 2019, there were no options granted and the aggregate fair value of options vested was $5 million. As of December 31, 2018 and 2017, the weighted-average grant date fair value of the options granted was $2.16 and $4.70, respectively, and the aggregate fair value of options vested was $6 million and $9 million, respectively.

At December 31, 2019, there was approximately $1 million of unearned share-based compensation related to stock options (net of estimated forfeitures) which the Company expects to record as share-based compensation expense over the next two years. The compensation expense related to the time-based awards is amortized over the term of the award using the graded vesting method.

The intrinsic value of the options exercised during the year ended December 31, 2019 was insignificant. The intrinsic value of the options exercised during the years ended December 31, 2018 and 2017 was $6 million and $17 million, respectively. For the year ended December 31, 2019, cash proceeds from the exercise of options was insignificant.

Under the Nielsen 2010 Stock Incentive Plan, Nielsen granted 2,524,176 time and performance based stock options to purchase shares during the year ended December 31, 2018. The weighted average grant date fair value of the awards was $3.09. The performance aspect of the award is achieved based on the performance of Nielsen’s stock price. If the performance obligations are satisfied, the award will become exercisable over a three year vesting period at a rate of 33.3% per year on the anniversary date of the award, and are tied to the executives’ continuing employment. As of December 31, 2019, there was approximately $1 million of unearned share-based compensation related to performance stock options (net of estimated forfeitures) which the Company expects to record as share-based compensation over the next two years. During the years ended December 31, 2019 and 2017, there were no time and performance based stock options issued.
The fair values of the granted time and performance based awards during 2018 were estimated using the Monte Carlo simulation model with the expected volatility based on the Company’s historical volatility.

The following assumptions were used for grants of time and performance based awards during 2018:

<table>
<thead>
<tr>
<th>Year Ended December 31, 2018</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected life (years)</td>
<td>5.00</td>
</tr>
<tr>
<td>Risk-free interest rate</td>
<td>2.83-2.92%</td>
</tr>
<tr>
<td>Expected dividend yield</td>
<td>4.85-5.54%</td>
</tr>
<tr>
<td>Expected volatility</td>
<td>27.11-27.27%</td>
</tr>
<tr>
<td>Weighted average volatility</td>
<td>27.13%</td>
</tr>
</tbody>
</table>

Activity of Nielsen’s restricted stock units (RSUs) that are ultimately payable in shares of common stock granted under the Stock Incentive Plan is summarized below:

<table>
<thead>
<tr>
<th>RSU activity</th>
<th>Number of RSUs</th>
<th>Weighted-Average Grant Date Fair Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonvested at December 31, 2016</td>
<td>1,356,393</td>
<td>$ 47.69</td>
</tr>
<tr>
<td>Granted</td>
<td>1,574,973</td>
<td>36.23</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(339,292)</td>
<td>46.09</td>
</tr>
<tr>
<td>Vested</td>
<td>(503,086)</td>
<td>44.62</td>
</tr>
<tr>
<td>Nonvested at December 31, 2017</td>
<td>2,088,988</td>
<td>$ 40.36</td>
</tr>
<tr>
<td>Granted</td>
<td>2,780,914</td>
<td>25.35</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(361,821)</td>
<td>38.46</td>
</tr>
<tr>
<td>Vested</td>
<td>(642,397)</td>
<td>41.24</td>
</tr>
<tr>
<td>Nonvested at December 31, 2018</td>
<td>3,865,684</td>
<td>$ 29.88</td>
</tr>
<tr>
<td>Granted</td>
<td>2,454,871</td>
<td>21.46</td>
</tr>
<tr>
<td>Forfeited</td>
<td>(692,718)</td>
<td>28.63</td>
</tr>
<tr>
<td>Vested</td>
<td>(986,852)</td>
<td>33.60</td>
</tr>
<tr>
<td>Nonvested at December 31, 2019</td>
<td>4,640,985</td>
<td>$ 25.10</td>
</tr>
</tbody>
</table>

With the exception of a limited group of senior executives, the 2019 and 2018 awards will vest at a rate of 6.25% per quarter over four years. The 2019 awards for the limited group of senior executives will vest at one of the following rates: 25% on the first anniversary date of the award/75% on the second anniversary date of the award, 100% on the second anniversary date of the award, 12.5% per quarter over two years, or 25% per year over four years on the anniversary date of the award. The 2018 awards for the limited group of senior executives will vest at one of the following rates: 100% on the third anniversary date of the award, 100% on the second anniversary date of the award, 33.3% per year over three years on the anniversary date of the award, 12.5% per quarter over two years, or 25% per year over four years on the anniversary date of the award. The 2017 awards for the limited group of senior executives will vest at a rate of 25% per year over four years on the anniversary date of the award.

On January 31, 2017, Nielsen completed the acquisition of Gracenote and concurrently provided 31,381 replacement restricted stock units under Nielsen’s existing 2010 Stock Incentive Plan. The exchange was accounted for as a modification in accordance with ASC 718. The aggregate fair value of the replacement awards granted on January 31, 2017 was $2 million, of which $1 million was attributed to post merger service and $1 million was included in purchase price consideration.

As of December 31, 2019, there was approximately $51 million of unearned share-based compensation related to unvested RSUs (net of estimated forfeitures) which the Company expects to record as stock-based compensation expense over a weighted average period of 2.8 years.
During the years ended December 31, 2019, 2018 and 2017, the Company granted 523,508, 463,442 and 348,885 performance restricted stock units, respectively, representing the target number of performance restricted stock subject to the award. The weighted average grant date fair value of the awards in 2019, 2018 and 2017 were $24.62, $27.94 and $37.88 per share. For the performance restricted stock units granted in 2019, the total number of performance restricted stock units to be earned is subject to achievement of cumulative performance goals for the year ending December 31, 2021. For the performance restricted stock units granted in 2018, the total number of performance restricted stock units to be earned is subject to achievement of cumulative performance goals for the year ending December 31, 2020. For the performance restricted stock units granted in 2017, the total number of performance restricted stock units to be earned is subject to achievement of cumulative performance goals for the year ending December 31, 2019. For the 2019 award, fifty percent of the target award will be determined based on the Company’s revenue compounded annual growth rate achievements and fifty percent of the award will be determined based on adjusted earnings per share achievements. There is a relative total shareholder return modifier that can increase or decrease the payout. For the 2018 award, twenty five percent of the target award will be determined based on the Company’s revenue compounded annual growth rate achievements, twenty five percent of the target award will be based on the Company’s relative total shareholder return and fifty percent of the award will be determined based on free cash flow achievements. For the 2017 awards, forty percent of the target award will be determined based on the Company’s relative total shareholder return and sixty percent of the target award will be determined based on free cash flow achievements. The maximum payout is 200% of target. The fair value of the target award related to free cash flow was the fair value on the date of the grant, and the fair value of the target awards related to relative shareholder return was based on the Monte Carlo model. As of December 31, 2019, there is approximately $6 million of unearned share-based compensation related to unvested performance restricted stock units (net of estimated forfeitures). The compensation expense is amortized over the term of the award, which is 3 years after the grant date.

In 2016, the Company implemented the Nielsen Holdings plc 2016 Employee Share Purchase Plan (the ESPP) and 2,000,000 shares were authorized for issuance under the ESPP. There were 201,637, 174,246 and 159,279 shares issued under the ESPP in 2019, 2018 and 2017, respectively.

15. Income Taxes

Nielsen provides for income taxes utilizing the asset and liability method of accounting for income taxes. Under this method, deferred income taxes are recorded to reflect the tax consequences in future years of differences between the tax basis of assets and liabilities and their financial reporting amounts at each balance sheet date, based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. If it is determined that it is more likely than not that future tax benefits associated with a deferred tax asset will not be realized, a valuation allowance is provided. The effect on deferred tax assets and liabilities of a change in the tax rates is recognized in the consolidated statements of operations as an adjustment to income tax expense in the period that includes the enactment date.

The Company records a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in a tax return. Such tax positions are, based solely on their technical merits, more likely than not to be sustained upon examination by taxing authorities and reflect the largest amount of benefit, determined on a cumulative probability basis that is more likely than not to be realized upon settlement with the applicable taxing authority with full knowledge of all relevant information. The Company recognizes interest and penalties, if any, related to unrecognized tax benefits in income tax expense.

On December 22, 2017, the TCJA was signed into law and significantly changed the way the U.S. taxes corporations. The TCJA reduced the U.S. federal corporate income tax rate from 35 percent to 21 percent and created a territorial-style taxing system. The TCJA required companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously deferred and also created new taxes on certain types of foreign earnings. As of December 31, 2017, we made a reasonable estimate of the (a) effects on our existing deferred tax balances, and (b) the one-time transition tax. Consequently, our fourth quarter of 2017 and full year 2017 results of operations reflected a non-cash provisional net expense of $104 million. We finalized our accounting for the TCJA in December of 2018 and our results for the fourth quarter of 2018 and full year 2018 results of operations reflect, in accordance with SAB 118, a reduction in tax expense of $252 million as an adjustment to the 2017 provisional expense. This was primarily comprised of a net tax benefit of $57 million relating to finalizing the calculation of the transition tax (including withholding taxes) together with a net tax benefit of $195 million associated with the re-measurement of our deferred taxes.

The TCJA imposed a U.S. tax on global intangible low taxed income (“GILTI”) that is earned by certain foreign affiliates owned by a U.S. shareholder and was intended to tax earnings of a foreign corporation that are deemed to be in excess of certain threshold return. As of December 31, 2018, Nielsen made a policy decision and elected to treat taxes on GILTI as a current period expense and have reflected as such within the financial statements as of December 31, 2019 as well.
As part of an intercompany restructuring during the year ended December 31, 2018, we transferred certain intellectual property assets between wholly-owned legal entities in non-U.S. tax jurisdictions. As the impact of the transfer was the result of an intra-entity transaction, the resulting gain on the transfer was eliminated for purposes of the consolidated financial statements. The transferring entity recognized a gain on the transfer of assets that was not subject to income tax in its local jurisdiction. In accordance with ASU 2016-16, which the Company adopted in the first quarter of 2018, and as further described in Note 1. “Significant Accounting Policies”, Nielsen recorded an income tax benefit of approximately $193 million.

Throughout 2019, ongoing federal and international audits were effectively settled in certain tax jurisdictions and the impact was recorded accordingly the financial statements.

The components of income/(loss) before income taxes and equity in net income of affiliates, were:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>UK</td>
<td>$</td>
</tr>
<tr>
<td>Non-UK</td>
<td>(633)</td>
</tr>
</tbody>
</table>

Income/(loss) before income taxes and equity in net income/(loss) of affiliates ........................................... $ (663) $(882) $828

The above amounts for UK and non-UK activities were determined based on the location of the taxing authorities.

The provision for income taxes attributable to the income/(loss) before income taxes and equity in net income/(loss) of affiliates consisted of:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Year Ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Current:</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>$</td>
</tr>
<tr>
<td>Non-UK</td>
<td>(265)</td>
</tr>
<tr>
<td>Deferred:</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>1</td>
</tr>
<tr>
<td>Non-UK</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
</tr>
</tbody>
</table>

Total ................................................................. $ (260) $ (182) $ 388
The Company’s provision for income taxes for the years ended December 31, 2019, 2018 and 2017 was different from the amount computed by applying the statutory UK federal income tax rates to the underlying income/(loss) before income taxes and equity in net income/(loss) of affiliates as a result of the following:

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income/(loss) before income taxes and equity in net income/(loss) of affiliates</td>
<td>$(663)</td>
<td>$(882)</td>
<td>$828</td>
</tr>
<tr>
<td>UK statutory tax rate</td>
<td>19.00%</td>
<td>19.00%</td>
<td>19.25%</td>
</tr>
<tr>
<td>(Benefit)/provision for income taxes at the UK statutory rate</td>
<td>$(126)</td>
<td>$(168)</td>
<td>$159</td>
</tr>
<tr>
<td>Impairment of goodwill and long-lived assets</td>
<td>191</td>
<td>268</td>
<td>—</td>
</tr>
<tr>
<td>Tax impact on distributions from foreign subsidiaries</td>
<td>4</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Effect of operations in non-UK jurisdictions</td>
<td>32</td>
<td>32</td>
<td>35</td>
</tr>
<tr>
<td>Tax impact of global licensing arrangements</td>
<td>(16)</td>
<td>18</td>
<td>66</td>
</tr>
<tr>
<td>Tax impact of intercompany restructuring</td>
<td>—</td>
<td>(142)</td>
<td>—</td>
</tr>
<tr>
<td>U.S. state and local taxation</td>
<td>10</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>Base erosion and other anti-abuse tax</td>
<td>35</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Withholding and other taxation</td>
<td>29</td>
<td>28</td>
<td>39</td>
</tr>
<tr>
<td>Effect of global financing activities</td>
<td>(7)</td>
<td>(67)</td>
<td>(68)</td>
</tr>
<tr>
<td>Changes in estimates for uncertain tax positions and audit settlements</td>
<td>(442)</td>
<td>25</td>
<td>45</td>
</tr>
<tr>
<td>Changes in valuation allowances</td>
<td>(40)</td>
<td>39</td>
<td>(8)</td>
</tr>
<tr>
<td>Effect of change in deferred tax rates</td>
<td>46</td>
<td>(6)</td>
<td>7</td>
</tr>
<tr>
<td>Tax impact of post-retirement settlements</td>
<td>26</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Tax impact due to US Tax Reform (1)</td>
<td>—</td>
<td>(228)</td>
<td>104</td>
</tr>
<tr>
<td>Other, net</td>
<td>(2)</td>
<td>(7)</td>
<td>(22)</td>
</tr>
<tr>
<td>Total (benefit)/provision for income taxes</td>
<td>$(260)</td>
<td>$(182)</td>
<td>$388</td>
</tr>
<tr>
<td>Effective tax rate (benefit) and expense</td>
<td>(39.2)%</td>
<td>(20.6)%</td>
<td>46.9%</td>
</tr>
</tbody>
</table>

(1) This includes the impact of BEAT and GILTI for 2018 and 2017.
The components of current and non-current deferred income tax assets/(liabilities) were:

<table>
<thead>
<tr>
<th>Description</th>
<th>December 31, 2019</th>
<th>December 31, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred tax assets (on balance):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net operating loss carryforwards</td>
<td>$484</td>
<td>$532</td>
</tr>
<tr>
<td>Capital loss carryforwards</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>Interest expense limitation</td>
<td>349</td>
<td>301</td>
</tr>
<tr>
<td>Employee benefits</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>Tax credit carryforwards</td>
<td>186</td>
<td>205</td>
</tr>
<tr>
<td>Share-based payments</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Accrued expenses</td>
<td>39</td>
<td>41</td>
</tr>
<tr>
<td>Other assets</td>
<td>30</td>
<td>66</td>
</tr>
<tr>
<td>Financial instruments</td>
<td>1</td>
<td>—</td>
</tr>
<tr>
<td>Valuation allowances</td>
<td>(636)</td>
<td>(651)</td>
</tr>
<tr>
<td>Deferred tax assets, net of valuation allowances</td>
<td>574</td>
<td>571</td>
</tr>
<tr>
<td>Deferred tax liabilities (on balance):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intangible assets</td>
<td>(892)</td>
<td>(913)</td>
</tr>
<tr>
<td>Fixed asset and computer software depreciation</td>
<td>(273)</td>
<td>(241)</td>
</tr>
<tr>
<td>Financial instruments</td>
<td>(57)</td>
<td>(61)</td>
</tr>
<tr>
<td>Unrealized gain on investments</td>
<td>(49)</td>
<td>(49)</td>
</tr>
<tr>
<td>Deferred (revenues)/costs</td>
<td>(5)</td>
<td>(9)</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>(74)</td>
<td>(67)</td>
</tr>
<tr>
<td>Net deferred tax liability</td>
<td>$ (776)</td>
<td>$ (775)</td>
</tr>
</tbody>
</table>

Realization of deferred tax assets is based, in part, on Nielsen’s judgment and various factors including reversal of deferred tax liabilities, Nielsen’s ability to generate future taxable income in jurisdictions where such assets have arisen and potential tax planning strategies. Valuation allowances are recorded in order to reduce the deferred tax assets to the amount expected to be realized in the future.

At December 31, 2019 and 2018 the Company had net operating loss carryforwards of approximately $2,066 million and $2,208 million, respectively, which began to expire in 2020. In addition, the Company had tax credit carryforwards of approximately $186 million and $205 million at December 31, 2019 and 2018, respectively, which began to expire in 2020.

In certain jurisdictions, the Company has operating losses and other tax attributes that, due to the uncertainty of achieving sufficient profits to utilize these operating loss carryforwards and tax credit carryforwards, the Company currently believes it is more likely than not that a portion of these losses will not be realized. Therefore, the Company had a valuation allowance of approximately $636 million and $651 million at December 31, 2019 and 2018, respectively, related to net operating loss carryforwards, tax credit carryforwards and deferred tax assets related to other temporary differences.

With respect to the outside basis differences of “domestic” subsidiaries, in each taxing jurisdiction where a tiered ownership structure exists, the Company has confirmed that one or more viable tax planning strategies exists in each separate taxing jurisdiction that it could, and would - if required - employ to eliminate any income tax liability on such outside basis differences. In addition, resulting from TCJA, the company no longer asserts that all foreign undistributed earnings will be permanently reinvested, but rather the company will, over time, remit up foreign earnings and has provisioned for withholding taxes related to those earnings.

At December 31, 2019 and 2018, the Company had gross uncertain tax positions of $164 million and $572 million, respectively. The Company has also accrued interest and penalties associated with these unrecognized tax benefits as of December 31, 2019 and 2018 of $25 million and $70 million, respectively. Estimated interest and penalties related to the underpayment of income taxes is classified as a component of benefit (provision) for income taxes in the Consolidated Statement of Operations. It is reasonably possible that within the next 12 months certain tax examinations will close, which could result in a change in unrecognized tax benefits, along with related interest and penalties. Furthermore, the amounts ultimately paid may differ from the amounts accrued. An estimate of any possible change cannot be made at this time.
A reconciliation of the beginning and ending amount of gross uncertain tax positions is as follows:

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>December 31, 2019</th>
<th>December 31, 2018</th>
<th>December 31, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance as of the beginning of period..................</td>
<td>$572</td>
<td>$452</td>
<td>$432</td>
</tr>
<tr>
<td>Additions for current year tax positions.............</td>
<td>2</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Additions for tax positions of prior years..........</td>
<td>14</td>
<td>108</td>
<td>15</td>
</tr>
<tr>
<td>Reductions for lapses of statute of limitations.....</td>
<td>(424)</td>
<td>(8)</td>
<td>(2)</td>
</tr>
<tr>
<td>Reductions for tax positions of prior years.........</td>
<td>—</td>
<td>(1)</td>
<td>(4)</td>
</tr>
<tr>
<td>Balance as of the end of the period..................</td>
<td>$164</td>
<td>$572</td>
<td>$452</td>
</tr>
</tbody>
</table>

Throughout 2019, ongoing federal and international audits were effectively settled in certain tax jurisdictions and the impact was recorded accordingly the financial statements.

If the balance of the Company’s uncertain tax positions is sustained by the taxing authorities in the Company’s favor, the reversal of the entire balance would reduce the Company’s effective tax rate in future periods.

The Company files numerous consolidated and separate income tax returns in the U.S. Federal jurisdiction and in many state and foreign jurisdictions. With few exceptions, the Company is no longer subject to U.S. Federal income tax examinations for 2015 and prior periods. In addition, the Company has subsidiaries in various states, provinces and countries that are currently under audit for years ranging from 2007 through 2018.

16. Investments in Affiliates and Related Party Transactions

Related Party Transactions with Affiliates

As of December 31, 2019 and 2018, Nielsen had investments in affiliates of $17 million and $16 million, respectively.

Obligations between Nielsen and its affiliates are regularly settled in cash in the ordinary course of business. Nielsen had net receivables from its affiliates of approximately $2 million and $3 million for the years ended December 31, 2019 and 2018, respectively.

17. Commitments and Contingencies

Leases and Other Contractual Arrangements

In July 2019, the Company amended its Second Amended and Restated Master Services Agreement (the “MSA”), dated as of October 1, 2017 and effective as of January 1, 2017 (the “Effective Date”), with Tata America International Corporation and Tata Consultancy Services Limited (jointly, “TCS”) by executing Amendment Number One (the “Amendment”) with TCS, dated as of July 1, 2019 and effective as of January 1, 2019 (the “Amendment Effective Date”). The Amendment reduces the amount of services Nielsen has committed to purchase from TCS from the Amendment Effective Date through the remaining term of the MSA (the “Minimum Commitment”) to $1.413 billion, including a commitment to purchase at least $275 million in services during 2019, at least $250 million in services during 2020, $184.3 million in services per year from 2021 through 2024, and $137.8 million in services in 2025 (in each of the foregoing cases, the “Annual Commitment”). TCS’s charges under existing and future statements of work (“SOW”) pursuant to the MSA will continue to be credited against the Minimum Commitment and the Annual Commitment and the occurrence of certain events, some of which also provide Nielsen with the right to terminate the Agreement or SOWs, as applicable, will continue to be available to reduce the Minimum and Annual Commitment Amounts as they occur. The parties also agreed to certain other commercial terms. However, the other material terms of the MSA as reflected in the MSA and as previously disclosed remain unchanged. As of December 31, 2019, the remaining TCS commitment was approximately $1.1 billion.

Nielsen has also entered into operating leases and other contractual obligations to secure real estate facilities, agreements to purchase data processing services and leases of computers and other equipment used in the ordinary course of business and various outsourcing contracts. These agreements are not unilaterally cancelable by Nielsen, are legally enforceable and specify fixed or minimum amounts or quantities of goods or services at fixed or minimum prices.
The amounts presented below represent the minimum annual payments under Nielsen’s purchase obligations that have initial or remaining non-cancelable terms in excess of one year. These purchase obligations include data processing, building maintenance, equipment purchasing, photocopiers, land and mobile telephone service, computer software and hardware maintenance, and outsourcing.

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>Thereafter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating leases</td>
<td>$ 136</td>
<td>$ 99</td>
<td>$ 75</td>
<td>$ 55</td>
<td>$ 40</td>
<td>$ 171</td>
<td>$ 574</td>
</tr>
<tr>
<td>Other contractual obligations(a)</td>
<td>$ 627</td>
<td>$ 295</td>
<td>$ 203</td>
<td>$ 190</td>
<td>$ 185</td>
<td>$ 139</td>
<td>$ 1,639</td>
</tr>
<tr>
<td>Total</td>
<td>$ 763</td>
<td>$ 394</td>
<td>$ 278</td>
<td>$ 243</td>
<td>$ 225</td>
<td>$ 310</td>
<td>$ 2,213</td>
</tr>
</tbody>
</table>

(a) Other contractual obligations represent obligations under agreement, which are not unilaterally cancelable by Nielsen, are legally enforceable and specify fixed or minimum amounts or quantities of goods or services at fixed or minimum prices. Nielsen generally requires purchase orders for vendor and third party spending. The amounts presented above represent the minimum future annual services covered by purchase obligations including data processing, building maintenance, equipment purchasing, photocopiers, land and mobile telephone service, computer software and hardware maintenance, and outsourcing. Nielsen’s remaining commitments as of December 31, 2019, under the outsourced services agreement with TCS have been included above based on the Annual Commitment minimum required payments.

Total expenses incurred under operating leases were $123 million, $96 million and $96 million for the years ended December 31, 2019, 2018 and 2017, respectively. Nielsen recognized rental income received under subleases of $3 million, $6 million and $6 million for the years ended December 31, 2019, 2018 and 2017, respectively. At December 31, 2019, Nielsen had aggregate future proceeds to be received under sub-lease guarantees of $8 million.

Nielsen also has minimum commitments under non-cancelable finance leases. See Note 5 “Leases” for more information on finance leases.

**Guarantees and Other Contingent Commitments**

At December 31, 2019, Nielsen was committed under the following significant guarantee arrangements:

**Sub-lease guarantees**

Nielsen provides sub-lease guarantees in accordance with certain agreements pursuant to which Nielsen guarantees all rental payments upon default of rental payment by the sub-lessee. To date, the Company has not been required to perform under such arrangements, does not anticipate making any significant payments related to such guarantees and, accordingly, no amounts have been recorded.

**Letters of credit**

Letters of credit issued and outstanding amount to $17 million and $16 million at December 31, 2019 and 2018, respectively.

**Legal Proceedings and Contingencies**

In August 2018, a putative shareholder class action lawsuit was filed in the Southern District of New York, naming as defendants Nielsen, former Chief Executive Officer Dwight Mitchell Barns, and former Chief Financial Officer Jamere Jackson. Another lawsuit, which alleged similar facts but also named other Nielsen officers, was filed in the Northern District of Illinois in September 2018 and transferred to the Southern District of New York in December 2018. The actions were consolidated on April 22, 2019, and the Public Employees’ Retirement System of Mississippi was appointed lead plaintiff for the putative class. The operative complaint was filed on September 27, 2019, and asserts violations of certain provisions of the Securities Exchange Act of 1934, as amended, based on allegedly false and materially misleading statements relating to the outlook of Nielsen’s Buy (now “Connect”) segment, the Company’s preparedness for changes in global data privacy laws and Nielsen’s reliance on third-party data. The Company moved to dismiss the operative complaint on November 26, 2019. Briefing of the Company’s motion is scheduled to conclude on February 26, 2020. In addition, in January 2019, a shareholder derivative lawsuit was filed in New York Supreme Court against a number of Nielsen’s current and former officers and directors. The derivative lawsuit alleges that the named officers and directors breached their fiduciary duties to Nielsen in connection with factual assertions substantially similar to those in the putative class action complaints. The derivative lawsuit further alleges that certain officers and directors engaged in trading Nielsen stock based on material, nonpublic information. By agreement dated June 26, 2019, the derivative lawsuit has been stayed pending resolution of the Company’s motion to dismiss the aforementioned securities litigation. Nielsen intends to defend these lawsuits vigorously. Based on currently available information, Nielsen believes that the Company has meritorious defenses to these actions and that their resolution is not likely to have a material adverse effect on Nielsen’s business, financial position, or results of operations.

Nielsen is also subject to litigation and other claims in the ordinary course of business, some of which include claims for substantial sums. Accruals have been recorded when the outcome is probable and can be reasonably estimated. While the ultimate results of claims and litigation cannot be determined, the Company does expect that the ultimate disposition of these matters will not have a material adverse effect on its operations or financial condition. However, depending on the amount and the timing, an unfavorable resolution of some or all of these matters could materially affect the Company’s future results of operations or cash flows in a particular period.
18. Segments

The Company aligns its operating segments in order to conform to management’s internal reporting structure, which is reflective of service offerings by industry. Prior to February 2019, Management aggregated such operating segments into two reporting segments: what consumers buy ("Buy"), consisting principally of market research information and analytical services; and what consumers read, watch and listen to ("Watch"), consisting principally of television, radio, online and mobile audience and advertising measurement and corresponding analytics.

In February 2019, Nielsen realigned its business segments from Buy and Watch to Nielsen Global Connect ("Connect") and Nielsen Global Media ("Media"). Each segment operates as a complete unit—from the conception of a product, through the collection of the data, into the technology and operations, all the way to the data being sold and delivered to the client. These changes better align Nielsen’s external view to its go-forward internal view. The Company’s reportable segments are stated on the new basis and such changes were retrospectively applied. The impact of these changes did not have a material impact on Nielsen’s consolidated financial statements or segment results.

Corporate consists principally of unallocated items such as certain facilities and infrastructure costs as well as intersegment eliminations. Certain corporate costs, other than those described above, including those related to selling, finance, legal, human resources, and information technology systems, are considered operating costs and are allocated to the Company’s segments based on either the actual amount of costs incurred or on a basis consistent with the operations of the underlying segment. Information with respect to the operations of each of Nielsen’s business segments is set forth below based on the nature of the services offered and geographic areas of operations.
### Business Segment Information

#### Year Ended December 31,

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect</td>
<td>$3,057</td>
<td>$3,138</td>
<td>$3,278</td>
</tr>
<tr>
<td>Media</td>
<td>$3,441</td>
<td>$3,377</td>
<td>$3,294</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$6,498</td>
<td>$6,515</td>
<td>$6,572</td>
</tr>
</tbody>
</table>

#### Year Ended December 31,

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business segment income/(loss)</strong>&lt;sup&gt;(13)&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect</td>
<td>$422</td>
<td>$420</td>
<td>$600</td>
</tr>
<tr>
<td>Media</td>
<td>$1,476</td>
<td>$1,476</td>
<td>$1,470</td>
</tr>
<tr>
<td>Corporate and eliminations</td>
<td>$(45)</td>
<td>$(46)</td>
<td>$(46)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1,855</td>
<td>$1,850</td>
<td>$2,024</td>
</tr>
</tbody>
</table>

#### Year Ended December 31,

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Depreciation and amortization</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect</td>
<td>$231</td>
<td>$223</td>
<td>$208</td>
</tr>
<tr>
<td>Media</td>
<td>$518</td>
<td>$444</td>
<td>$425</td>
</tr>
<tr>
<td>Corporate and eliminations</td>
<td>$7</td>
<td>$8</td>
<td>$7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$756</td>
<td>$675</td>
<td>$640</td>
</tr>
</tbody>
</table>

#### Year Ended December 31,

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restructuring charges</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect</td>
<td>$49</td>
<td>$101</td>
<td>$43</td>
</tr>
<tr>
<td>Media</td>
<td>$15</td>
<td>$23</td>
<td>$13</td>
</tr>
<tr>
<td>Corporate and eliminations</td>
<td>$16</td>
<td>$15</td>
<td>$24</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$80</td>
<td>$139</td>
<td>$80</td>
</tr>
</tbody>
</table>

#### Year Ended December 31,

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impairment of goodwill and other long-lived assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect</td>
<td>$1,004</td>
<td>$1,411</td>
<td>$—</td>
</tr>
<tr>
<td>Media</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Corporate and eliminations</td>
<td>—</td>
<td>$2</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1,004</td>
<td>$1,413</td>
<td>$—</td>
</tr>
</tbody>
</table>

#### Year Ended December 31,

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Share-based compensation expense</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect</td>
<td>$15</td>
<td>$14</td>
<td>$13</td>
</tr>
<tr>
<td>Media</td>
<td>$13</td>
<td>$11</td>
<td>$11</td>
</tr>
<tr>
<td>Corporate and eliminations</td>
<td>$22</td>
<td>$10</td>
<td>$21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$50</td>
<td>$35</td>
<td>$45</td>
</tr>
</tbody>
</table>

#### Year Ended December 31,

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other items</strong>&lt;sup&gt;(2)&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Media</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Corporate and eliminations</td>
<td>$56</td>
<td>$63</td>
<td>$45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$56</td>
<td>$63</td>
<td>$45</td>
</tr>
</tbody>
</table>

#### Year Ended December 31,

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating income/(loss)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect</td>
<td>$(877)</td>
<td>$(1,329)</td>
<td>$336</td>
</tr>
<tr>
<td>Media</td>
<td>$930</td>
<td>$998</td>
<td>$1,021</td>
</tr>
<tr>
<td>Corporate and eliminations</td>
<td>$(146)</td>
<td>$(144)</td>
<td>$(143)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$(93)</td>
<td>$(475)</td>
<td>$1,214</td>
</tr>
</tbody>
</table>
The Company’s chief operating decision-maker uses business segment income/(loss) to measure performance from period to period both at the consolidated level as well as within its operating segments.

For the year ended December 31, 2019 and 2018, other items primarily consist of business optimization costs, including strategic review costs, and transaction related costs.

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Year ended December 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td></td>
</tr>
<tr>
<td>Connect</td>
<td>$195</td>
</tr>
<tr>
<td>Media</td>
<td>308</td>
</tr>
<tr>
<td>Corporate and eliminations</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>$519</td>
</tr>
</tbody>
</table>
### Geographic Segment Information

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Revenues(1)</th>
<th>Operating Income/(Loss)</th>
<th>Long-lived Assets(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2019</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S.</td>
<td>$3,724</td>
<td>$85</td>
<td>$10,176</td>
</tr>
<tr>
<td>North and South America, excluding the U.S.</td>
<td>551</td>
<td>(104)</td>
<td>297</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>208</td>
<td>(110)</td>
<td>120</td>
</tr>
<tr>
<td>Other Europe, Middle East &amp; Africa</td>
<td>1,179</td>
<td>(26)</td>
<td>578</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>836</td>
<td>62</td>
<td>169</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$6,498</td>
<td>(93)</td>
<td>$11,340</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Revenues(1)</th>
<th>Operating Income/(Loss)</th>
<th>Long-lived Assets(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2018</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S.</td>
<td>$3,697</td>
<td>$31</td>
<td>$10,806</td>
</tr>
<tr>
<td>North and South America, excluding the U.S.</td>
<td>569</td>
<td>(226)</td>
<td>523</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>192</td>
<td>(130)</td>
<td>153</td>
</tr>
<tr>
<td>Other Europe, Middle East &amp; Africa</td>
<td>1,217</td>
<td>(157)</td>
<td>734</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>840</td>
<td>7</td>
<td>263</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$6,515</td>
<td>(475)</td>
<td>$12,479</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Revenues(1)</th>
<th>Operating Income/(Loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2017</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S.</td>
<td>$3,730</td>
<td>$743</td>
</tr>
<tr>
<td>North and South America, excluding the U.S.</td>
<td>595</td>
<td>164</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>194</td>
<td>(20)</td>
</tr>
<tr>
<td>Other Europe, Middle East &amp; Africa</td>
<td>1,188</td>
<td>159</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>865</td>
<td>168</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$6,572</td>
<td>$1,214</td>
</tr>
</tbody>
</table>

(1) Revenues are attributed to geographic areas based on the location of customers.

(2) Long-lived assets include property, plant and equipment, goodwill and other intangible assets.

#### 19. Additional Financial Information

##### Accounts payable and other current liabilities

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>December 31, 2019</th>
<th>December 31, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade payables</td>
<td>$230</td>
<td>$288</td>
</tr>
<tr>
<td>Personnel costs</td>
<td>301</td>
<td>225</td>
</tr>
<tr>
<td>Current portion of restructuring liabilities</td>
<td>30</td>
<td>62</td>
</tr>
<tr>
<td>Data and professional services</td>
<td>202</td>
<td>221</td>
</tr>
<tr>
<td>Interest payable</td>
<td>61</td>
<td>64</td>
</tr>
<tr>
<td>Current portion of operating leases</td>
<td>111</td>
<td>-</td>
</tr>
<tr>
<td>Other current liabilities(1)</td>
<td>247</td>
<td>259</td>
</tr>
<tr>
<td><strong>Total accounts payable and other current liabilities</strong></td>
<td>$1,182</td>
<td>$1,119</td>
</tr>
</tbody>
</table>

(1) Other includes multiple items, none of which is individually significant.
20. Guarantor Financial Information

The following supplemental financial information is being provided for purposes of compliance with reporting covenants contained in certain debt obligations of Nielsen and its subsidiaries. The financial information sets forth for Nielsen, its subsidiaries that have issued certain debt securities (the “Issuers”) and its guarantor and non-guarantor subsidiaries, the consolidating balance sheet as of December 31, 2019 and 2018 and consolidating statements of operations and cash flows for the periods ended December 31, 2019, 2018 and 2017.

The issued debt securities are jointly and severally guaranteed on a full and unconditional basis by Nielsen and subject to certain exceptions, each of the direct and indirect 100% owned subsidiaries of Nielsen, in each case to the extent that such entities provide a guarantee under the senior secured credit facilities. The issuers are also 100% owned indirect subsidiaries of Nielsen: Nielsen Finance LLC and Nielsen Finance Co. for certain series of debt obligations, and The Nielsen Company (Luxembourg) S.ar.L., for the other series of debt obligations. Each issuer is a guarantor of the debt obligations not issued by it.

Nielsen is a holding company and does not have any material assets or operations other than ownership of the capital stock of its direct and indirect subsidiaries. All of Nielsen’s operations are conducted through its subsidiaries, and, therefore, Nielsen is expected to continue to be dependent upon the cash flows of its subsidiaries to meet its obligations. The senior secured credit facilities contain certain limitations on the ability of Nielsen to receive the cash flows of its subsidiaries.

While all subsidiary guarantees of the issued debt securities are full and unconditional, these guarantees contain customary release provisions including when (i) the subsidiary is sold or sells all of its assets, (ii) the subsidiary is declared “unrestricted” for covenant purposes, (iii) the subsidiary’s guarantee under the senior secured credit facilities is released and (iv) the requirements for discharge of the indenture have been satisfied.
Nielsen Holdings plc  
Consolidated Statement of Comprehensive Income  
For the year ended December 31, 2019

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Parent</th>
<th>Issuers</th>
<th>Guarantor</th>
<th>Non-Guarantor</th>
<th>Elimination</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$—</td>
<td>$—</td>
<td>$3,586</td>
<td>$2,912</td>
<td>$—</td>
<td>$6,498</td>
</tr>
<tr>
<td>Cost of revenues, exclusive of depreciation and amortization shown separately below</td>
<td>—</td>
<td>—</td>
<td>1513</td>
<td>1,309</td>
<td>—</td>
<td>2,822</td>
</tr>
<tr>
<td>Selling, general and administrative expenses, exclusive of depreciation and amortization shown separately below</td>
<td>14</td>
<td>—</td>
<td>936</td>
<td>979</td>
<td>—</td>
<td>1,929</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>—</td>
<td>—</td>
<td>610</td>
<td>146</td>
<td>—</td>
<td>756</td>
</tr>
<tr>
<td>Impairment of goodwill and other long-lived assets</td>
<td>—</td>
<td>—</td>
<td>419</td>
<td>585</td>
<td>—</td>
<td>1,004</td>
</tr>
<tr>
<td>Restructuring charges</td>
<td>—</td>
<td>—</td>
<td>35</td>
<td>45</td>
<td>—</td>
<td>80</td>
</tr>
<tr>
<td>Operating income/(loss)</td>
<td>(14)</td>
<td>—</td>
<td>73</td>
<td>(152)</td>
<td>—</td>
<td>(93)</td>
</tr>
<tr>
<td>Interest income</td>
<td>1</td>
<td>726</td>
<td>40</td>
<td>(771)</td>
<td>—</td>
<td>6</td>
</tr>
<tr>
<td>Interest expense</td>
<td>—</td>
<td>(371)</td>
<td>(756)</td>
<td>(41)</td>
<td>771</td>
<td>(397)</td>
</tr>
<tr>
<td>Foreign currency exchange transaction gains/(losses), net</td>
<td>—</td>
<td>—</td>
<td>(1)</td>
<td>(9)</td>
<td>—</td>
<td>(10)</td>
</tr>
<tr>
<td>Other income/(expense), net</td>
<td>—</td>
<td>—</td>
<td>86</td>
<td>(255)</td>
<td>—</td>
<td>(169)</td>
</tr>
<tr>
<td>Income/(loss) before income taxes and equity in net income/(loss) of subsidiaries</td>
<td>(13)</td>
<td>355</td>
<td>(558)</td>
<td>(447)</td>
<td>—</td>
<td>(663)</td>
</tr>
<tr>
<td>Benefit/(provision) for income taxes</td>
<td>—</td>
<td>(112)</td>
<td>292</td>
<td>80</td>
<td>—</td>
<td>260</td>
</tr>
<tr>
<td>Equity in net income/(loss) of subsidiaries</td>
<td>(402)</td>
<td>176</td>
<td>(135)</td>
<td>—</td>
<td>361</td>
<td>—</td>
</tr>
<tr>
<td>Equity in net income/(loss) of affiliates</td>
<td>—</td>
<td>—</td>
<td>(1)</td>
<td>(9)</td>
<td>—</td>
<td>(10)</td>
</tr>
<tr>
<td>Net income/(loss)</td>
<td>(415)</td>
<td>419</td>
<td>(402)</td>
<td>(366)</td>
<td>361</td>
<td>(403)</td>
</tr>
<tr>
<td>Less net income/(loss) attributable to noncontrolling interests</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>12</td>
<td>—</td>
<td>12</td>
</tr>
<tr>
<td>Net income/(loss) attributable to controlling interest</td>
<td>(415)</td>
<td>419</td>
<td>(402)</td>
<td>(378)</td>
<td>361</td>
<td>(415)</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss)</td>
<td>105</td>
<td>(20)</td>
<td>105</td>
<td>165</td>
<td>(248)</td>
<td>107</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss) attributable to noncontrolling interests</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>—</td>
<td>2</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss) attributable to controlling interests</td>
<td>105</td>
<td>(20)</td>
<td>105</td>
<td>163</td>
<td>(248)</td>
<td>105</td>
</tr>
<tr>
<td>Comprehensive income/(loss)</td>
<td>(310)</td>
<td>399</td>
<td>(297)</td>
<td>(215)</td>
<td>113</td>
<td>(310)</td>
</tr>
<tr>
<td>Comprehensive income/(loss) attributable to noncontrolling interests</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>14</td>
<td>—</td>
<td>14</td>
</tr>
<tr>
<td>Total comprehensive income/(loss) attributable to controlling interest</td>
<td>$ (310)</td>
<td>$ 399</td>
<td>$ (297)</td>
<td>$ (215)</td>
<td>$ 113</td>
<td>$ (310)</td>
</tr>
</tbody>
</table>
Nielsen Holdings plc
Consolidated Statement of Comprehensive Income
For the year ended December 31, 2018

<table>
<thead>
<tr>
<th></th>
<th>Parent</th>
<th>Issuers</th>
<th>Guarantor</th>
<th>Guarantor</th>
<th>Elimination</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$ —</td>
<td>$ —</td>
<td>$3,566</td>
<td>$2,949</td>
<td>$ —</td>
<td>$6,515</td>
</tr>
<tr>
<td>Cost of revenues, exclusive of depreciation and amortization shown separately below</td>
<td>$ —</td>
<td>$ —</td>
<td>$1,457</td>
<td>$1,348</td>
<td>$ —</td>
<td>$2,805</td>
</tr>
<tr>
<td>Selling, general and administrative expenses, exclusive of depreciation and amortization shown separately below</td>
<td>$4</td>
<td>$946</td>
<td>$1,008</td>
<td>$ —</td>
<td>$ —</td>
<td>$1,958</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>$ —</td>
<td>$542</td>
<td>$133</td>
<td>$ —</td>
<td>$ —</td>
<td>$675</td>
</tr>
<tr>
<td>Impairment of goodwill and other long-lived assets</td>
<td>$ —</td>
<td>$579</td>
<td>$834</td>
<td>$ —</td>
<td>$ —</td>
<td>$1,413</td>
</tr>
<tr>
<td>Restructuring charges</td>
<td>$ —</td>
<td>$51</td>
<td>$88</td>
<td>$ —</td>
<td>$ —</td>
<td>$139</td>
</tr>
<tr>
<td>Operating income/(loss)</td>
<td>$ —</td>
<td>(9)</td>
<td>(462)</td>
<td>$ —</td>
<td>$ —</td>
<td>(475)</td>
</tr>
<tr>
<td>Interest income</td>
<td>$1</td>
<td>$681</td>
<td>$38</td>
<td>$6 (718)</td>
<td>$8</td>
<td>$8</td>
</tr>
<tr>
<td>Interest expense</td>
<td>$ —</td>
<td>(369)</td>
<td>(704)</td>
<td>(39) (718)</td>
<td>(39) (718)</td>
<td>(718)</td>
</tr>
<tr>
<td>Foreign currency exchange transaction gains/(losses), net</td>
<td>$ —</td>
<td>—</td>
<td>—</td>
<td>$ (16) (718)</td>
<td>(5)</td>
<td>(5)</td>
</tr>
<tr>
<td>Other income/(expense), net</td>
<td>$ —</td>
<td>(6)</td>
<td>860</td>
<td>(859)</td>
<td>$ —</td>
<td>(5)</td>
</tr>
<tr>
<td>Income/(loss) before income taxes and equity in net income/(loss) of subsidiaries</td>
<td>(3)</td>
<td>306</td>
<td>185 (1,370)</td>
<td>$ —</td>
<td>(882)</td>
<td></td>
</tr>
<tr>
<td>Benefit/(provision) for income taxes</td>
<td>$ —</td>
<td>(99)</td>
<td>139</td>
<td>142</td>
<td>$ —</td>
<td>182</td>
</tr>
<tr>
<td>Equity in net income/(loss) of subsidiaries</td>
<td>(709)</td>
<td>167</td>
<td>(1,033)</td>
<td>$ —</td>
<td>(700)</td>
<td></td>
</tr>
<tr>
<td>Net income/(loss)</td>
<td>(712)</td>
<td>374</td>
<td>(709)</td>
<td>(1,228)</td>
<td>1,575</td>
<td>(700)</td>
</tr>
<tr>
<td>Less net income/(loss) attributable to noncontrolling interests</td>
<td>$ —</td>
<td>—</td>
<td>—</td>
<td>12</td>
<td>$ —</td>
<td>12</td>
</tr>
<tr>
<td>Net income/(loss) attributable to controlling interest</td>
<td>(712)</td>
<td>374</td>
<td>(709)</td>
<td>(1,240)</td>
<td>1,575</td>
<td>(712)</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss)</td>
<td>(170)</td>
<td>17</td>
<td>(170)</td>
<td>(176)</td>
<td>328</td>
<td>(171)</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss) attributable to noncontrolling interests</td>
<td>$ —</td>
<td>—</td>
<td>—</td>
<td>(1)</td>
<td>$ —</td>
<td>(1)</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss) attributable to controlling interest</td>
<td>(170)</td>
<td>17</td>
<td>(170)</td>
<td>(175)</td>
<td>328</td>
<td>(170)</td>
</tr>
<tr>
<td>Total comprehensive income/(loss)</td>
<td>(882)</td>
<td>$391</td>
<td>$879</td>
<td>(1,415)</td>
<td>1,903</td>
<td>(882)</td>
</tr>
</tbody>
</table>

119
Nielsen Holdings plc  
Consolidated Statement of Comprehensive Income  
For the year ended December 31, 2017

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Revenues</td>
</tr>
<tr>
<td>Cost of revenues, exclusive of depreciation and amortization shown separately below</td>
</tr>
<tr>
<td>Selling, general and administrative expenses, exclusive of depreciation and amortization shown separately below</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
</tr>
<tr>
<td>Restructuring charges</td>
</tr>
<tr>
<td>Operating income/(loss)</td>
</tr>
<tr>
<td>Interest income</td>
</tr>
<tr>
<td>Interest expense</td>
</tr>
<tr>
<td>Foreign currency exchange transaction gains/(losses), net</td>
</tr>
<tr>
<td>Other income/(expense), net</td>
</tr>
<tr>
<td>Income/(loss) before income taxes and equity in net income/(loss) of subsidiaries and affiliates</td>
</tr>
<tr>
<td>Benefit/(provision) for income taxes</td>
</tr>
<tr>
<td>Equity in net income/(loss) of subsidiaries</td>
</tr>
<tr>
<td>Equity in net income/(loss) of affiliates</td>
</tr>
<tr>
<td>Net income/(loss)</td>
</tr>
<tr>
<td>Less net income/(loss) attributable to noncontrolling interests</td>
</tr>
<tr>
<td>Net income/(loss) attributable to controlling interest</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss)</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss) attributable to noncontrolling interests</td>
</tr>
<tr>
<td>Total other comprehensive income/(loss) attributable to controlling interests</td>
</tr>
<tr>
<td>Total comprehensive income/(loss)</td>
</tr>
<tr>
<td>Comprehensive income/(loss) attributable to noncontrolling interests</td>
</tr>
<tr>
<td>Total comprehensive income/(loss) attributable to controlling interest</td>
</tr>
</tbody>
</table>
Nielsen Holdings plc  
Consolidated Balance Sheet  
December 31, 2019

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Parent</th>
<th>Issuers</th>
<th>Guarantor</th>
<th>Non-Guarantor</th>
<th>Elimination</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$2</td>
<td>$ -</td>
<td>$ 48</td>
<td>$ 404</td>
<td>$ -</td>
<td>$ 454</td>
</tr>
<tr>
<td>Trade and other receivables, net</td>
<td>-</td>
<td>-</td>
<td>404</td>
<td>699</td>
<td>-</td>
<td>1,103</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>-</td>
<td>-</td>
<td>291</td>
<td>129</td>
<td>-</td>
<td>420</td>
</tr>
<tr>
<td>Intercompany receivables</td>
<td>7</td>
<td>1,615</td>
<td>278</td>
<td>69</td>
<td>(1,969)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>9</td>
<td>1,615</td>
<td>1,021</td>
<td>1,301</td>
<td>(1,969)</td>
<td>1,977</td>
</tr>
<tr>
<td><strong>Non-current assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment, net</td>
<td>-</td>
<td>-</td>
<td>292</td>
<td>174</td>
<td>-</td>
<td>466</td>
</tr>
<tr>
<td>Operating lease right-of-use asset</td>
<td>-</td>
<td>-</td>
<td>190</td>
<td>203</td>
<td>-</td>
<td>393</td>
</tr>
<tr>
<td>Goodwill</td>
<td>-</td>
<td>-</td>
<td>5,103</td>
<td>890</td>
<td>-</td>
<td>5,993</td>
</tr>
<tr>
<td>Other intangible assets, net</td>
<td>-</td>
<td>-</td>
<td>4,370</td>
<td>511</td>
<td>-</td>
<td>4,881</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>275</td>
<td>-</td>
<td>276</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>-</td>
<td>-</td>
<td>256</td>
<td>77</td>
<td>-</td>
<td>333</td>
</tr>
<tr>
<td>Equity investment in subsidiaries</td>
<td>2,170</td>
<td>1,298</td>
<td>4,576</td>
<td>-</td>
<td>(8,044)</td>
<td>-</td>
</tr>
<tr>
<td>Intercompany loans</td>
<td>25</td>
<td>8,887</td>
<td>896</td>
<td>1,605</td>
<td>(11,413)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$ 2,205</td>
<td>$ 11,800</td>
<td>$ 16,704</td>
<td>$ 5,036</td>
<td>(21,426)</td>
<td>$ 14,319</td>
</tr>
<tr>
<td><strong>Liabilities and equity:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable and other current liabilities</td>
<td>$ 10</td>
<td>$ 62</td>
<td>$ 517</td>
<td>$ 593</td>
<td>$ -</td>
<td>$ 1,182</td>
</tr>
<tr>
<td>Deferred revenues</td>
<td>-</td>
<td>-</td>
<td>217</td>
<td>128</td>
<td>-</td>
<td>345</td>
</tr>
<tr>
<td>Income tax liabilities</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>56</td>
<td>-</td>
<td>60</td>
</tr>
<tr>
<td>Current portion of long-term debt, finance lease obligations and short-term borrowings</td>
<td>-</td>
<td>861</td>
<td>46</td>
<td>7</td>
<td>-</td>
<td>914</td>
</tr>
<tr>
<td>Intercompany payables</td>
<td>-</td>
<td>3</td>
<td>1,689</td>
<td>277</td>
<td>(1,969)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>10</td>
<td>926</td>
<td>2,473</td>
<td>1,061</td>
<td>(1,969)</td>
<td>2,501</td>
</tr>
<tr>
<td><strong>Non-current liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term debt and finance lease obligations</td>
<td>-</td>
<td>7,302</td>
<td>80</td>
<td>13</td>
<td>-</td>
<td>7,395</td>
</tr>
<tr>
<td>Operating lease liabilities</td>
<td>-</td>
<td>-</td>
<td>213</td>
<td>157</td>
<td>-</td>
<td>370</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>-</td>
<td>71</td>
<td>887</td>
<td>94</td>
<td>-</td>
<td>1,052</td>
</tr>
<tr>
<td>Intercompany loans</td>
<td>-</td>
<td>-</td>
<td>10,516</td>
<td>897</td>
<td>(11,413)</td>
<td>-</td>
</tr>
<tr>
<td>Other non-current liabilities</td>
<td>-</td>
<td>22</td>
<td>365</td>
<td>226</td>
<td>-</td>
<td>613</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td>10</td>
<td>8,321</td>
<td>14,534</td>
<td>2,448</td>
<td>(13,382)</td>
<td>11,931</td>
</tr>
<tr>
<td><strong>Total shareholders’ equity</strong></td>
<td>2,195</td>
<td>3,479</td>
<td>2,170</td>
<td>2,395</td>
<td>(8,044)</td>
<td>2,195</td>
</tr>
<tr>
<td>Noncontrolling interests</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>193</td>
<td>-</td>
<td>193</td>
</tr>
<tr>
<td><strong>Total equity</strong></td>
<td>2,195</td>
<td>3,479</td>
<td>2,170</td>
<td>2,588</td>
<td>(8,044)</td>
<td>2,388</td>
</tr>
<tr>
<td><strong>Total liabilities and equity</strong></td>
<td>$ 2,205</td>
<td>$ 11,800</td>
<td>$ 16,704</td>
<td>$ 5,036</td>
<td>(21,426)</td>
<td>$ 14,319</td>
</tr>
</tbody>
</table>
### Nielsen Holdings plc
#### Consolidated Balance Sheet
**December 31, 2018**

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Parent</th>
<th>Issuers</th>
<th>Guarantor</th>
<th>Non-Guarantor</th>
<th>Elimination</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current assets:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$3</td>
<td>$79</td>
<td>$442</td>
<td>$524</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade and other receivables, net</td>
<td>—</td>
<td>1</td>
<td>377</td>
<td>740</td>
<td>—</td>
<td>1,118</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>—</td>
<td>3</td>
<td>234</td>
<td>124</td>
<td>—</td>
<td>361</td>
</tr>
<tr>
<td>Intercompany receivables</td>
<td>3</td>
<td>1,310</td>
<td>399</td>
<td>94</td>
<td>(1,806)</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total current assets:</strong></td>
<td>$6</td>
<td>1,314</td>
<td>1,089</td>
<td>1,400</td>
<td>(1,806)</td>
<td>2,003</td>
</tr>
<tr>
<td><strong>Non-current assets:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment, net</td>
<td>—</td>
<td>—</td>
<td>303</td>
<td>165</td>
<td>—</td>
<td>468</td>
</tr>
<tr>
<td>Goodwill</td>
<td>—</td>
<td>—</td>
<td>5,531</td>
<td>1,456</td>
<td>—</td>
<td>6,987</td>
</tr>
<tr>
<td>Other intangible assets, net</td>
<td>—</td>
<td>—</td>
<td>4,545</td>
<td>479</td>
<td>—</td>
<td>5,024</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>332</td>
<td>—</td>
<td>333</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>—</td>
<td>19</td>
<td>273</td>
<td>72</td>
<td>—</td>
<td>364</td>
</tr>
<tr>
<td>Equity investment in subsidiaries</td>
<td>2,815</td>
<td>1,232</td>
<td>1,936</td>
<td>—</td>
<td>(5,983)</td>
<td>—</td>
</tr>
<tr>
<td>Intercompany loans</td>
<td>25</td>
<td>8,822</td>
<td>2,220</td>
<td>105</td>
<td>(11,172)</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total assets:</strong></td>
<td>$2,847</td>
<td>$11,387</td>
<td>$15,897</td>
<td>$4,009</td>
<td>(18,961)</td>
<td>$15,179</td>
</tr>
<tr>
<td><strong>Liabilities and equity:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current liabilities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable and other current liabilities</td>
<td>$—</td>
<td>$62</td>
<td>$541</td>
<td>$516</td>
<td>—</td>
<td>$1,119</td>
</tr>
<tr>
<td>Deferred revenues</td>
<td>—</td>
<td>—</td>
<td>225</td>
<td>130</td>
<td>—</td>
<td>355</td>
</tr>
<tr>
<td>Income tax liabilities</td>
<td>—</td>
<td>—</td>
<td>20</td>
<td>56</td>
<td>—</td>
<td>76</td>
</tr>
<tr>
<td>Current portion of long-term debt, finance lease obligations and short-term borrowings</td>
<td>—</td>
<td>54</td>
<td>46</td>
<td>7</td>
<td>—</td>
<td>107</td>
</tr>
<tr>
<td>Intercompany payables</td>
<td>—</td>
<td>—</td>
<td>1,408</td>
<td>398</td>
<td>(1,806)</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total current liabilities:</strong></td>
<td>—</td>
<td>116</td>
<td>2,240</td>
<td>1,107</td>
<td>(1,806)</td>
<td>1,657</td>
</tr>
<tr>
<td><strong>Non-current liabilities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term debt and finance lease obligations</td>
<td>—</td>
<td>8,170</td>
<td>95</td>
<td>15</td>
<td>—</td>
<td>8,280</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>—</td>
<td>71</td>
<td>956</td>
<td>81</td>
<td>—</td>
<td>1,108</td>
</tr>
<tr>
<td>Intercompany loans</td>
<td>—</td>
<td>—</td>
<td>8,952</td>
<td>2,220</td>
<td>(11,172)</td>
<td>—</td>
</tr>
<tr>
<td>Other non-current liabilities</td>
<td>—</td>
<td>3</td>
<td>839</td>
<td>249</td>
<td>—</td>
<td>1,091</td>
</tr>
<tr>
<td><strong>Total liabilities:</strong></td>
<td>—</td>
<td>8,360</td>
<td>13,082</td>
<td>3,672</td>
<td>(12,978)</td>
<td>12,136</td>
</tr>
<tr>
<td><strong>Total shareholders’ equity:</strong></td>
<td>2,847</td>
<td>3,027</td>
<td>2,815</td>
<td>141</td>
<td>(5,983)</td>
<td>2,847</td>
</tr>
<tr>
<td>Noncontrolling interests</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>196</td>
<td>—</td>
<td>196</td>
</tr>
<tr>
<td><strong>Total equity:</strong></td>
<td>2,847</td>
<td>3,027</td>
<td>2,815</td>
<td>337</td>
<td>(5,983)</td>
<td>3,043</td>
</tr>
<tr>
<td><strong>Total liabilities and equity:</strong></td>
<td>$2,847</td>
<td>$11,387</td>
<td>$15,897</td>
<td>$4,009</td>
<td>(18,961)</td>
<td>$15,179</td>
</tr>
</tbody>
</table>
# Nielsen Holdings plc
## Consolidated Statement of Cash Flows
### For the year ended December 31, 2019

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Parent</th>
<th>Issuers</th>
<th>Guarantor</th>
<th>Guarantor</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net cash provided by/(used in) operating activities</strong></td>
<td>$ (8)</td>
<td>$ 90</td>
<td>$ 482</td>
<td>$ 502</td>
<td>$ 1,066</td>
</tr>
<tr>
<td><strong>Investing activities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition of subsidiaries and affiliates, net of cash acquired</td>
<td>—</td>
<td>—</td>
<td>(11)</td>
<td>(50)</td>
<td>(61)</td>
</tr>
<tr>
<td>Proceeds from the sale of subsidiaries and affiliates</td>
<td>—</td>
<td>17</td>
<td>—</td>
<td>—</td>
<td>17</td>
</tr>
<tr>
<td>Additions to property, plant and equipment and other assets</td>
<td>—</td>
<td>—</td>
<td>(55)</td>
<td>(61)</td>
<td>(116)</td>
</tr>
<tr>
<td>Additions to intangible assets</td>
<td>—</td>
<td>—</td>
<td>(326)</td>
<td>(77)</td>
<td>(403)</td>
</tr>
<tr>
<td>Other investing activities</td>
<td>—</td>
<td>—</td>
<td>(18)</td>
<td>(1)</td>
<td>(19)</td>
</tr>
<tr>
<td><strong>Net cash provided by/(used in) investing activities</strong></td>
<td>—</td>
<td>—</td>
<td>(393)</td>
<td>(189)</td>
<td>(582)</td>
</tr>
<tr>
<td><strong>Financing activities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repayments of debt</td>
<td>—</td>
<td>—</td>
<td>(57)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Increase/(decrease) in short term borrowings</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(1)</td>
</tr>
<tr>
<td>Cash dividends paid to shareholders</td>
<td>—</td>
<td>—</td>
<td>(395)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Activity under stock plans</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(8)</td>
<td>—</td>
</tr>
<tr>
<td>Proceeds from employee stock purchase plan</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Finance leases</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(54)</td>
<td>(6)</td>
</tr>
<tr>
<td>Settlement of intercompany and other financing activities</td>
<td>398</td>
<td>(33)</td>
<td>(58)</td>
<td>(334)</td>
<td>(27)</td>
</tr>
<tr>
<td><strong>Net cash provided by/(used in) financing activities</strong></td>
<td>7</td>
<td>(90)</td>
<td>(120)</td>
<td>(341)</td>
<td>(544)</td>
</tr>
<tr>
<td>Effect of exchange-rate changes on cash and cash equivalents</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(10)</td>
</tr>
<tr>
<td><strong>Net increase/(decrease) in cash and cash equivalents</strong></td>
<td>(1)</td>
<td>—</td>
<td>(31)</td>
<td>(38)</td>
<td>(70)</td>
</tr>
<tr>
<td>Cash and cash equivalents at beginning of period</td>
<td>3</td>
<td>—</td>
<td>79</td>
<td>442</td>
<td>524</td>
</tr>
<tr>
<td><strong>Cash and cash equivalents at end of period</strong></td>
<td>$ 2</td>
<td>$ —</td>
<td>$ 48</td>
<td>$ 404</td>
<td>$ 454</td>
</tr>
</tbody>
</table>
Nielsen Holdings plc  
Consolidated Statement of Cash Flows  
For the year ended December 31, 2018

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Parent</th>
<th>Issuers</th>
<th>Guarantor</th>
<th>Non-Guarantor</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net cash provided by/(used in) operating activities</td>
<td>$(2)</td>
<td>$240</td>
<td>$383</td>
<td>$437</td>
<td>$1,058</td>
</tr>
<tr>
<td>Investing activities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition of subsidiaries and affiliates, net of cash acquired</td>
<td>—</td>
<td>—</td>
<td>(15)</td>
<td>(28)</td>
<td>(43)</td>
</tr>
<tr>
<td>Proceeds from the sale of subsidiaries and affiliates</td>
<td>51</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>51</td>
</tr>
<tr>
<td>Additions to property, plant and equipment and other assets</td>
<td>—</td>
<td>—</td>
<td>(53)</td>
<td>(53)</td>
<td>(106)</td>
</tr>
<tr>
<td>Additions to intangible assets</td>
<td>—</td>
<td>—</td>
<td>(356)</td>
<td>(58)</td>
<td>(414)</td>
</tr>
<tr>
<td>Proceeds from the sale of property, plant and equipment and other assets</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Other investing activities</td>
<td>—</td>
<td>—</td>
<td>9</td>
<td>(7)</td>
<td>2</td>
</tr>
<tr>
<td>Net cash provided by/(used in) investing activities</td>
<td>—</td>
<td>—</td>
<td>(364)</td>
<td>(142)</td>
<td>(506)</td>
</tr>
<tr>
<td>Financing activities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repayments of debt</td>
<td>—</td>
<td>(818)</td>
<td>—</td>
<td>(1)</td>
<td>(819)</td>
</tr>
<tr>
<td>Proceeds from the issuance of debt, net of issuance costs</td>
<td>—</td>
<td>781</td>
<td>—</td>
<td>—</td>
<td>781</td>
</tr>
<tr>
<td>Increase/(decrease) in short term borrowings</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cash dividends paid to shareholders</td>
<td>(494)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(494)</td>
</tr>
<tr>
<td>Repurchase of common stock</td>
<td>(70)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(70)</td>
</tr>
<tr>
<td>Activity under stock plans</td>
<td>23</td>
<td>—</td>
<td>(8)</td>
<td>—</td>
<td>15</td>
</tr>
<tr>
<td>Proceeds from employee stock purchase plan</td>
<td>5</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>5</td>
</tr>
<tr>
<td>Finance leases</td>
<td>—</td>
<td>—</td>
<td>(69)</td>
<td>(7)</td>
<td>(76)</td>
</tr>
<tr>
<td>Settlement of intercompany and other financing activities</td>
<td>539</td>
<td>(204)</td>
<td>67</td>
<td>(421)</td>
<td>(19)</td>
</tr>
<tr>
<td>Net cash provided by/(used in) financing activities</td>
<td>3</td>
<td>(241)</td>
<td>(10)</td>
<td>(428)</td>
<td>(676)</td>
</tr>
<tr>
<td>Effect of exchange-rate changes on cash and cash equivalents</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>(9)</td>
<td>(8)</td>
</tr>
<tr>
<td>Net increase/(decrease) in cash and cash equivalents</td>
<td>1</td>
<td>—</td>
<td>10</td>
<td>(142)</td>
<td>(132)</td>
</tr>
<tr>
<td>Cash and cash equivalents at beginning of period</td>
<td>2</td>
<td>1</td>
<td>69</td>
<td>584</td>
<td>656</td>
</tr>
<tr>
<td>Cash and cash equivalents at end of period</td>
<td>$3</td>
<td>$ —</td>
<td>$79</td>
<td>$442</td>
<td>$524</td>
</tr>
</tbody>
</table>
Nielsen Holdings plc  
Consolidated Statement of Cash Flows  
For the year ended December 31, 2017

<table>
<thead>
<tr>
<th>(IN MILLIONS)</th>
<th>Parent</th>
<th>Issuers</th>
<th>Guarantor</th>
<th>Non-Guarantor</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net cash provided by/(used in) operating activities</strong></td>
<td>$ (1)</td>
<td>$ 171</td>
<td>$ 789</td>
<td>$ 351</td>
<td>$ 1,310</td>
</tr>
<tr>
<td><strong>Investing activities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition of subsidiaries and affiliates, net of cash acquired</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceeds from the sale of subsidiaries and affiliates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additions to property, plant and equipment and other assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additions to intangible assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceeds from the sale of property, plant and equipment and other assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other investing activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net cash provided by/(used in) investing activities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Financing activities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repayments of debt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceeds from the issuance of debt, net of issuance costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase/(decrease) in short term borrowings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash dividends paid to shareholders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repurchase of common stock</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity under stock plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceeds from employee stock purchase plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance leases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Settlement of intercompany and other financing activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net cash provided by/(used in) financing activities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect of exchange-rate changes on cash and cash equivalents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net increase/(decrease) in cash and cash equivalents</strong></td>
<td>(3)</td>
<td></td>
<td>(146)</td>
<td>51</td>
<td>(98)</td>
</tr>
<tr>
<td>Cash and cash equivalents at beginning of period</td>
<td>5</td>
<td>1</td>
<td>215</td>
<td>533</td>
<td>754</td>
</tr>
<tr>
<td><strong>Cash and cash equivalents at end of period</strong></td>
<td>$ 2</td>
<td>$ 1</td>
<td>$ 69</td>
<td>$ 584</td>
<td>$ 656</td>
</tr>
</tbody>
</table>
21. Quarterly Financial Data (unaudited)

(IN MILLIONS, EXCEPT PER SHARE DATA)

<table>
<thead>
<tr>
<th>Year</th>
<th>First Quarter</th>
<th>Second Quarter</th>
<th>Third Quarter</th>
<th>Fourth Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>$1,563</td>
<td>$1,628</td>
<td>$1,616</td>
<td>$1,691</td>
</tr>
<tr>
<td></td>
<td>Operating income/(loss) $174</td>
<td>$249</td>
<td>$(740)</td>
<td>$224</td>
</tr>
<tr>
<td></td>
<td>Income/(loss) before income taxes and equity in net income/(loss) of affiliates $79</td>
<td>$149</td>
<td>$(848)</td>
<td>$(43)</td>
</tr>
<tr>
<td></td>
<td>Net income/(loss) attributable to Nielsen shareholders $43</td>
<td>$123</td>
<td>$(472)</td>
<td>$(109)</td>
</tr>
<tr>
<td></td>
<td>Net income/(loss) per share of common stock, basic $0.12</td>
<td>$0.35</td>
<td>$(1.33)</td>
<td>$(0.31)</td>
</tr>
<tr>
<td></td>
<td>Net income/(loss) attributable to Nielsen shareholders $0.12</td>
<td>$0.34</td>
<td>$(1.33)</td>
<td>$(0.31)</td>
</tr>
</tbody>
</table>

(IN MILLIONS, EXCEPT PER SHARE DATA)

<table>
<thead>
<tr>
<th>Year</th>
<th>First Quarter</th>
<th>Second Quarter</th>
<th>Third Quarter</th>
<th>Fourth Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$1,610</td>
<td>$1,647</td>
<td>$1,600</td>
<td>$1,658</td>
</tr>
<tr>
<td></td>
<td>Operating income/(loss) $207</td>
<td>$228</td>
<td>$261</td>
<td>$(1,171)</td>
</tr>
<tr>
<td></td>
<td>Income/(loss) before income taxes and equity in net income/(loss) of affiliates $114</td>
<td>$121</td>
<td>$157</td>
<td>$(1,274)</td>
</tr>
<tr>
<td></td>
<td>Net income/(loss) attributable to Nielsen shareholders $72</td>
<td>$72</td>
<td>$96</td>
<td>$(952)</td>
</tr>
<tr>
<td></td>
<td>Net income/(loss) per share of common stock, basic $0.20</td>
<td>$0.20</td>
<td>$0.27</td>
<td>$(2.68)</td>
</tr>
<tr>
<td></td>
<td>Net income/(loss) attributable to Nielsen shareholders $0.20</td>
<td>$0.20</td>
<td>$0.27</td>
<td>$(2.68)</td>
</tr>
</tbody>
</table>
Schedule I—Condensed Financial Information of Registrant

Nielsen Holdings plc
Parent Company Only

Statements of Operations

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling, general and administrative expenses</td>
<td>$14</td>
<td>$4</td>
<td>$4</td>
</tr>
<tr>
<td>Operating loss</td>
<td>(14)</td>
<td>(4)</td>
<td>(4)</td>
</tr>
<tr>
<td>Interest income/(loss)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Interest expense</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Other income/(expense), net</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Income/(loss) before income taxes and equity in net income/(loss) of subsidiaries</td>
<td>(13)</td>
<td>(3)</td>
<td>(3)</td>
</tr>
<tr>
<td>Benefit/(provision) for income taxes</td>
<td>—</td>
<td>(1)</td>
<td>—</td>
</tr>
<tr>
<td>Equity in net income/(loss) of subsidiaries</td>
<td>(402)</td>
<td>(709)</td>
<td>433</td>
</tr>
<tr>
<td>Net income/(loss)</td>
<td>$(415)</td>
<td>$(712)</td>
<td>$429</td>
</tr>
</tbody>
</table>

Nielsen Holdings plc
Parent Company Only

Balance Sheets

<table>
<thead>
<tr>
<th>December 31,</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$2</td>
<td>$3</td>
</tr>
<tr>
<td>Amounts receivable from subsidiary</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Total current assets</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Investment in subsidiaries</td>
<td>2,170</td>
<td>2,815</td>
</tr>
<tr>
<td>Loans outstanding from subsidiary</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total assets</td>
<td>$2,205</td>
<td>$2,847</td>
</tr>
<tr>
<td>Liabilities and equity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable and other current liabilities</td>
<td>10</td>
<td>—</td>
</tr>
<tr>
<td>Intercompany payables</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>10</td>
<td>—</td>
</tr>
<tr>
<td>Loans outstanding from subsidiary</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Other non-current liabilities</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>10</td>
<td>—</td>
</tr>
<tr>
<td>Total equity</td>
<td>2,195</td>
<td>2,847</td>
</tr>
<tr>
<td>Total liabilities and equity</td>
<td>$2,205</td>
<td>$2,847</td>
</tr>
</tbody>
</table>
Nielsen Holdings plc  
Parent Company Only  
Statements of Cash Flows  

(IN MILLIONS)  

| Net cash used in operating activities ..................................................... | $ (8) | $ (2) | $ (1) |
| Year Ended December 31, | |
| Financing Activities: | | | |
| Cash dividends paid to shareholders ............................................... | (395) | (494) | (474) |
| Repurchase of common stock .............................................................. | — | (70) | (140) |
| Activity under stock plans .............................................................. | — | 23 | 32 |
| Proceeds from employee stock purchase plan ................................ | 4 | 5 | 6 |
| Other financing activities ................................................................ | 398 | 539 | 574 |
| Net cash provided by/(used in) financing activities............................... | 7 | 3 | (2) |
| Net increase/(decrease) in cash and cash equivalents ................................ | (1) | 1 | (3) |
| Cash and cash equivalents, beginning of period ..................................... | 3 | 2 | 5 |
| Cash and cash equivalents, end of period ............................................... | $ 2 | $ 3 | $ 2 |

The notes to the consolidated financial statements of Nielsen Holdings plc (the “Company”) are an integral part of these nonconsolidated financial statements.

Notes to Schedule I  

1. Basis of Presentation  
The Company has accounted for the earnings of its subsidiaries under the equity method in these financial statements.

2. Commitments and Contingencies  
The debenture loans are jointly and severally guaranteed on an unconditional basis by the Company and subject to certain exceptions, each of the direct and indirect wholly-owned subsidiaries of the Company, including VNU Intermediate Holding B.V., Nielsen Holding and Finance B.V., VNU International B.V., TNC (US) Holdings, Inc., VNU Marketing Information, Inc. and ACN Holdings, Inc., and the wholly-owned subsidiaries thereof, including the wholly-owned U.S. subsidiaries of ACN Holdings, Inc., in each case to the extent that such entities provide a guarantee under the senior secured credit facilities. The issuers are Nielsen Finance LLC and Nielsen Finance Co., both wholly-owned subsidiaries of ACN Holdings, Inc. and subsidiary guarantors and The Nielsen Company (Luxembourg) S.ar.l., a wholly owned subsidiary of Nielsen Holding and Finance B.V. The historical financial information has been updated to reflect The Nielsen Company (Luxembourg) S.ar.l. as an issuer.

The Company had no material commitments or contingencies during the reported periods.

3. Related Party Transactions  
The Company enters into certain transactions with its subsidiaries through the normal course of operations and periodically settles these transactions in cash. The Company had a $25 million loan receivable from subsidiaries associated with financing transactions for each of the years ended December 31, 2019 and 2018.
4. Common Stock and Related Transactions

On January 31, 2013, the Company’s Board of Directors (the “Board”) adopted a cash dividend policy to pay quarterly cash dividends on its outstanding common stock. The following table represents the cash dividends declared by the Board and paid to shareholders for the years ended December 31, 2018 and 2019, respectively.

<table>
<thead>
<tr>
<th>Declaration Date</th>
<th>Record Date</th>
<th>Payment Date</th>
<th>Dividend Per Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 21, 2018</td>
<td>March 7, 2018</td>
<td>March 21, 2018</td>
<td>$0.34</td>
</tr>
<tr>
<td>April 19, 2018</td>
<td>June 6, 2018</td>
<td>June 20, 2018</td>
<td>$0.35</td>
</tr>
<tr>
<td>July 19, 2018</td>
<td>August 22, 2018</td>
<td>September 5, 2018</td>
<td>$0.35</td>
</tr>
<tr>
<td>October 18, 2018</td>
<td>November 21, 2018</td>
<td>December 5, 2018</td>
<td>$0.35</td>
</tr>
<tr>
<td>February 21, 2019</td>
<td>March 7, 2019</td>
<td>March 21, 2019</td>
<td>$0.35</td>
</tr>
<tr>
<td>April 18, 2019</td>
<td>June 5, 2019</td>
<td>June 19, 2019</td>
<td>$0.35</td>
</tr>
<tr>
<td>July 18, 2019</td>
<td>August 22, 2019</td>
<td>September 5, 2019</td>
<td>$0.35</td>
</tr>
<tr>
<td>November 3, 2019</td>
<td>November 21, 2019</td>
<td>December 5, 2019</td>
<td>$0.06</td>
</tr>
</tbody>
</table>

On November 3, 2019 the Board approved a plan to reduce the quarterly cash dividend, with the goal of strengthening Nielsen’s balance sheet and providing added flexibility to invest for growth. On February 20, 2020, the Board declared a cash dividend of $0.06 per share on Nielsen’s common stock. The dividend is payable on March 19, 2020 to shareholders of record at the close of business on March 5, 2020.

The dividend policy and payment of future cash dividends are subject to the discretion of the Board.

Nielsen’s Board approved a share repurchase program, as included in the below table, for up to $2 billion of the Company’s outstanding common stock. The primary purpose of the program is to return value to shareholders and to mitigate dilution associated with Nielsen’s equity compensation plans.

<table>
<thead>
<tr>
<th>Board Approval</th>
<th>Share Repurchase Authorization ($ in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 25, 2013</td>
<td>$500</td>
</tr>
<tr>
<td>October 23, 2014</td>
<td>$1,000</td>
</tr>
<tr>
<td>December 11, 2015</td>
<td>$500</td>
</tr>
<tr>
<td>Total Share Repurchase Authorization</td>
<td>$2,000</td>
</tr>
</tbody>
</table>

Repurchases under this program will be made in accordance with applicable securities laws from time to time in the open market or otherwise depending on Nielsen’s evaluation of market conditions and other factors. This program has been executed within the limitations of the authority granted by Nielsen’s shareholders.

As of December 31, 2019, there have been 39,426,521 shares of the Company’s common stock purchased at an average price of $44.95 per share (total consideration of approximately $1,772 million) under this program. There were no share repurchases for the year ended December 31, 2019.
<table>
<thead>
<tr>
<th>Allowance for accounts receivable and sales returns</th>
<th>Balance Beginning of Period</th>
<th>Charges to Expense</th>
<th>Deductions</th>
<th>Effect of Foreign Currency Translation</th>
<th>Balance at End of Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the year ended December 31, 2017..................</td>
<td>$25</td>
<td>$6</td>
<td>$(3)</td>
<td>$1</td>
<td>$29</td>
</tr>
<tr>
<td>For the year ended December 31, 2018..................</td>
<td>$29</td>
<td>$5</td>
<td>$(2)</td>
<td>$(1)</td>
<td>$31</td>
</tr>
<tr>
<td>For the year ended December 31, 2019..................</td>
<td>$31</td>
<td>$2</td>
<td>$(5)</td>
<td>$-</td>
<td>$28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Valuation allowance for deferred taxes</th>
<th>Balance Beginning of Period</th>
<th>Charges/ (Credits) to Expense</th>
<th>Charged to Other Accounts</th>
<th>Effect of Foreign Currency Translation</th>
<th>Balance at End of Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the year ended December 31, 2017..................</td>
<td>$112</td>
<td>$355</td>
<td>$(8)</td>
<td>$7</td>
<td>$466</td>
</tr>
<tr>
<td>For the year ended December 31, 2018..................</td>
<td>$466</td>
<td>$193</td>
<td>$3</td>
<td>$(11)</td>
<td>$651</td>
</tr>
<tr>
<td>For the year ended December 31, 2019..................</td>
<td>$651</td>
<td>$(4)</td>
<td>$1</td>
<td>$(12)</td>
<td>$636</td>
</tr>
</tbody>
</table>
Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that the Company files or submits to the SEC under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to the Company’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, as the Company’s disclosure controls and procedures are designed to do.

The Company’s Chief Executive Officer and Chief Financial Officer have evaluated the effectiveness of the Company’s disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of December 31, 2018 (the “Evaluation Date”). Based on such evaluation and subject to the foregoing, such officers have concluded that, as of the Evaluation Date, the Company’s disclosure controls and procedures are effective at the reasonable assurance level to ensure that information required to be disclosed by the Company in the reports that the Company files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and to ensure that information required to be disclosed by the Company in the reports that the Company files or submits under the Exchange Act is accumulated and communicated to the Company’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

(b) Management’s Annual Report on Internal Control Over Financial Reporting


(c) Attestation Report of the Registered Public Accounting Firm

The Company’s financial statements included in this annual report on Form 10-K have been audited by Ernst & Young LLP, independent registered public accounting firm. Ernst & Young LLP has also provided an attestation report on the Company’s internal control over financial reporting. Their reports appear in Part II, Item 8. “Financial Statements and Supplementary Data” of this annual report on Form 10-K.

(d) Changes in Internal Control over Financial Reporting

There have been no changes in the Company’s internal control over financial reporting that occurred during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting.

Item 9B. Other Information

None.
PART III

Item 10. Directors, Executive Officers, and Corporate Governance

The information required by this Item is incorporated by reference to the following sections of our definitive Proxy Statement related to the 2020 Annual Meeting of Shareholders to be filed with the SEC (the “2020 Proxy Statement”): “Proposal No. 1 – Election of Directors”, “The Board of Directors and Certain Governance Matters” and “Delinquent Section 16(a) Reports”.

Item 11. Executive Compensation

The information required by this Item is incorporated by reference to the following sections of the 2020 Proxy Statement: “Executive Compensation” and “Director Compensation.”


The information required by this Item is incorporated by reference to the following sections of the 2020 Proxy Statement: “Equity Compensation Plan Information” and “Ownership of Securities.”

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated by reference to the following sections of the 2020 Proxy Statement: “Certain Relationships and Related Party Transactions” and “The Board of Directors and Certain Governance Matters.”

Item 14. Principal Accounting Fees and Services

The information required by this Item is incorporated by reference to the following section of the 2020 Proxy Statement: “Proposal No. 2 – Ratification of Independent Registered Public Accounting Firm.”
PART IV

Item 15. Exhibits, Financial Statement Schedules

(a)(1) Financial Statements

The Financial Statements listed in the Index to Financial Statements in Item 8 are filed as part of this Annual Report on Form 10-K.

(a)(2) Financial Statement Schedules

The Financial Statement Schedules listed in the Index to Financial Statements in Item 8 are filed as part of this Annual Report on Form 10-K.

(a)(3) Exhibits

The exhibit index attached hereto is incorporated herein by reference.

Item 16. Form 10-K Summary

None.
EXHIBIT INDEX

The agreements and other documents filed as exhibits to this annual report on Form 10-K are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by the registrant in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs as of the date they were made or at any other time.

<table>
<thead>
<tr>
<th>Exhibit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Articles of Association of Nielsen Holdings plc (incorporated herein by reference to Exhibit 3.1 to the Current Report on Form 8-K file by the registrant on August 31, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.1(a)</td>
<td>Form of Fourth Amended and Restated Credit Agreement (incorporated herein by reference to Exhibit 4.3 to the Quarterly Report on Form 10-Q of Nielsen Holdings N.V. filed on April 24, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.1(b)</td>
<td>Amendment No. 1, dated as of March 30, 2016, to the Fourth Amended and Restated Credit Agreement dated April 22, 2014 (incorporated herein by reference to the Current Report on Form 8-K of Nielsen Holdings plc filed on March 30, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.1(c)</td>
<td>Amendment No. 2, dated as of October 4, 2016, to the Fourth Amended and Restated Credit Agreement dated April 22, 2014 (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K of Nielsen Holdings plc filed on October 11, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.1(d)</td>
<td>Amendment No. 3, dated as of April 13, 2017, to the Fourth Amended and Restated Credit Agreement dated April 22, 2014 (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K of Nielsen Holdings plc filed on April 17, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.1(e)</td>
<td>Amended and Restated Security Agreement, dated as of August 9, 2006 and amended and restated as of June 23, 2009, among Nielsen Finance LLC, the other Grantors identified therein, and Citibank, N.A., as Collateral Agent (incorporated herein by reference to Exhibit 4.1(j) to Amendment No. 2 to the Registration Statement on Form S-1 of Nielsen Holdings N.V. filed on July 30, 2010 (File No. 333-167271))</td>
</tr>
<tr>
<td>4.1(f)</td>
<td>Amendment No. 4, dated as of June 29, 2018, to the Fourth Amended and Restated Credit Agreement dated April 22, 2014 (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K of Nielsen Holdings plc filed on July 6, 2018)</td>
</tr>
<tr>
<td>4.1(g)</td>
<td>Amendment Agreement, dated as of June 29, 2018, by and among Nielsen Finance LLC, the other borrowers party thereto, the guarantors party thereto, Citibank, N.A., as administrative agent and collateral agent, and certain of the lenders (incorporated herein by reference to Exhibit 4.2 to the Current Report on Form 8-K of Nielsen Holdings plc filed on July 6, 2018)</td>
</tr>
<tr>
<td>4.1(h)</td>
<td>Intellectual Property Security Agreement, dated as of August 9, 2006, among Nielsen Finance LLC, the other Grantors identified therein and Citibank, N.A. as Collateral Agent (incorporated herein by reference to Exhibit 4.1(c) to Amendment No. 2 to the Registration Statement on Form S-1 of Nielsen Holdings N.V. filed on July 30, 2010 (File No. 333-167271))</td>
</tr>
<tr>
<td>4.1(i)</td>
<td>First Lien Intercreditor Agreement, dated as of June 23, 2009, among Citibank, N.A., as Collateral Agent and Authorized Representative under the Credit Agreement, Goldman Sachs Lending Partners LLC, as the Initial Additional Authorized Representative, and each additional Authorized Representative from time to time party thereto (incorporated herein by reference to Exhibit 4.1(c) to the Form 8-K/A of The Nielsen Company B.V. filed on June 26, 2009 (File No. 333-142546-29))</td>
</tr>
<tr>
<td>4.2(a)</td>
<td>Indenture, dated as of October 2, 2012, among Nielsen Finance LLC, Nielsen Finance Co., the Guarantors (as defined therein) and Law Debenture Trust Company of New York, as Trustee (incorporated herein by reference to Exhibit 4.1 (a) to the Form 8-K of Nielsen Holdings N.V. filed on October 4, 2012 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(b)</td>
<td>First Supplemental Indenture, dated as of December 12, 2012, among Vizu Corporation, Nielsen Finance Co. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.1(b) to the Registration Statement on Form S-4 of The Nielsen Company B.V. filed on June 19, 2013 (File No. 333-189456))</td>
</tr>
<tr>
<td>4.2(c)</td>
<td>Second Supplemental Indenture, dated as of June 17, 2013, among G4 Analytics, Inc., Nielsen Finance Co. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.1(c) to Registration Statement on Form S-4 of The Nielsen Company B.V. filed on June 19, 2013 (File No. 333-189456))</td>
</tr>
<tr>
<td>4.2(d)</td>
<td>Third Supplemental Indenture, dated as of December 31, 2013, between Nielsen Audio, Inc. and Nielsen Finance Co., and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.3(d) to the Annual Report on Form 10-K of Nielsen Holdings N.V. filed on February 21, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>Exhibit No.</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>4.2(e)</td>
<td>Fourth Supplemental Indenture, dated as of December 31, 2013, between Cardinal North LLC and Nielsen Finance Co., and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.3(e) to the Annual Report on Form 10-K of Nielsen Holdings N.V. filed on February 21, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(f)</td>
<td>Fifth Supplemental Indenture, dated as of December 31, 2013, between Nielsen International Holdings, Inc. and Nielsen Finance Co., and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.3(f) to the Annual Report on Form 10-K of Nielsen Holdings N.V. filed on February 21, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(g)</td>
<td>Sixth Supplemental Indenture, dated as of May 23, 2014, between Nielsen Consumer Insights, Inc. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.6 to the Quarterly Report on Form 10-Q of Nielsen N.V. filed on July 29, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(h)</td>
<td>Seventh Supplemental Indenture, dated as of December 23, 2014, between Scarborough Research and the Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.2(h) to the Annual Report on Form 10-K of Nielsen N.V. filed on February 20, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(i)</td>
<td>Eighth Supplemental Indenture, dated as of December 23, 2014, between Nielsen N.V. and the Law Debenture Trust company of New York, as trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K of Nielsen N.V. filed on December 29, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(j)</td>
<td>Ninth Supplemental Indenture, dated as of January 23, 2015, between Valcon Acquisition B.V. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.2(j) to the Annual Report on Form 10-K of Nielsen N.V. filed on February 20, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(k)</td>
<td>Tenth Supplemental Indenture, dated as of July 7, 2015, between eXelate, Inc. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.3 to the Quarterly Report on Form 10-Q of Nielsen N.V. filed on July 28, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(l)</td>
<td>Eleventh Supplemental Indenture, dated as of August 17, 2015, between Affinnova, Inc. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.3 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on October 21, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(m)</td>
<td>Twelfth Supplemental Indenture, dated as of April 20, 2016, between Nielsen Finance Ireland Limited and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.6 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on July 26, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(n)</td>
<td>Thirteenth Supplemental Indenture, dated as of April 20, 2016, between Nielsen Luxembourg S.ar.l and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.8 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on July 26, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(o)</td>
<td>Fourteenth Supplemental Indenture, dated as of April 20, 2016, between Nielsen UK Finance I, LLC and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.9 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on July 26, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(p)</td>
<td>Fifteenth Supplemental Indenture, dated as of October 31, 2016 between Rugby Acquisition B.V. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.2(p) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 17, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(q)</td>
<td>Sixteenth Supplemental Indenture, dated as of October 31, 2016 between RSMG Insights Cooperatief U.A. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.2(q) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 17, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(r)</td>
<td>Seventeenth Supplemental Indenture, dated as of April 19, 2017, between Gracenote, Inc., Nielsen Finance Co. and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.2(a) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(s)</td>
<td>Eighteenth Supplemental Indenture, dated as of April 19, 2017, between Gracenote Digital Ventures, LLC, Nielsen Finance Co. and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.2(b) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(t)</td>
<td>Nineteenth Supplemental Indenture, dated as of April 19, 2017, between Gracenote Media Services, LLC, Nielsen Finance Co. and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.2(c) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>Exhibit No.</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>4.2(u)</td>
<td>Twentieth Supplemental Indenture, dated September 28, 2017, between Nielsen Finance Holdings Ireland Limited and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.7 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on October 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(v)</td>
<td>Twenty-First Supplemental Indenture, dated September 28, 2017, between Nielsen Holdings Luxembourg S.ar.l., Nielsen Finance Co. and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.8 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on October 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.2(w)</td>
<td>Twenty-second Supplemental Indenture, dated as of February 7, 2018, between Visual IQ, Inc., and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.2(a) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 26, 2018 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(a)</td>
<td>Indenture, dated as of September 27, 2013, among The Nielsen Company (Luxembourg) S.ar.l., the Guarantors (as defined therein) and Deutsche Bank Trust Company Americas, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K of Nielsen Holdings N.V. filed on September 27, 2013 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(b)</td>
<td>First Supplemental Indenture, dated as of December 31, 2013, between Nielsen Audio, Inc. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.4(b) to the Annual Report on Form 10-K of Nielsen Holdings N.V. filed on February 21, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(c)</td>
<td>Second Supplemental Indenture, dated as of December 31, 2013, between Cardinal North LLC and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.4(c) to the Annual Report on Form 10-K of Nielsen Holdings N.V. filed on February 21, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(d)</td>
<td>Third Supplemental Indenture, dated as of December 31, 2013, between Nielsen International Holdings, Inc. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.4(d) to the Annual Report on Form 10-K of Nielsen Holdings N.V. filed on February 21, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(e)</td>
<td>Fourth Supplemental Indenture, dated as of May 23, 2014, between Nielsen Consumer Insights, Inc. and Deutsche Bank Trust Company, as trustee (incorporated herein by reference to Exhibit 4.5 to the Quarterly Report on Form 10-Q of Nielsen N.V. filed July 29, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(f)</td>
<td>Fifth Supplemental Indenture, dated as of December 23, 2014, between Scarborough Research and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.3(f) to the Annual Report on Form 10-K of Nielsen N.V. filed on February 20, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(g)</td>
<td>Sixth Supplemental Indenture, dated as of December 23, 2014, between Nielsen N.V. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.3 to the Current Report on Form 8-K of Nielsen N.V. filed on December 29, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(h)</td>
<td>Seventh Supplemental Indenture, dated as of January 23, 2015, between Valcon Acquisition B.V. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.3(h) to the Annual Report on Form 10-K of Nielsen N.V. filed on February 20, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(i)</td>
<td>Eighth Supplemental Indenture, dated as of July 7, 2015, between eXelate, Inc. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.2 to the Quarterly Report on Form 10-Q of Nielsen N.V. filed on July 28, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(j)</td>
<td>Ninth Supplemental Indenture, dated as of August 17, 2015, between Affinnova, Inc. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.2 to the Quarterly Report on Form 10-Q of Nielsen N.V. filed on October 21, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(k)</td>
<td>Tenth Supplemental Indenture, dated as of April 20, 2016, between Nielsen Finance Ireland Limited and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.4 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on July 26, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(l)</td>
<td>Eleventh Supplemental Indenture, dated as of April 20, 2016, between Nielsen Luxembourg S.ar.l and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.5 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on July 26, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(m)</td>
<td>Twelfth Supplemental Indenture, dated as of April 20, 2016, between Nielsen UK Finance I, LLC and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.7 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on July 26, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>Exhibit No.</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>4.3(n)</td>
<td>Thirteenth Supplemental Indenture, dated as of October 31, 2016 between Rugby Acquisition B.V. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.3(n) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 17, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(o)</td>
<td>Fourteenth Supplemental Indenture, dated as of October 31, 2016 between RSMG Insights Cooperatief U.A. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.3(o) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 17, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(p)</td>
<td>Fifteenth Supplemental Indenture, dated as of April 19, 2017, between Gracenote, Inc. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.3(a) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(q)</td>
<td>Sixteenth Supplemental Indenture, dated as of April 19, 2017, between Gracenote Digital Ventures, LLC and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.3(b) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(r)</td>
<td>Seventeenth Supplemental Indenture, dated as of April 19, 2017, between Gracenote Media Services, LLC and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.3(c) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(s)</td>
<td>Eighteenth Supplemental Indenture, dated as of September 28, 2017, between Nielsen Finance Holdings Ireland Limited and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.5 to the Form 10-Q of Nielsen Holdings N.V. filed on October 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(t)</td>
<td>Nineteenth Supplemental Indenture, dated as of September 28, 2017, between Nielsen Holdings Luxembourg S.a.r.l., and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.6 to the Form 10-Q of Nielsen Holdings N.V. filed on October 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.3(u)</td>
<td>Twentieth Supplemental Indenture, dated as of February 7, 2018, between Visual IQ, Inc., and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.2(d) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 26, 2018 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4</td>
<td>Indenture, dated as of April 11, 2014, among Nielsen Finance LLC, Nielsen Finance Co., the Guarantors (as defined therein) and Law Debenture Trust Company of New York, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K of Nielsen Holdings N.V. filed on April 11, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(a)</td>
<td>First Supplemental Indenture, dated as of May 23, 2014, between Nielsen Consumer Insights, Inc. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.4 to the Quarterly Report on Form 10-Q of Nielsen Holdings N.V. filed July 29, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(b)</td>
<td>Supplemental Indenture, dated as of July 8, 2014, among Nielsen Finance LLC, Nielsen Finance Co., the Guarantors (identified therein) and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K of Nielsen Holdings N.V. filed on July 8, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(c)</td>
<td>Third Supplemental Indenture, dated as of December 23, 2014, between Scarborough Research and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.4(c) to the Annual Report on Form 10-K of Nielsen N.V. filed on February 20, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(d)</td>
<td>Fourth Supplemental Indenture, dated as of December 23, 2014, between Nielsen N.V. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.2 to the Current Report on Form 8-K of Nielsen N.V. filed on December 29, 2014 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(e)</td>
<td>Fifth Supplemental Indenture, dated as of January 23, 2015, between Valcon Acquisition B.V. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.4(e) to the Annual Report on Form 10-K of Nielsen N.V. filed on February 20, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(f)</td>
<td>Eighteenth Supplemental Indenture, dated as of February 7, 2018, between Visual IQ, Inc., and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.2(b) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 26, 2018 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(g)</td>
<td>Supplemental Indenture, dated as of February 25, 2015, among Nielsen Finance LLC, Nielsen Finance Co., the Guarantors (as defined therein) and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on February 25, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>Exhibit No.</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>4.4(h)</td>
<td>Sixth Supplemental Indenture, dated as of July 7, 2015, between eXelate, Inc. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.1 to the Quarterly Report on Form 10-Q of Nielsen N.V. filed on July 28, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(i)</td>
<td>Seventh Supplemental Indenture, dated as of August 17, 2015, between Affinnova, Inc. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.1 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on October 21, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(j)</td>
<td>Eighth Supplemental Indenture, dated as of April 20, 2016, between Nielsen Finance Ireland Limited and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.1 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on July 26, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(k)</td>
<td>Ninth Supplemental Indenture, dated as of April 20, 2016, between Nielsen Luxembourg S.à r.l and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.2 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on July 26, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(l)</td>
<td>Tenth Supplemental Indenture, dated as of April 20, 2016, between Nielsen UK Finance I, LLC and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.3 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on July 26, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(m)</td>
<td>Eleventh Supplemental Indenture, dated as of October 31, 2016 between Rugby Acquisition B.V. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.4(1) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 17, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(n)</td>
<td>Twelfth Supplemental Indenture, dated as of October 31, 2016 between RSMG Insights Cooperatief U.A. and Law Debenture Trust Company of New York, as trustee (incorporated herein by reference to Exhibit 4.4(m) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 17, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(o)</td>
<td>Thirteenth Supplemental Indenture, dated as of April 19, 2017, between Gracenote, Inc., Nielsen Finance Co. and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.4(a) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(p)</td>
<td>Fourteenth Supplemental Indenture, dated as of April 19, 2017, between Gracenote Digital Ventures, LLC, Nielsen Finance Co. and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.4(b) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(q)</td>
<td>Fifteenth Supplemental Indenture, dated as of April 19, 2017, between Gracenote, Media Services, LLC, Nielsen Finance Co. and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.4(c) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(r)</td>
<td>Sixteenth Supplemental Indenture, dated September 28, 2017, between Nielsen Finance Holdings Ireland Limited and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.3 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on October 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.4(s)</td>
<td>Seventeenth Supplemental Indenture, dated September 28, 2017, between Nielsen Holdings Luxembourg S.à r.l., and Delaware Trust Company, as trustee (incorporated herein by reference to Exhibit 4.4 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on October 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.5</td>
<td>Indenture, dated as of January 31, 2017, among The Nielsen Company (Luxembourg) S.à r.l., the Guarantors (as defined therein) and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.1 to the Current Report on Form 8-K filed by Nielsen Holdings plc on February 1, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.5(a)</td>
<td>First Supplemental Indenture, dated as of April 19, 2017, between Gracenote, Inc. and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.5(a) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.5(b)</td>
<td>Second Supplemental Indenture, dated as of April 19, 2017, between Gracenote Digital Ventures, LLC and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.5(b) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
<tr>
<td>4.5(c)</td>
<td>Third Supplemental Indenture, dated as of April 19, 2017, between Gracenote Media Services, LLC and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.5(c) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 25, 2017 (File No. 001-35042))</td>
</tr>
</tbody>
</table>
4.5(d) Fourth Supplemental Indenture, dated September 28, 2017, between Nielsen Finance Holdings Ireland Limited and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.1 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on October 25, 2017 (File No. 001-35042))

4.5(e) Fifth Supplemental Indenture, dated September 28, 2017, between Nielsen Holdings Luxembourg S.à.r.l., and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.2 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on October 25, 2017 (File No. 001-35042))

4.5(f) Sixth Supplemental Indenture, dated as of February 7, 2018, between Visual IQ, Inc., and Deutsche Bank Trust Company Americas, as trustee (incorporated herein by reference to Exhibit 4.2(c) to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on April 26, 2018 (File No. 001-35042))

4.6* Description of Securities

10.1† Nielsen Holdings plc Severance Policy for Section 16 Officers and United-States-Based Senior Executives (incorporated herein by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of Nielsen Holdings plc filed on October 25, 2017 (File No. 001-35042))

10.2† The Nielsen Company Deferred Compensation Plan, as amended and restated, effective September 11, 2012 (incorporated herein by reference to Exhibit 10.2 to the Form 10-Q of Nielsen Holdings N.V. filed on October 22, 2012 (File No. 001-35042))

10.3(a)+ Form of Nielsen Holdings plc 2017 Performance Restricted Stock Unit Award Agreement (FCF metric) (incorporated herein by reference to Exhibit 10.3(c) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 8, 2018 (File No. 001-35042))

10.3(b)+ Form of Nielsen Holdings plc 2017 Performance Restricted Stock Unit Award Agreement (TSR metric) (incorporated herein by reference to Exhibit 10.3(d) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 8, 2018 (File No. 001-35042))

10.3(c)+ Form of 2018 Nielsen Holdings plc Performance Restricted Stock Unit Agreement (Related Total Shareholder Return) (incorporated herein by reference to Exhibit 10.3(e) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 28, 2019 (File No. 001-35042))

10.3(d)+ Form of 2018 Nielsen Holdings plc Performance Restricted Stock Unit Agreement (Free Cash Flow) (incorporated herein by reference to Exhibit 10.3(f) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 28, 2019 (File No. 001-35042))

10.3(e)+ Form of 2018 Nielsen Holdings plc Performance Restricted Stock Unit Agreement (Revenue CAGR) (incorporated herein by reference to Exhibit 10.3(g) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 28, 2019 (File No. 001-35042))

10.3(f)+ Form of Nielsen Holdings plc 2019 Performance Restricted Stock Unit Award Agreement (ESP + TSR CAGR + TSR metric)

10.3(g)+ Form of Nielsen Holdings plc 2019 Performance Restricted Stock Unit Award Agreement (ESP + TSR metric)

10.4(a)+ Offer letter to Eric Dale, dated July 6, 2015 (incorporated herein by reference to Exhibit 10.4(a) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 17, 2017 (File No. 001-35042))

10.4(b)+ Offer letter to Nancy Phillips, dated December 15, 2016 (incorporated herein by reference to Exhibit 10.4(b) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 8, 2018 (File No. 001-35042))

10.4(c)+ Offer Letter to David J. Anderson, dated September 4, 2018 (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K of Nielsen Holdings plc filed on September 5, 2018 (File No. 001-35042))

10.4(d)+ Letter Agreement, dated November 16, 2018, by and between David Kenny and Nielsen Holdings plc (incorporated herein by reference to Exhibit 10.1 to the Form 8-K of Nielsen Holdings plc filed on November 20, 2018 (File No. 001-35042))

10.4(e)+ Offer Letter to George Callard, dated January 3, 2019 (incorporated herein by reference to Exhibit 10.4(e) to the 10-K of Nielsen Holdings plc filed on February 28, 2019 (File No. 001-35042))
<table>
<thead>
<tr>
<th>Exhibit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.4(f)†</td>
<td>Separation Agreement and Release, dated as of October 17, 2018, by and between Dwight Barns and Nielsen Holdings plc (incorporated herein by reference to Exhibit 10.4(f) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 28, 2019 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.4(g)**</td>
<td>Offer Letter to Laurie Lovett, dated as of December 13, 2019</td>
</tr>
<tr>
<td>10.4(h)**</td>
<td>Offer Letter to Linda Zukauckas, dated as of January 10, 2020</td>
</tr>
<tr>
<td>10.4(i)**</td>
<td>Offer Letter to David Rawlinson, dated as of December 28, 2019</td>
</tr>
<tr>
<td>10.4(j)**</td>
<td>Separation, Non-Disparagement and General Release Agreement, effective as of December 31, 2019, by and between David Anderson and Nielsen Holdings plc.</td>
</tr>
<tr>
<td>10.5†</td>
<td>Form of Deferred Stock Unit Grant, dated as of September 11, 2012, for non-employee directors of Nielsen Holdings N.V. (incorporated herein by reference to Exhibit 10.4 to the Form 10-Q of Nielsen Holdings N.V. filed on October 22, 2012 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.6(a)†</td>
<td>VNU Excess Plan, as amended and restated, effective April 1, 2002 (incorporated herein by reference to Exhibit 10.12(a) to Amendment No. 1 to the Company’s Registration Statement on Form S-4 of The Nielsen Company B.V. filed on June 21, 2007 (File No. 333-142546-29))</td>
</tr>
<tr>
<td>10.6(b)†</td>
<td>Amendment to the VNU Excess Plan, effective August 31, 2006 (incorporated herein by reference to Exhibit 10.12(b) to Amendment No. 1 to the Registration Statement on Form S-4 of The Nielsen Company B.V. filed on June 21, 2007 (File No. 333-142546-29))</td>
</tr>
<tr>
<td>10.6(c)†</td>
<td>Second Amendment to the VNU Excess Plan, effective January 23, 2007 (incorporated herein by reference to Exhibit 10.12(c) to Amendment No. 1 to the Registration Statement on Form S-4 of The Nielsen Company B.V. filed on June 21, 2007 (File No. 333-142546-29))</td>
</tr>
<tr>
<td>10.7†</td>
<td>The Nielsen Company Deferred Compensation Plan, as amended and restated, effective October 28, 2008 (incorporated herein by reference to Exhibit 10.13(c) to the quarterly report on Form 10-Q of The Nielsen Company B.V. for the fiscal quarter ended September 30, 2008, (File No. 333-142546-29))</td>
</tr>
<tr>
<td>10.10(a)†</td>
<td>Form of Stock Option Agreement (incorporated herein by reference to Exhibit 10.24(b) to the Quarterly report on Form 10-Q of The Nielsen Company B.V. filed on April 29, 2010 (File No. 333-142546-29))</td>
</tr>
<tr>
<td>10.10(b)†</td>
<td>Form of Stock Option Agreement (incorporated herein by reference to Exhibit 10.26 to Amendment No. 2 to the Registration Statement on Form S-1 of Nielsen Holdings N.V. filed on July 30, 2010 (File No. 333-167271))</td>
</tr>
<tr>
<td>10.11(a)√</td>
<td>Second Amended and Restated Master Services Agreement, effective as of January 1, 2017, by and between Tata America International Corporation &amp; Tata Consultancy Services Limited and The Nielsen Company (US), LLC (incorporated herein by reference to Exhibit 10.11(a) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 8, 2018 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.11(b)√</td>
<td>Amendment Number One, dated as of January 1, 2019, to the Second Amended and Restated Master Services Agreement, dated as of January 1, 2017, by and between TATA American International Corporation and Tata Consultancy Services Limited and The Nielsen Company (US), LLC (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 10-Q of Nielsen Holdings plc filed on July 31, 2019 (File No. 001-35402)).</td>
</tr>
<tr>
<td>10.12†</td>
<td>Nielsen Holdings N.V. Directors Deferred Compensation Plan, effective September 11, 2012 (incorporated herein by reference to Exhibit 10.3 to the Form 10-Q of Nielsen Holdings N.V. filed on October 22, 2012 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.13†</td>
<td>Nielsen 2019 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K of Nielsen Holdings plc filed on May 23, 2019 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.13(a)†</td>
<td>Amended and Restated Nielsen 2010 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.4 to the Current Report on Form 8-K of Nielsen Holdings plc filed on August 31, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.14†</td>
<td>Form of Termination Protection Agreement (incorporated herein by reference to Exhibit 10.11 to Amendment No. 1 to the Registration Statement on Form S-4 of The Nielsen Company B.V. filed on June 21, 2007 (File No. 333-142546-29))</td>
</tr>
<tr>
<td>Exhibit No.</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>10.15(a)†</td>
<td>Form of 2016 Restricted Stock Unit Award Agreement (incorporated herein by reference to Exhibit 10.19(c) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 8, 2018 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.15(b)†</td>
<td>Form of 2017 Restricted Stock Unit Award Agreement (incorporated herein by reference to Exhibit 10.19(d) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 8, 2018 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.15(c)†</td>
<td>Form of 2018 Restricted Stock Unit Award Agreement (incorporated herein by reference to Exhibit 10.19(e) to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 28, 2019 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.15(d)‡*</td>
<td>Form of 2019 Restricted Stock Unit Award Agreement</td>
</tr>
<tr>
<td>10.20†</td>
<td>Form of 2018 Performance Stock Option Award (incorporated herein by reference to Exhibit 10.20 to the Current Report on Form 10-K of Nielsen Holdings plc filed on February 28, 2019 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.21†</td>
<td>Form of Indemnification Agreement (incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K of Nielsen Holdings plc filed on August 31, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.22†</td>
<td>Form of Letter of Appointment (incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K of Nielsen Holdings plc filed on August 31, 2015 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.23†</td>
<td>The Nielsen Company 401(k) Savings Plan (amended and restated on December 29, 2015) (incorporated herein by reference to Exhibit 4.2 to the registration statement on Form S-8/A of Nielsen Holdings plc filed on June 29, 2016 (File No. 333-176940))</td>
</tr>
<tr>
<td>10.24†</td>
<td>Nielsen Holdings plc 2016 Employee Share Purchase Plan (incorporated herein by reference to Annex A to the proxy statement on Schedule 14A of Nielsen Holdings plc filed on April 29, 2016 (File No. 001-35042))</td>
</tr>
<tr>
<td>10.25†</td>
<td>Form of 2018 Retention Award Agreement (incorporated herein by reference to Exhibit 10.25 to the Annual Report on Form 10-K of Nielsen Holdings plc filed on February 28, 2019 (File No. 001-35042))</td>
</tr>
<tr>
<td>21.1*</td>
<td>Nielsen Holdings plc Subsidiaries</td>
</tr>
<tr>
<td>23.1*</td>
<td>Consent of Ernst &amp; Young LLP, Independent Registered Public Accounting Firm</td>
</tr>
<tr>
<td>31.1*</td>
<td>CEO 302 Certification pursuant to Rule 13a-15(e)/15d-15(e)</td>
</tr>
<tr>
<td>31.2*</td>
<td>CFO 302 Certification pursuant to Rule 13a-15(e)/15d-15(e)</td>
</tr>
<tr>
<td>32.1*</td>
<td>Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, U.S. Code)</td>
</tr>
<tr>
<td>32.2*</td>
<td>Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, U.S. Code)</td>
</tr>
<tr>
<td>104*</td>
<td>Cover Page Interactive Data File (embedded within the Inline XBRL and included in Exhibit 101)</td>
</tr>
</tbody>
</table>

* Filed or furnished herewith.
† Management contract or compensatory plan in which directors and/or executive officers are eligible to participate.
✓ Certain portions have been omitted in accordance with a request for confidential treatment that the Company has submitted to the SEC. Omitted information has been filed separately with the SEC.
Nielsen Holdings plc  
(Registrant)  

Date: February 27, 2020  

/s/ Christopher Taft  
CHISTOPHER TAFT  
Senior Vice President and Corporate Controller  
(Duly Authorized Officer and Principal Accounting Officer)

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>/s/ DAVID KENNY</td>
<td>Chief Executive Officer (Principal Executive Officer) and Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>David Kenny</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ LINDA ZUKAUCKAS</td>
<td>Chief Financial Officer (Principal Financial Officer)</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Linda Zukaukas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ CHRISTOPHER TAFT</td>
<td>Senior Vice President and Corporate Controller (Principal Accounting Officer)</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Christopher Taft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ JAMES A. ATTWOOD JR.</td>
<td>Chairman of the Board</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>James A. Attwood Jr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ THOMAS H. CASTRO</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Thomas H. Castro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ GUERRINO DE LUCA</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Guerrino De Luca</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ KAREN HOGUE</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Karen Hoguet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ HARISH MANWANI</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Harish Manwani</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ JANICE MARINELLI MAZZA</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Janice Marinelli Mazza</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ ROBERT POZEN</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Robert Pozen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ DAVID RAWLINSON</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>David Rawlinson</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ NANCY TELLEM</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Nancy Tellem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ JAVIER TERUEL</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Javier Teruel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s/ LAUREN ZALAZNICK</td>
<td>Director</td>
<td>February 27, 2020</td>
</tr>
<tr>
<td>Lauren Zalaznick</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated.