

LETTER TO OUR SHAREHOLDERS

In 2016, our next generation Intelsat Epic^{NG} satellites entered service to the benefit of our customers. Intelsat Epic^{NG} begins a period of transformation as these more capable assets unlock access to new and higher growth applications.



Stephen Spengler
Director & Chief Executive Officer

Intelsat achieved its 2016 plan; with \$2.19 billion in revenue, net income attributable to Intelsat S.A. of \$990 million and \$1.65 billion in Adjusted EBITDA¹. Each of our businesses hit its target, navigated challenges, captured new revenue and established important relationships for the future.



We launched four satellites in 2016, including two fully-incremental, fully-committed media satellites, and the first two of our seven planned next generation high-throughput Intelsat Epic^{NG} satellites. The launches were the culmination of several years of collaboration with customers and work with our manufacturers to design and build our spacecraft. The Intelsat Epic^{NG} satellites are expected to lift Intelsat's revenue trajectory as the new inventory converts to revenue



growth, offsetting headwinds in our business. More importantly, the advanced capabilities provided by the Intelsat Epic^{NG} satellites expand the types of services that can be profitably delivered by our customers, transforming their businesses and ours.

Intelsat has passed through a period of considerable challenge to one of attractive opportunities. Throughout, we have focused on bringing higher performance, enhanced economics and simplified access to our satellite solutions. In 2016, we established the right mix of inventory, services and relationships to position us for leadership in much larger and faster growing sectors. As we continue to build-out our Intelsat Epic^{NG} ecosystem of satellites, services and technology, we are positioning Intelsat to play a bigger and broader role in the greater communications landscape.

OPERATIONAL TRANSFORMATION

In 2016, we made steady and significant progress towards each of the five operational priorities that are transforming our business.

OUR FIRST PRIORITY WAS TO MAINTAIN OUR DESIGN, MANUFACTURING AND LAUNCH SCHEDULE FOR THE NEXT GENERATION INTELSAT EPIC^{NG} FLEET, AND OTHER SATELLITES IN OUR PLAN, TO ENSURE AVAILABILITY OF NEW INVENTORY TO DRIVE REVENUE GROWTH.

Our first two Intelsat Epic^{NG} satellites, Intelsat 29e and Intelsat 33e, entered service in March 2016 and in January 2017, respectively. The Intelsat Epic^{NG} high-performance footprint now spans the Americas, the Caribbean and the North Atlantic to the Middle East, Europe, Africa and the Asia-Pacific regions. It covers the high demand maritime and aeronautical routes important to capturing new growth.

We also launched and placed into service two important media satellites, fully-committed for the life of the assets. Intelsat 31 provides expansion services and resilience for AT&T/DIRECTV[®] Latin America. Intelsat 36 includes a Ku-band payload used by direct-to-home ("DTH") television leader MultiChoice for the expansion of high definition ("HD") services in Sub-Saharan Africa.



Intelsat 33e/Intelsat 36 Launch

OUR SECOND PRIORITY WAS TO DRIVE INNOVATION TO CREATE NEXT GENERATION SOLUTIONS THAT WILL OPTIMIZE PERFORMANCE, IMPROVE ECONOMICS AND SIMPLIFY ACCESS TO NEXT GENERATION SATELLITE TECHNOLOGY.

We began the Intelsat Epic^{NG} evolution with the launch and entry into service of Intelsat 29e and Intelsat 33e. In the period leading up to their first year of service, 125 customers committed to this high-throughput platform, with seamless service transitions and backward compatible design to allow customers to use existing hardware.

We continued our ground innovation support through our investments in Kymeta Corporation and Phasor, two technology companies harnessing metamaterials and phased array technologies, to drive smaller and more capable antennas, which over time will expand the universe of satellite applications. We expect to deploy 70cm units from Kymeta later on in 2017, with 20cm antennas designed for the connected car opportunity in 2018. We expect Phasor antennas to follow in future years, with application in the business jet arena.

OUR THIRD PRIORITY WAS TO DEVELOP NEW SERVICE OFFERINGS THAT SUPPORT THE GROWTH OBJECTIVES OF OUR CUSTOMERS AND INVEST IN OUR VIDEO NEIGHBORHOOD ORBITAL LOCATIONS TO SUPPORT LONG-TERM GROWTH GOALS.

Last year, we expanded IntelsatOne® Flex from the maritime vertical to the enterprise sector. We signed our first customers who will use this flexibility to provide services spanning the Atlantic, Europe, the Middle East and Africa.

For our media customers, we continue to enhance our IntelsatOne® Prism managed service, recently introducing a full-time version for broadcasters exchanging news and programming with affiliates. IntelsatOne® Prism streamlines the collection and distribution of content using an all-IP connectivity platform, and allows for voice and internet traffic within the same connection-perfect for news and sports gathering. Separately, we continued to invest in our valuable video neighborhoods, such as the new Intelsat 36 satellite at the 68.5°E orbital location.

OUR FOURTH PRIORITY WAS TO MAINTAIN OUR LEADERSHIP IN GOVERNMENT SERVICES, PROVIDING A HIGH VALUE PROPOSITION TO GOVERNMENT CUSTOMERS SEEKING AFFORDABLE SOLUTIONS FROM A TRUSTED COMMERCIAL PROVIDER.

Intelsat is the leading provider of commercial satellite services to the government sector, according to NSR, with a 28% share of the U.S. military and government use of commercial satellite capacity with allied partners worldwide.

We continue to position ourselves for long-term growth opportunities serving the U.S. military with commercial capacity and services. In 2016, our subsidiary, Intelsat General Corporation ("Intelsat General") demonstrated Intelsat Epic^{NG} technology for its customers. These included demonstrations of automated beam switching and other technologies optimized for unmanned airborne systems ("UAS"). With Intelsat 33e entering service in early 2017, we expect to generate new opportunities to serve our military and global government customers.

OUR FIFTH PRIORITY WAS TO OPTIMIZE USE OF OUR SPECTRUM RIGHTS AND GLOBAL PRESENCE TO MAXIMIZE MARKET ACCESS AND CONTINUITY, PARTICULARLY IN ATTRACTIVE REGIONS, WHILE MAINTAINING INVESTMENT DISCIPLINE.

Intelsat entered into a contract to become the first customer for the new Orbital ATK satellite life extension service known as the Mission Extension Vehicle-1 ("MEV-1"). Scheduled to begin its mission extension service for Intelsat in 2019, MEV-1 will provide additional flexibility to extend the life of healthy in-orbit assets and position us to be more responsive to our customers' changing needs.

ENABLING THE TRANSFORMATION OF OUR CUSTOMERS' OPPORTUNITIES

The priorities outlined above were essential to our efforts to transform our satellite network and in turn, transform the opportunities pursued by our customers.

NETWORK SERVICES

Network services generated \$900 million of revenue in 2016, a 15 percent decline over 2015.

Revenue declines were primarily related to pricing pressures and retiring international trunking point-to-point services impacted results throughout the year. However, during the second half of 2016, we experienced signs of stabilization on our traditional fleet, even as our first Intelsat Epic^{NG} satellite entered service, generating incremental revenues.

\$900M
Network Services
2016 Revenue

As we move through 2017, we will place into service three more Intelsat Epic^{NG} satellites. Intelsat 32e successfully launched in February 2017 and will be followed by Intelsat 35e and Intelsat 37e. On a global basis, growth opportunities for our network services business include increased demand for aeronautical mobility, the Internet of Things and maritime mobility applications, as well as high-throughput capacity for fixed and mobile broadband applications for telecommunications providers and enterprise networks. On a combined basis we expect these applications to grow from a \$4.9 billion opportunity in 2016 to a \$7.1 billion opportunity industry-wide in 2021.

Approximately
\$2.3B
Incremental Growth
Industry-wide by 2021

Our strategy during this period includes:

- Capturing new business on our Intelsat Epic^{NG} fleet;
- Accelerating the adoption and commercialization of IntelsatOne® Flex managed services for enterprise, aeronautical and maritime applications; and
- Introducing IntelsatOne® Mobile Reach services for wireless infrastructure.

Although high-performance capacity, such as that provided by Intelsat Epic^{NG}, is an important element of capturing this growth, we continue to invest in managed services and smaller, more capable site hardware that simplify network adoption, installation and operations.

MEDIA

Intelsat has earned an enviable leadership position serving the media sector. We deliver over 5,600 channels for content owners and DTH service providers around the globe. In 2016, our media business provided \$868 million in revenue, down 20% from the previous year. Performance improved over the course of 2016 as two new fully-

\$868M
Media Services
2016 Revenue

contracted media satellites were placed into service, generating fully incremental revenue.

The top trend in our media business is multiscreen viewing by consumers. This provides our customers with additional viewers and potential revenue streams that complement the linear delivery of our services. The multiscreen environment results in more complexity in the operations chain. Our new services simplify these distribution complexities, and also increase outsourcing options for



Intelsat 31 Launch

broadcasters and programmers seeking to improve operational efficiency.

In 2017, the incremental revenues from Intelsat 31 and Intelsat 36 are the primary growth catalysts for our media business. Our next media satellite will be Intelsat 38, currently planned for launch in 2018. We recently announced our plan to position one of our existing satellites, Intelsat 14, as a new neighborhood satellite for Latin America. This will further enhance our leading position in the region, providing growth options for our programming customers who continue to add new HD channels to their lineups in the region.

GOVERNMENT

The cadence in our government business continued to show signs of stability, as evidenced by Intelsat General's attractive renewal rates for the provision of commercial satellite services to the U.S. government. As a result, we reported \$387 million in revenue for 2016, a slight increase from 2015.



Business activity in this customer set reflects the current tempo of our end- customers' operations and the pace of RFP issuances and subsequent awards remains slow. We see increasing use of lowest price technically acceptable, or LPTA, evaluation formats for awards of new business.

Over the mid-term, our strategy to grow our government business includes providing mobility services to the U.S. government for aeronautical and ground mobile requirements. With Intelsat 33e, our second Intelsat Epic^{NG} satellite, covering Europe, Africa, Middle East and Asia now in service, we expect to expand the service alternatives for this customer base.

GLOBALIZED NETWORK TRANSFORMATION

The Intelsat network is a connectivity powerhouse. From geographic coverage, to the multitude of broadband, media and government applications enabled for our customers, our Globalized Network improves the lives of countless citizens on every continent. This was the third and final year of above-average capital investments that has fueled our Intelsat Epic^{NG} next generation program as well as built a number of customized satellites for DTH customers.

The Intelsat Epic^{NG} satellites are exceeding our expectations and that of our customers! Our ecosystem partners conducted rigorous in-orbit tests of their data platforms using Intelsat Epic^{NG}, with outstanding results. With existing hardware, customers are experiencing a 165 percent increase in efficiency. When using next generation hardware, efficiency increases by a factor of 330 percent. These results directly translate into a reduced cost per bit for our customers, and demonstrate that Intelsat Epic^{NG} is delivering on the promise of high throughput technology.

However, it's not enough to have high performance satellites. We continue to emphasize the importance of the entire ecosystem, supporting the development of new metamaterial antennas and solar powered user terminals to enable simplified access for existing and new users of satellite-based solutions.

Intelsat Epic^{NG} delivering from 165% and up to 330% increase in efficiency to our customers.

Our antenna partners are progressing on their development plans. We continue to look for other innovators where our global scale and financial commitments can stimulate further development in technologies that will allow our solutions to be adopted by new sectors, expanding our market opportunity.

TRANSFORMATIVE TRANSACTION

Early in 2017, we announced a conditional combination agreement with the low earth orbit ("LEO") constellation operator, OneWeb, including a \$1.7 billion investment in Intelsat by technology investment leader SoftBank Group. The combination and the SoftBank investment are conditioned upon the consummation of certain debt exchange offers, the receipt of regulatory approvals, consent and approval by both Intelsat and OneWeb shareholders as well as other customary closing conditions.

We were a founding investor in OneWeb in 2015 and the industrial logic is clear: our respective Ku-band systems are complementary, producing new solutions that will open new markets while generating operating and capital efficiencies. As important as the industrial logic, our two companies share a mission to connect the globe.

Leveraging the combined strengths of our geostationary orbit ("GEO") and LEO Ku-band constellations, we are in a stronger position to achieve that together.

Given that data requirements are expected to triple every three years, this combination of our networks provides a long-term technology roadmap for our Ku-band customers, a future-proof environment that meets the fast changing broadband requirements of the future.

INTELSAT'S EMPLOYEES TRANSFORM AND DELIVER

At the heart of Intelsat's transformation is our innovative, talented and dedicated team around the world. Our employees are passionate about communications, satellite technology, our customers and importantly, how we transform and enhance people's lives.

On a daily basis, we witness the economic growth that comes to a region concurrent with the connectivity of our network and the sense of global community that develops from distribution of major news and sporting events. Our employees are engaged in our mission at a level seldom experienced by other companies. Intelsat team members take tremendous pride in how our services impact the success of businesses and improve the lives of citizens around the world, given the vital role of the connectivity provided by Intelsat's fleet.

As Intelsat moves forward in 2017, we are clear on our mission: Our team is committed to building the communications network of tomorrow by executing on our long-term strategy. By doing so, we will return to top-line growth, strengthening our financial foundation and delivering value for our stakeholders.



From Left to right:

Michael DeMarco, SVP Operations; **Michelle Bryan**, EVP, General Counsel & CAO; **Stephen Spengler**, Director & CEO; **Kurt Riegelman**, SVP, Sales and Marketing; **Jacques Kerrest**, EVP and CFO.

As always, we appreciate and thank you for your support of Intelsat.

Stephen Spengler
Director and Chief Executive Officer

¹In this 2016 Annual Report, financial measures are presented both in accordance with U.S. GAAP and also on a non-U.S. GAAP basis. EBITDA, Adjusted EBITDA ("AEBITDA"), free cash flow from (used in) operations and related margins included in this Annual Report are non-U.S. GAAP financial measures. Please see the consolidated financial information found in our Annual Report on Form 20-F and available on our website for information reconciling non-U.S. GAAP financial measures to comparable U.S. GAAP financial measures.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 20-F

(Mark One)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

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

For the fiscal year ended December 31, 2016

OR

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

OR

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

Commission file number: 001-35878

INTELSAT S.A.

(Exact name of Registrant as specified in its charter)

N/A

(Translation of Registrant's name into English)

Grand Duchy of Luxembourg

(Jurisdiction of incorporation or organization)

4 rue Albert Borschette

Luxembourg

Grand-Duchy of Luxembourg

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(Name, Telephone, E-Mail and/or Facsimile number and Address of Company Contact Person)

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

Title of Each Class

Name of Each Exchange On Which Registered

Common Shares, nominal value \$0.01 per share
5.75% Series A mandatory convertible junior non-voting
preferred shares, nominal value \$0.01 per share

New York Stock Exchange
New York Stock Exchange

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the Annual Report.

118,028,651 common shares, nominal value \$0.01 per share

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

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes No

Note—checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act (Check one):

Large accelerated filer Accelerated Filer Non-accelerated filer

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP International Financial Reporting Standards as issued
by the International Accounting Standards Board Other

If "Other" has been checked in response to the previous question indicate by check mark which financial statement item the registrant has elected to follow. Item 17 Item 18

If this is an Annual Report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

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FORWARD-LOOKING STATEMENTS

Some of the statements in this Annual Report on Form 20-F, or Annual Report, and oral statements made from time to time by our representatives constitute forward-looking statements that do not directly or exclusively relate to historical facts. The Private Securities Litigation Reform Act of 1995 provides a “safe harbor” for certain forward-looking statements as long as they are identified as forward-looking and are accompanied by meaningful cautionary statements identifying important factors that could cause actual results to differ materially from the expectations expressed or implied in the forward-looking statements.

When used in this Annual Report, the words “may,” “will,” “might,” “should,” “expect,” “plan,” “anticipate,” “project,” “believe,” “estimate,” “predict,” “intend,” “potential,” “outlook” and “continue,” and the negative of these terms, and other similar expressions are intended to identify forward-looking statements and information. Examples of these forward-looking statements include, but are not limited to, statements regarding the following: our statements regarding certain plans, expectations, goals, projections, and beliefs about the benefits of the proposed transactions, the transactions parties’ plans, objectives, expectations and intentions, and the expected timing of completion of the proposed transactions; our belief that the growing worldwide demand for reliable broadband connectivity everywhere at all times, together with our leadership position in our attractive sector, global scale, efficient operating and financial profile, diversified customer sets and sizeable contracted backlog, provide us with a platform for long-term success; our belief that the new and differentiated capacity of our next generation Intelsat Epic^{NG} satellites will provide inventory to help offset recent trends of pricing pressure in our network services business; our outlook that the increased volume of services provided by our Intelsat Epic^{NG} fleet is expected to stabilize business activity in the network services sector; our expectation that over time new demand for capacity to support the new 4K format, also known as ultra-high definition, could compensate for reductions in demand related to use of new compression technologies in our media business; our expectation that our investment in a new generation of ground hardware will simplify access to satellite communications, potentially opening much larger and faster growing sectors than those traditionally served by our industry; our belief that the continued deployment of our next generation capacity in 2017 will increase opportunity to capture growth from new applications and meet the demand for evolving customer requirements; our expectation that we will not replace our existing fleet of approximately 50 satellites on a one-for-one basis; our expectation that our next generation investment strategy, which includes the deployment of space and terrestrial network elements, will allow us to deliver high performance bandwidth while improving unit costs through efficiency and simplified access to satellite communications, potentially opening much larger and faster growing sectors than those traditionally served by our industry; our expectation that our development partnership with Kymeta Inc. will result in an affordable, flat antenna that could be installed in the automotive sector, enabling connected cars on a global basis as well as other mobility applications; our belief that our investment in Phasor will result in antenna technology that has a form factor to support broadband communications for the business jet sector that will enhance the transformation of our capabilities; our expectation that our investment in OneWeb will result in a low earth orbit platform that will complement our geostationary fleet by providing fully interoperable global capacity, as well as low-latency offerings for certain segments; our expectations of pricing for our services in the future; our ability to efficiently incorporate new technologies into our network to capture growth; our intention to maximize our revenues and returns generated by our assets by developing and managing our capacity in a disciplined and efficient manner; our projection that our government business will benefit from the increasing demands for mobility services from the U.S. government for aeronautical and ground mobile requirements; our intention to leverage our satellite launches and orbital rights to supply specialized capabilities for certain customers; our intent to consider select acquisitions of complementary businesses or technologies that enhance our product and geographic portfolio; our belief that developing differentiated services and investing in new technology will allow us to unlock opportunities that are essential, but have been slow to develop due to cost and/or technology challenges; the trends that we believe will impact our revenue and operating expenses in the future; our assessments regarding how long satellites that have experienced anomalies in the past should be able to provide service on their transponders; our assessment of the risks of future anomalies occurring on our satellites; our plans for satellite launches in the near-term; our expected capital expenditures in 2017 and during the next several years; our belief that the diversity of our revenue and customer base allows us to recognize trends, capture new growth opportunities, and gain experience that can be transferred to customers in other regions; our belief that the scale of our fleet can reduce the financial impact of any satellite or launch failures and protect against service interruption; and the impact on our financial position or results of operations of pending legal proceedings.

Forward-looking statements reflect our intentions, plans, expectations, anticipations, projections, estimations, predictions, outlook, assumptions and beliefs about future events. These forward-looking statements speak only as of their dates and are not guarantees of future performance or results and are subject to risks, uncertainties and other factors, many of which are outside of our control. These factors could cause actual results or developments to differ materially from the expectations expressed or implied in the forward-looking statements and include known and unknown risks. Known risks include, among others, the risks discussed in Item 3D—Risk Factors, the political, economic and legal conditions in the markets we are targeting for communications services or in which we operate and other risks and uncertainties inherent in the telecommunications business in general and the satellite communications business in particular.

Other factors that may cause results or developments to differ materially from historical results or developments or the forward-looking statements made in this Annual Report include, but are not limited to:

- risks associated with operating our in-orbit satellites;
- satellite launch failures, satellite launch and construction delays and in-orbit failures or reduced satellite performance;
- potential changes in the number of companies offering commercial satellite launch services and the number of commercial satellite launch opportunities available in any given time period that could impact our ability to timely schedule future launches and the prices we pay for such launches;
- our ability to obtain new satellite insurance policies with financially viable insurance carriers on commercially reasonable terms or at all, as well as the ability of our insurance carriers to fulfill their obligations;
- possible future losses on satellites that are not adequately covered by insurance;
- U.S. and other government regulation;
- changes in our contracted backlog or expected contracted backlog for future services;
- pricing pressure and overcapacity in the markets in which we compete;
- our ability to access capital markets for debt or equity;
- the competitive environment in which we operate;
- customer defaults on their obligations to us;
- our international operations and other uncertainties associated with doing business internationally;
- the possibility that the proposed transactions do not close when expected or at all;
- potential adverse reactions or changes to business or employee relationships, including those resulting from the announcement or completion of the proposed transactions;
- competitive responses to the proposed transactions;
- the possibility that the anticipated benefits of the transactions are not realized when expected or at all, including as a result of the impact of, or problems arising from, the integration of the two companies, or conditions imposed in order to obtain regulatory approvals to complete the transactions;
- the possibility that the proposed transactions may be more expensive to complete than anticipated, including as a result of unexpected factors or events;
- diversion of management's attention from ongoing business operations and opportunities;
- the possibility that the condition to the transactions relating to the completion of exchange offers may not be satisfied, or may be satisfied on different terms than currently proposed;
- litigation; and
- other risks discussed under Item 3D—Risk Factors.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee our future results, level of activity, performance or achievements. Because actual results could differ materially from our intentions, plans, expectations, anticipations, projections, estimations, predictions, outlook, assumptions and beliefs about the future, you are urged not to rely on forward-looking statements in this Annual Report and to view all forward-looking statements made in this Annual Report with caution. We do not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

INDUSTRY AND MARKET DATA

This Annual Report includes information with respect to regional and sector share and industry conditions from third-party sources, public filings and based upon our estimates using such sources when available. While we believe that such information and estimates are reasonable and reliable, we have not independently verified the data from third-party sources, including *23rd Satellite Communications & Broadcasting Markets Survey, Forecasts to 2025*, dated September 2016, by Euroconsult; *Global Satellite Capacity Supply and Demand Study, 13th Edition*, dated July 2016, by NSR; *Government and Military Satellite Communications, 13th Edition*, dated November 2016, by NSR; *Wireless Backhaul via Satellite, 10th Edition*, dated March 2016, by NSR; *Pyramid Research Fixed Communications Demand—Africa & Middle East*, dated December 2016, and *Pyramid Research Fixed Communications Demand—Latin America*, dated December 2016. Unless otherwise specified, all references contained in this Annual Report to these third-party sources are as of the dates of these sources stated above. Similarly, our internal research is based upon our understanding of industry conditions, and such information has not been verified by independent sources. Specifically, when we refer to the relative size, regions served, number of customers contracted, experience and financial performance of our business as compared to other companies in our sector, our assertions are based upon public filings of other operators and comparisons provided by third-party sources, as outlined above.

Throughout this Annual Report, unless otherwise indicated, references to market positions are based on third-party market research. If a regional position or statement as to industry conditions is based on internal research, it is identified as management's belief. Throughout this Annual Report, unless otherwise indicated, statements as to our relative positions as a provider of services to customers and regions are based upon our relative share. For additional information regarding our regional share with respect to our customer sets, services and regions, and the bases upon which we determine our share, see Item 4B—Business Overview.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

In this Annual Report unless otherwise indicated or the context otherwise requires, (1) the terms “we,” “us,” “our,” “the Company” and “Intelsat” refer to Intelsat S.A., and its subsidiaries on a consolidated basis, (2) the term “Intelsat Holdings” refers to our indirect subsidiary, Intelsat Holdings S.A., (3) the term “Intelsat Investments” refers to Intelsat Investments S.A., Intelsat Holdings’ direct wholly-owned subsidiary, (4) the term “Intelsat Luxembourg” refers to Intelsat (Luxembourg) S.A., Intelsat Investments’ direct wholly-owned subsidiary, (5) the terms “Intelsat Connect” and “ICF” refer to Intelsat Connect Finance S.A., Intelsat Luxembourg’s direct wholly-owned subsidiary, (6) the term “Intelsat Jackson” refers to Intelsat Jackson Holdings S.A., Intelsat Connect’s direct wholly-owned subsidiary, and (7) the term “Intelsat” refers to specific Intelsat-satellites. We refer to Intelsat General Corporation, one of our subsidiaries, as “Intelsat General.” Capitalized terms used but not defined under the heading “Risks Relating to the Transactions” below have the meanings assigned to such terms under the heading “Item 4B – Business Overview – Recent Developments.” In this Annual Report, unless the context otherwise requires, all references to transponder capacity or demand refer to transponder capacity or demand in the C-band and Ku-band only.

A. Selected Financial Data

The following selected historical consolidated financial data should be read in conjunction with, and is qualified by reference to, Item 5—Operating and Financial Review and Prospects and our audited consolidated financial statements and their notes included elsewhere in this Annual Report. The consolidated statement of operations data and consolidated cash flow data for the years ended December 31, 2014, 2015 and 2016, and the consolidated balance sheet data as of December 31, 2015 and 2016 have been derived from audited consolidated financial statements included elsewhere in this Annual Report. The consolidated statement of operations data and consolidated cash flow data for the years ended December 31, 2012 and 2013 and the consolidated balance sheet data as of December 31, 2012 and 2013 have been derived from audited consolidated financial statements that are not included in this Annual Report.

	Year Ended December 31,				
	2012	2013	2014	2015	2016
	(in thousands, except share and per share amounts)				
Consolidated Statement of Operations Data					
Revenue	\$ 2,610,152	\$ 2,603,623	\$ 2,472,386	\$ 2,352,521	\$ 2,188,047
Operating expenses:					
Direct costs of revenue (excluding depreciation and amortization)	415,900	375,769	348,348	328,501	341,147
Selling, general and administrative	204,025	288,467	197,407	199,412	231,397
Impairment of goodwill and other intangibles	—	—	—	4,165,400	—
Depreciation and amortization	764,903	736,567	679,351	687,729	694,891
Gain on satellite insurance recoveries	—	(9,618)	—	—	—
Total operating expenses	1,384,828	1,391,185	1,225,106	5,381,042	1,267,435
Income (loss) from operations	1,225,324	1,212,438	1,247,280	(3,028,521)	920,612
Interest expense, net	1,310,783	1,122,261	944,787	890,279	938,501
Gain (loss) on early extinguishment of debt	(73,542)	(368,089)	(40,423)	7,061	1,030,092
Other income (expense), net	(10,128)	(4,918)	(2,593)	(6,201)	(2,105)
Income (loss) before income taxes	(169,129)	(282,830)	259,477	(3,917,940)	1,010,098
Provision for (benefit from) income taxes	(19,631)	(30,837)	22,971	1,513	15,986
Net income (loss)	(149,498)	(251,993)	236,506	(3,919,453)	994,112
Net (income) loss attributable to noncontrolling interest	(1,639)	(3,687)	(3,974)	(3,934)	(3,915)
Net income (loss) attributable to Intelsat S.A.	(151,137)	(255,680)	232,532	(3,923,387)	990,197
Cumulative preferred dividends	—	(10,196)	(9,917)	(9,919)	—
Net income (loss) attributable to common shareholders	\$ (151,137)	\$ (265,876)	\$ 222,615	\$ (3,933,306)	\$ 990,197
Other Data					
Capital expenditures	\$ 866,016	\$ 600,792	\$ 645,424	\$ 724,362	\$ 714,570
Other payments for satellites	\$ —	\$ —	\$ —	\$ —	\$ 18,333
Basic income (loss) per common share attributable to Intelsat S.A.	\$ (1.82)	\$ (2.70)	\$ 2.09	\$ (36.68)	\$ 8.65
Diluted income (loss) per common share attributable to Intelsat S.A.	\$ (1.82)	\$ (2.70)	\$ 1.99	\$ (36.68)	\$ 8.36
Basic weighted average shares outstanding (in millions)	83.0	98.5	106.5	107.2	114.5
Diluted weighted average shares outstanding (in millions)	83.0	98.5	116.6	107.2	118.5
Dividends declared per 5.75% series A mandatory convertible junior non-voting preferred share	\$ —	\$ 2.96	\$ 2.87	\$ 2.88	\$ —
Consolidated Cash Flow Data					
Net cash provided by operating activities	\$ 821,310	\$ 716,892	\$ 1,046,170	\$ 910,031	\$ 683,506
Net cash used in investing activities	(783,601)	(134,061)	(645,250)	(749,354)	(730,589)
Net cash provided by (used in) financing activities	(139,619)	(516,523)	(519,003)	(102,986)	541,596
Consolidated Balance Sheet Data					
Cash and cash equivalents, net of restricted cash	\$ 187,485	\$ 247,790	\$ 123,147	\$ 171,541	\$ 666,024
Satellites and other property and equipment, net	6,355,192	5,805,540	5,880,264	5,998,317	6,185,842
Total assets	17,067,705	16,408,217	16,326,434	12,253,590	12,942,009
Total debt	15,706,053	15,105,961	14,668,221	14,611,379	14,198,084
Shareholders' deficit	(1,357,760)	(975,353)	(776,268)	(4,649,565)	(3,634,145)
Net assets	(1,312,090)	(934,667)	(742,567)	(4,620,353)	(3,609,998)
Number of common shares (in millions)	83.2	106.0	106.7	107.6	118.0
Number of 5.75% series A mandatory convertible junior non-voting preferred shares (in millions)	—	3.5	3.5	3.5	—

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

The risks described below are not the only ones that we may face. Additional risks that are not currently known to us or that we currently consider immaterial may also impair our business, financial condition or results of operations.

Risk Factors Relating to Our Business

We are subject to significant competition from within the fixed satellite services (“FSS”) sector, from alternative satellite service providers and from other providers of communications capacity, such as fiber optic cable capacity. Competition from other telecommunications providers could have a material adverse effect on our business and could prevent us from implementing our business strategy and expanding our operations as planned.

We face significant competition in the FSS sector in different regions around the world. We compete against other satellite operators and against suppliers of ground-based communications capacity. The increasing availability of satellite capacity and capacity from other forms of communications technology has historically created an excess supply of telecommunications capacity in certain regions from time to time. We believe such an imbalance could again occur in certain regions, particularly as we and other operators begin to introduce next generation high-throughput satellite technology to our fleets. Additionally, there is emerging interest from new entrants to launch new constellations in different orbits that could potentially compete with portions of our business. Increased competition in the FSS sector could lower prices, which could reduce our operating margins and the cash available to fund our operations and service our debt obligations. In addition, there has been a trend toward consolidation of major FSS providers as customers increasingly demand more robust distribution platforms with network redundancies and worldwide reach, and we expect to face increased competition as a result of this trend. Our direct competitors are likely to continue developing and launching satellites with greater power and more transponders, which may create satellite capacity at lower costs. In order to compete effectively, we invest in similar technology.

We also believe that there are many companies that are seeking ways to improve the ability of existing land-based infrastructure, such as fiber optic cable, to transmit signals. Any significant improvement or increase in the amount of land-based capacity, particularly with respect to the existing fiber optic cable infrastructure and point-to-point applications, may cause our video and network services customers to shift their transmissions to land-based capacity or make it more difficult for us to obtain new customers. If fiber optic cable networks or other ground-based high-capacity transmission systems are available to service a particular point, that capacity, when available, is generally less expensive than satellite capacity. As land-based telecommunications services expand, demand for some satellite-based services may be reduced.

In addition, we face challenges to our business apart from these industry trends that our competition may not face. A portion of our revenue has historically been derived from channel services, and from other point-to-point services which comprise a portion of our transponder services. Because fiber optic cable capacity is generally available at lower prices than satellite capacity, competition from fiber optic cable providers has historically caused a migration of our point-to-point customers from satellite to fiber optic cable on certain routes, resulting in erosion in our revenue from point-to-point services over the last ten years. Some other FSS operators have service mixes that are less weighted towards point-to-point connectivity than our current service mix. We have been addressing this erosion and sustaining our business by expanding our customer base in point-to-multipoint services, such as video, and growing our presence in serving wireless communications providers and the mobility sector.

Failure to compete effectively with other FSS operators and to adapt to new competition and new technologies or failure to implement our business strategy while maintaining our existing business could result in a loss of revenue and a decline in profitability, a decrease in the value of our business and a downgrade of our credit ratings, which could restrict our access to the capital markets.

The market for FSS may not grow or may shrink, and therefore we may not be able to attract new customers, retain our existing customers or implement our strategies to grow our business. In addition, pricing pressures may have an adverse impact on FSS sector revenue.

The FSS sector, as a whole, has experienced growth over the past few years. However, the future market for FSS may not grow or may shrink. Competing technologies, such as fiber optic cable, continue to adversely affect the point-to-point segment of the FSS sector. In the point-to-multipoint segment, economic downturns, the transition of video traffic from analog to digital and continuing improvements in compression technology, which allow for improved transmission efficiency, have negatively impacted demand for certain fixed satellite services. Developments that we expect to support the growth of the satellite services industry, such as continued growth in data traffic and the proliferation of direct-to-home (“DTH”) platforms, high definition television (“HDTV”) and niche programming, may fail to materialize or may not occur in the manner or to the extent we anticipate. Any of these industry dynamics could negatively affect our operations and financial condition.

Because the market for FSS may not grow or may shrink, we may not be able to attract customers for the services that we are providing as part of our strategy to sustain and grow our business. Reduced growth in the FSS sector may also adversely affect our ability to retain our existing customers. A shrinking market could reduce the number and value of our customer contracts and would have a material adverse effect on our business and results of operations. In addition, there could be a substantial negative impact on our credit ratings and our ability to access the capital markets.

The FSS sector has in the past, experienced periods of pricing pressures that have resulted in reduced revenues of FSS operators. Current pricing pressures and potential pricing pressures in the future could have a significant negative impact on our revenues and financial condition.

We have a substantial amount of indebtedness, which may adversely affect our cash flow and our ability to operate our business, remain in compliance with debt covenants and make payments on our indebtedness.

As of December 31, 2016, on a consolidated basis, we had approximately \$14.5 billion principal amount of third-party indebtedness outstanding, approximately \$4.9 billion of which was secured debt. On a pro forma basis, after giving effect to certain debt exchange transactions completed in December 2016 and January 2017, we had approximately \$14.5 billion principal amount of third-party indebtedness outstanding on a consolidated basis. Our subsidiaries were the issuers or borrowers of this debt as follows: (a) Intelsat (Luxembourg) S.A. (“Intelsat Luxembourg”), had approximately \$14.5 billion principal amount of total third-party indebtedness outstanding on a consolidated basis, approximately \$4.9 billion of which was secured debt, (b) Intelsat Connect Finance S.A. (“ICF”), had approximately \$731.9 million principal amount of total third-party indebtedness outstanding on a stand-alone basis, and (c) Intelsat Jackson Holdings S.A. (“Intelsat Jackson”), had approximately \$11.8 billion principal amount of total third-party indebtedness outstanding on a consolidated basis, approximately \$4.9 billion of which was secured debt. Intelsat Luxembourg debt, ICF debt and Intelsat Jackson debt are included in our consolidated debt.

The indentures and credit agreements governing a substantial portion of the outstanding debt of Intelsat Luxembourg, ICF and Intelsat Jackson and their respective subsidiaries permit each of these companies to make payments to their respective direct and indirect parent companies to fund the cash interest payments on such indebtedness, so long as no default or event of default shall have occurred and be continuing or would occur as a consequence thereof.

Our substantial indebtedness could have important consequences. For example, it could:

- make it more difficult for us to satisfy obligations with respect to indebtedness, and any failure to comply with the obligations of any of our debt instruments, including financial and other restrictive covenants, could result in an event of default under the indentures governing our notes and the agreements governing such other indebtedness;
- require us to dedicate a substantial portion of available cash flow to pay principal and interest on our outstanding debt, which will reduce the funds available for working capital, capital expenditures, acquisitions and other general corporate purposes;
- limit flexibility in planning for and reacting to changes in our business and in the industry in which we operate;
- increase our vulnerability to general adverse economic and industry conditions and to deterioration in operating results;
- limit our ability to engage in strategic transactions or implement our business strategies;
- limit our ability to borrow additional funds, or to refinance, repay or restructure our existing indebtedness; and
- place us at a disadvantage compared to any competitors that have less debt.

Any of the factors listed above could materially and adversely affect our business and our results of operations. Furthermore, our interest expense could increase if interest rates rise because certain portions of our debt bear interest at floating rates. Our interest expense could also increase when we refinance debt. If we do not have sufficient cash flow to service our debt, we may be required to refinance all or part of our existing debt, sell assets, borrow more money or sell securities, none of which we can guarantee we will be able to do.

We may be able to incur significant additional indebtedness in the future. Although the agreements governing our indebtedness contain restrictions on the incurrence of certain additional indebtedness, these restrictions are subject to a number of important qualifications and exceptions, and the indebtedness incurred in compliance with these restrictions could be substantial. If we incur new indebtedness, the related risks, including those described above, could intensify.

To service our third-party indebtedness, we will require a significant amount of cash. Our ability to generate cash depends on many factors beyond our control, and any failure to meet our third-party debt service obligations could harm our business, financial condition and results of operations.

On a pro forma basis, after giving effect to certain debt exchange transactions completed in December 2016 and January 2017, our estimated payment obligations with respect to third-party indebtedness (i.e., not held by ICF or any of our other subsidiaries) for 2017, comprise approximately \$996 million of interest payments, excluding payments related to satellite performance incentives due to satellite manufacturers. Of this amount, \$748 million is attributable to Intelsat Jackson, \$158 million is attributable to Intelsat Luxembourg and \$90 million is attributable to Intelsat Connect.

Our ability to satisfy our debt obligations will depend principally upon our future operating performance. As a result, prevailing economic conditions and financial, business and other factors, many of which are beyond our control, will affect our ability to make payments on our indebtedness. If we do not generate sufficient cash flow from operations to satisfy our debt service obligations, or if our subsidiaries are prohibited from paying dividends or making distributions because of restrictions in the agreements governing their indebtedness or otherwise, we may have to pursue alternative financing plans, such as refinancing or restructuring our indebtedness, selling assets, reducing or delaying capital investments or seeking to raise additional capital. Our ability to refinance or restructure our debt will depend on the capital markets and our financial condition at such time. Any refinancing of our debt could be at higher interest rates and may require us to comply with more onerous covenants, which could further restrict our business operations. In addition, the terms of our and our subsidiaries' existing or future debt instruments, including the Intelsat Jackson Secured Credit Agreement and the indentures governing Intelsat Luxembourg's, Intelsat Jackson's and ICF's outstanding notes, may restrict us from adopting some of these alternatives. Furthermore, the Sponsors (as defined below in Item 4A—History and Development of the Company—The Sponsors Acquisition Transactions) have no obligation to provide us with debt or equity financing in the future. Our inability to generate sufficient cash flow to satisfy our debt service obligations, or to refinance our obligations on commercially reasonable terms would have an adverse effect, which could be material, on our business, financial position, results of operations and cash flows.

The terms of the Intelsat Jackson Secured Credit Agreement, the indentures governing our existing notes and the terms of our other indebtedness may restrict our current and future operations, particularly our ability to respond to changes in our business or to take certain actions.

On January 12, 2011, Intelsat Jackson, our wholly-owned subsidiary, entered into a secured credit agreement (as amended, the "Intelsat Jackson Secured Credit Agreement"). The Intelsat Jackson Secured Credit Agreement, the indentures governing our existing notes and the terms of our other outstanding indebtedness contain, and any future indebtedness of ours would likely contain, a number of restrictive covenants imposing significant operating and financial restrictions on Intelsat S.A. and some or all of its subsidiaries, including restrictions that may limit our ability to engage in acts that may be in our long-term best interests. The Intelsat Jackson Secured Credit Agreement includes two financial covenants. Intelsat Jackson must maintain a consolidated secured debt to consolidated EBITDA ratio of less than or equal to 3.50 to 1.00 at the end of each fiscal quarter as well as a consolidated EBITDA to consolidated interest expense ratio of greater than or equal to 1.75 to 1.00 at the end of each fiscal quarter, in each case as such financial measures are defined in the Intelsat Jackson Secured Credit Agreement.

In addition, the Intelsat Jackson Secured Credit Agreement requires Intelsat Jackson to use a portion of the proceeds of certain asset sales, in excess of a specified amount, that are not reinvested in its business to repay indebtedness under the agreement.

The Intelsat Jackson Secured Credit Agreement, the indentures governing our existing notes and the terms of our other outstanding indebtedness include covenants restricting, among other things, the ability of Intelsat S.A. and its subsidiaries to:

- incur or guarantee additional debt or issue disqualified stock;
- pay dividends (including to fund cash interest payments at different entity levels), or make redemptions, repurchases or distributions, with respect to ordinary shares or capital stock;

- create or incur certain liens;
- make certain loans or investments;
- engage in mergers, acquisitions, amalgamations, asset sales and sale and leaseback transactions; and
- engage in transactions with affiliates.

These covenants are subject to a number of qualifications and exceptions. The operating and financial restrictions and covenants in our existing debt agreements and any future financing agreements may adversely affect our ability to finance future operations or capital needs or to engage in other business activities. A breach of any of the restrictive covenants in the Intelsat Jackson Secured Credit Agreement could result in a default under such agreement. If any such default occurs, the lenders under the Intelsat Jackson Secured Credit Agreement may elect to declare all outstanding borrowings, together with accrued interest and other fees, to be immediately due and payable, enforce their security interest or require us to apply all available cash to repay these borrowings. If this occurred under the Intelsat Jackson Secured Credit Agreement, this would result in an event of default under our existing notes. The lenders under the Intelsat Jackson Secured Credit Agreement will also have the right in these circumstances to terminate any commitments they have to fund further borrowings. If Intelsat Jackson were unable to repay outstanding borrowings when due, the lenders under the Intelsat Jackson Secured Credit Agreement would have the right to proceed against the collateral granted to them to secure the debt owed to them. If the debt under the Intelsat Jackson Secured Credit Agreement were to be accelerated, our assets might not be sufficient to repay such debt in full or to repay our notes and our other debt.

Our business is capital intensive and requires us to make long-term capital expenditure decisions, and we may not be able to raise adequate capital to finance our business strategies, or we may be able to do so only on terms that significantly restrict our ability to operate our business.

Implementation of our business strategy requires a substantial outlay of capital. As we pursue our business strategies and seek to respond to opportunities and trends in our industry, our actual capital expenditures may differ from our expected capital expenditures and there can be no assurance that we will be able to satisfy our capital requirements in the future. The nature of our business also requires us to make capital expenditure decisions in anticipation of customer demand, and we may not be able to correctly predict customer demand. We have only a fixed amount of transponder capacity available to serve a particular region. If our customer demand exceeds our transponder capacity, we may not be able to fully capture the growth in demand in the region served by that capacity. We currently expect that our liquidity requirements in 2017 will be satisfied by cash on hand and cash generated from our operations. However, if we determine we need to obtain additional funds through external financing and are unable to do so, we may be prevented from fully implementing our business strategy.

The availability and cost to us of external financing depend on a number of factors, including general market conditions, our financial performance and our credit rating. Both our credit rating and our ability to obtain financing generally may be influenced by the supply and demand characteristics of the telecommunications sector in general and of the FSS sector in particular. Declines in our expected future revenue under contracts with customers and challenging business conditions faced by our customers are among factors that may adversely affect our credit. Other factors that could impact our credit include the amount of debt in our current capital structure, activities associated with our strategic initiatives, our expected future cash flows and the capital expenditures required to execute our business strategy. The overall impact on our financial condition of any transaction that we pursue may be negative or may be negatively perceived by the financial markets and ratings agencies and may result in adverse rating agency actions with respect to our credit rating. A disruption in the capital markets, a deterioration in our financial performance or a credit rating downgrade could limit our ability to obtain financing or could result in any such financing being available only at greater cost or on more restrictive terms than might otherwise be available. Our debt agreements also impose restrictions on our operation of our business and could make it more difficult for us to obtain further external financing if required. See—The terms of the Intelsat Jackson Secured Credit Agreement, the indentures governing our existing notes and the terms of our other indebtedness may restrict our current and future operations, particularly our ability to respond to changes in our business or to take certain actions.

Long-term disruptions in the capital and credit markets as a result of uncertainty due to recent recessions, changing or increased regulation or failures of significant financial institutions could adversely affect our access to capital. If financial market disruptions intensify, it may become difficult for us to raise additional capital or refinance debt when needed, on acceptable terms or at all. Any disruption could require us to take measures to conserve cash until the markets stabilize or until alternative credit arrangements or other funding for our business needs can be arranged. Such measures could include deferring capital expenditures and reducing or eliminating other discretionary uses of cash, which could adversely impact our business and our ability to execute our business strategies.

Our financial condition could be materially and adversely affected if we were to suffer a satellite loss that is not adequately covered by insurance.

We currently carry in-orbit insurance only with respect to a small portion of our satellite fleet, generally for a short period of time following launch. As of December 31, 2016, four of the approximately 50 satellites in our fleet were covered by in-orbit insurance. Amounts recoverable from in-orbit insurance coverage may initially be comparable to amounts recoverable with respect to launch insurance coverage; however, such amounts generally decrease over time and are typically based on our declining potential repayment obligations with respect to certain customer prepayments made prior to or during the manufacture of certain satellites, or the declining book value of the satellite.

As our satellite insurance policies expire, we may elect to reduce or eliminate insurance coverage relating to certain of our satellites to the extent permitted by our debt agreements if, in our view, exclusions make such policies ineffective or the costs of coverage make such insurance impractical and we believe that we can more reasonably protect our business through the use of in-orbit spare satellites, backup transponders and self-insurance. A partial or complete failure of a revenue-producing satellite, whether insured or not, could require additional, unplanned capital expenditures, an acceleration of planned capital expenditures, interruptions in service, a reduction in contracted backlog and lost revenue and could have a material adverse effect on our business, financial condition and results of operations. We do not currently insure against lost revenue in the event of total or partial loss of a satellite.

We also maintain third-party liability insurance on some of our satellites to cover damage caused by our satellites. This insurance, however, may not be adequate or available to cover all third-party liability damages that may be caused by any of our satellites, and we may not in the future be able to renew our third-party liability coverage on reasonable terms and conditions, if at all.

We may become subject to unanticipated tax liabilities that may have a material adverse effect on our results of operations.

Intelsat S.A and certain of its subsidiaries are Luxembourg-based companies and are subject to Luxembourg taxation for corporations. We believe that a significant portion of the income derived from our communications network will not be subject to tax in certain countries in which we own assets or conduct activities or in which our customers are located, including the United States and the United Kingdom. However, this belief is based on the presently anticipated nature and conduct of our business and on our current position under the tax laws of the countries in which we own assets or conduct activities. This position is subject to review and possible challenge by taxing authorities and to possible changes in law that may have a retroactive effect.

In addition, we conduct business with customers and counterparties in multiple countries and jurisdictions. Our overall tax burden is affected by tax legislation in these jurisdictions and the terms of income tax treaties between these countries and the countries in which our subsidiaries are qualified residents for treaty purposes as in effect from time to time. Tax legislation in these countries and jurisdictions may be amended and treaties are regularly renegotiated by the contracting countries and, in each case, may change. If tax legislation or treaties were to change, we could become subject to additional taxes, including retroactive tax claims or assessments of withholding on amounts payable to us or other taxes assessed at the source, in excess of the taxation we anticipate based on business contracts and practices and the current tax regimes. The extent to which certain taxing jurisdictions may require us to pay tax or to make payments in lieu of tax cannot be determined in advance. Our results of operations could be materially adversely affected if we become subject to a significant amount of unanticipated tax liabilities.

We are subject to political, economic, regulatory and other risks due to the international nature of our operations.

We provide communications services in approximately 200 countries and territories. Accordingly, we may be subject to greater risks than other companies as a result of the international nature of our business operations. We could be harmed financially and operationally by tariffs, taxes, government sanctions and regulatory actions, and other trade barriers that may be imposed on our services, or by political and economic instability in the countries in which we provide services, for instance in countries heavily reliant on revenues from natural resources. If we ever need to pursue legal remedies against our customers or our business partners located outside of Luxembourg, the United States or the United Kingdom, it may be difficult for us to enforce our rights against them depending on their location.

Substantially all of our on-going technical operations are conducted and/or managed in the United States, Luxembourg and Germany. However, providers of satellite launch services, upon which we are reliant to place our satellites into orbit, locate their operations in other countries, including Kazakhstan. Political disruptions in this country could increase the risk of launching the satellites that provide capacity for our operations, which could result in financial harm to us.

Our business is subject to foreign currency risk.

Almost all of our customers pay for our services in U.S. dollars, although we are exposed to some risk related to customers who do not pay in U.S. dollars. Fluctuations in the value of non-U.S. currencies may make payment in U.S. dollars more expensive for our non-U.S. customers, and in certain circumstances, cause us to renegotiate prices or other terms in contracts in order to retain such customers. For instance, our Russian customers and others may face difficulties paying for our services because of recent deterioration in the Russian currency and the relative strength of the U.S. dollar compared to many other currencies. In addition, our non-U.S. customers may have difficulty obtaining U.S. currency and/or remitting payment due to currency exchange controls.

Our Sponsors own a significant amount of our common shares and may have conflicts of interest with us in the future.

Our Sponsors (as defined below in Item 4A—History and Development of the Company—The Sponsors Acquisition Transactions) hold in the aggregate approximately 65% of our common shares. By virtue of their share ownership, the Sponsors may be able to influence decisions to enter into any corporate transaction or other matter that requires the approval of shareholders. Additionally, the Sponsors are in the business of making investments in companies and, although they do not currently hold interests in any business that competes directly or indirectly with us, may from time to time acquire and hold interests in businesses that compete with us. The Sponsors may also pursue acquisition opportunities that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us.

We have several large customers and the loss of, or default by, these customers could materially reduce our revenue and materially adversely affect our business.

A limited number of customers provide a substantial portion of our revenue and contracted backlog. For the year ended December 31, 2016, our ten largest customers and their affiliates represented approximately 31% of our revenue. The loss of, or default by, our larger customers could adversely affect our current and future revenue and operating margins.

Some customers have in the past defaulted and, although we monitor our larger customers' financial performance and seek deposits, guarantees and other methods of protection against default where possible, our customers may in the future default on their obligations to us due to bankruptcy, lack of liquidity, operational failure, devaluation of local currency or other reasons. Defaults by any of our larger customers or by a group of smaller customers who, collectively, represent a significant portion of our revenue could adversely affect our revenue, operating margins and cash flows. If our contracted backlog is reduced due to the financial difficulties of our customers, our revenue, operating margins and cash flows would be further negatively impacted.

Reductions or changes in U.S. government spending, including the U.S. defense budget, could reduce our revenue and adversely affect our business.

The U.S. government, through the U.S. Department of Defense and other agencies, is one of our largest customers. Spending authorizations for defense-related and other programs by the U.S. government have fluctuated in the past, and future levels of expenditures and authorizations for these programs may decrease, remain constant or shift to programs in areas where we do not currently provide services. We provide services to the U.S. government and its agencies through contracts that are conditioned upon the continuing availability of Congressional appropriations. Congress usually appropriates funds on a fiscal year basis, even though contract performance may extend over many years. In recent years, there has been a pattern of delays in the finalization and approval of the U.S. government budget, which can create uncertainty over the extent of future U.S. government demand for our services. Furthermore, in light of the current geopolitical situation, with reductions in U.S. operational presence in Iraq, Afghanistan and potentially the Middle East more generally, there may be additional future declines in the U.S. government's demand for and use of our services. To the extent the U.S. government and its agencies reduce spending on commercial satellite services, this could adversely affect our revenue and operating margins.

The loss of the services of key personnel could have a material adverse effect on our business.

Our executive officers and other members of our senior management have been a critical element of our success. These individuals have substantial experience and expertise in our business and have made significant contributions to its growth and success. We have entered into employment agreements with each of our executive officers, including David McGlade, our Executive Chairman, Stephen Spengler, our Chief Executive Officer, Jacques Kerrest, our Executive Vice President and Chief Financial Officer, Michelle Bryan, our Executive Vice President, General Counsel and Chief Administrative Officer, Kurt Riegelman, our Senior Vice President, Sales and Marketing and Michael DeMarco, our Senior Vice President, Operations, and certain targeted retention mechanisms; however, these agreements and mechanisms do not guarantee that these executives will remain with us. The unexpected loss of services of one or more of our executive officers or members of senior management could have a material adverse effect on our business.

We have received letters alleging defaults under certain of our existing indentures. If proved correct, such allegations could materially and adversely impact us.

From May 13 to July 7, 2016, our subsidiary, Intelsat Jackson received four letters (the “Letters”), all of which were publicly disseminated by the authors, from funds affiliated with Aurelius Capital Management, LP (“Aurelius”) that purported to hold outstanding 7.25% Senior Notes due 2020 (the “2020 Notes”) of Intelsat Jackson and from counsel to and affiliates of such funds. We believe that the transactions referenced in the Letters, relating primarily to the third quarter of 2015 and the first two quarters of 2016, were in compliance with all of our debt agreements and applicable law and that allegations to the contrary in the Letters are wrong. However, it should be noted that:

- The matters asserted in the Letters, or other allegations alleging a default by Intelsat Jackson, may become the subject of legal proceedings. We intend to vigorously defend our position in any actions or proceedings stemming from the allegations contained in the Letters. However, no assurance can be given that we would prevail in any such legal proceedings.
- No assurance can be given that holders of the 2020 Notes or Intelsat Jackson’s other indebtedness, including lenders under Intelsat Jackson’s Secured Credit Agreement, will not take a similar position to Aurelius, raise new allegations, pursue legal proceedings or assert a default under the applicable debt agreements and seek to enforce their rights and remedies, including acceleration of our debt obligations.
- We rely on access to debt capital in order to address maturities of our existing indebtedness as it comes due. The pendency of the allegations made in the Letters and the possibility of the other consequences set forth in this Annual Report may make it difficult for us to access the capital markets or obtain credit, or may make the terms on which we could raise money more onerous.
- If a default or event of default, as applicable, were to occur under any of Intelsat Jackson’s material debt agreements and not timely cured, the indebtedness thereunder could be declared immediately due and payable and such acceleration could result in an event of default under, and acceleration of, Intelsat Jackson’s other indebtedness.

Risks Relating to the Transactions

The Transactions are subject to a number of conditions, and may not be completed on the terms or timeline currently contemplated, or at all.

The Transactions with OneWeb and SoftBank described in *Item 4B – Business Overview – Recent Developments* are expected to close late in the third quarter of 2017 and are subject to the completion of certain debt exchange offers, certain regulatory approvals and other customary closing conditions. If these conditions are not satisfied or waived, the Transactions will not be consummated. If Intelsat is not able to consummate the exchange offers as described in the Combination Agreement, the Merger may not be consummated. The willingness of the holders of certain of our subsidiaries’ notes to reduce the aggregate principal amount of the notes in the exchange offers may depend in part on the holders’ assessment of the impact of nonconsummation of the Merger on the trading value of those notes, and their assessment of the trading value of the newly issued notes in the event the Merger is consummated. In addition, under certain circumstances, Intelsat or OneWeb may terminate the Combination Agreement if the acquisition has not closed on or prior to February 28, 2018.

As of the date of this Annual Report on Form 20-F, Intelsat has not consummated the exchange offers, and Intelsat may not be able to consummate the exchange offer transactions, in which case the Merger may not be consummated.

We may not realize the anticipated benefits of the Transactions.

The Transactions involve the integration of two companies that have previously operated independently. The integration of our operations with those of OneWeb is expected to result in financial and operational benefits, including increased revenues, cost savings and other synergies. There can be no assurance, however, as to when or the extent to which we will be able to realize these increased revenues, cost savings or other synergies or benefits. Integration may also be difficult, unpredictable, and subject to delay because of possible company culture conflicts. We must integrate or, in some cases, replace or, with respect to OneWeb, develop, numerous systems, including those involving management information, purchasing, accounting and finance, sales, billing, employee benefits, payroll and regulatory compliance, which may be dissimilar. Moreover, we anticipate that we may incur significant expenses in connection with the integration of our business with OneWeb’s, the development of systems for OneWeb and our efforts to realize expected synergies. Difficulties associated with integration could adversely affect the revenues, earnings, cash flows and expenses of Intelsat.

The pendency of the Transactions could adversely affect the business and operations of Intelsat.

In connection with the pending Transactions, some customers or vendors of Intelsat may delay or defer decisions, which could adversely affect the revenues, earnings, cash flows and expenses of Intelsat, regardless of whether the Merger is completed. Similarly, current and prospective employees of Intelsat may experience uncertainty about their future roles with Intelsat following the Transactions, which may materially adversely affect the ability of Intelsat to attract and retain key personnel during the pendency of the Transactions. In addition, due to operating covenants in the Transaction Agreements, Intelsat may be unable (without OneWeb's or SoftBank's prior written consent, as applicable), during the pendency of the Transactions, to pursue strategic transactions, undertake significant capital projects, undertake certain significant financing transactions and otherwise pursue other actions, even if such actions would prove beneficial. The risks, and adverse effects, of such disruptions could be exacerbated by a delay in the completion of the Transactions or termination of the Transaction Agreements. These factors could adversely affect the revenues, earnings, cash flows and expenses of Intelsat, regardless of whether the Transactions are completed.

Integrating our business with that of OneWeb may divert our management's attention away from operations.

The integration of our and OneWeb's operations, products, and personnel, and the financing and development of the OneWeb business, may place a significant burden on our management and other internal resources. The diversion of management's attention, and any difficulties encountered in the transition and integration process, could harm our business, financial conditions and operating results.

If Intelsat fails to obtain all required consents and waivers, third parties may terminate or alter existing contracts.

Under certain of Intelsat's contracts, the Transactions may constitute a change in control, and, therefore, the counterparty may exercise certain rights under the applicable agreement upon the closing of the Transactions. Any such counterparty may request modifications of the applicable agreements as a condition to granting a waiver or consent under such agreement. There is no assurance that such counterparties will not exercise their rights under the agreements, including termination rights where available, that the exercise of any such rights will not result in a material adverse effect or that any modifications of such agreements will not result in a material adverse effect.

The exchange ratio in the Combination Agreement, and the purchase price in the SoftBank Investment, are fixed and will not be adjusted to reflect stock price changes of either Intelsat or OneWeb prior to the consummation of the Transactions.

In the proposed Merger, each OneWeb ordinary share will be converted into the right to receive 66 shares of Intelsat common stock, and the price per share at which SoftBank will purchase shares in the proposed SoftBank Investment is fixed. The exchange ratio and purchase price per share will not be adjusted to reflect stock price changes prior to the consummation of the Transactions.

Intelsat stockholders will be diluted by the Transactions.

The Merger and SoftBank Investment will dilute the ownership position of Intelsat shareholders. Based upon the number of outstanding shares on February 28, 2017, and on the terms of the Transactions as announced on February 28, 2017, upon the consummation of the Transactions including any equity issuances in connection with the exchange offers, we expect that existing Intelsat stockholders will own approximately 19% of the outstanding Intelsat shares.

Failure to consummate the Transactions could adversely affect the stock price and the future business and financial results of Intelsat.

If the Transactions are not completed for any reason, including as a result of the inability of Intelsat to consummate the required debt exchange offers, the ongoing businesses of Intelsat may be adversely affected and, without realizing any of the benefits of having completed the Transactions, Intelsat will be subject to numerous risks, including the following:

- having to pay substantial costs relating to the Transactions, such as legal, accounting, financial advisor, filing, and other fees that will have already been incurred;
- experiencing negative reactions from the financial markets, including negative impacts on its stock price, or from its customers, regulators and employees;
- focusing on the Transactions instead of on pursuing other opportunities that could be beneficial to the company, without realizing any of the benefits of having the Transactions consummated; and
- reputational harm due to the adverse perception of any failure to successfully consummate the Transactions.

If the Transactions are not consummated, Intelsat cannot assure its stockholders that these risks will not materialize and will not materially affect the business, financial results and stock price of Intelsat.

The failure to obtain required regulatory approvals in a timely manner or any materially burdensome conditions contained in any regulatory approvals could delay or prevent completion of the Transactions and diminish the anticipated benefits of the Transactions.

Completion of the Merger is conditional upon the receipt of certain regulatory approvals in the United States and in other jurisdictions under antitrust laws, foreign investment laws and satellite and earth station licensing requirements.

Although Intelsat and OneWeb have agreed in the Combination Agreement to use their reasonable best efforts to obtain the requisite regulatory approvals, there can be no assurance that the applicable regulatory approvals will be obtained in a timely manner, or at all. The requirement to receive such approvals before the closing of the Transactions could delay the consummation of the Transactions. Any delay in completing the Merger, or any additional conditions imposed in order to obtain regulatory approvals to complete the Transactions, may adversely affect the synergies and other benefits that Intelsat expects to achieve if the Transactions and the integration of the companies' respective businesses are completed within the expected timeframe, and could result in additional transaction costs, loss of revenue or other effects associated with uncertainty about the Transactions.

Risk Factors Relating to Our Industry

We may experience in-orbit satellite failures or degradations in performance that could impair the commercial performance of our satellites, which could lead to lost revenue, an increase in our cash operating expenses, lower operating income or lost backlog.

Satellites utilize highly complex technology and operate in the harsh environment of space and, accordingly, are subject to significant operational risks while in orbit. These risks include malfunctions, commonly referred to as anomalies, that have occurred in our satellites and the satellites of other operators as a result of:

- the satellite manufacturer's error, whether due to the use of new and largely unproven technology or due to a design, manufacturing or assembly defect that was not discovered before launch;
- problems with the power systems of the satellites, including:
 - circuit failures or other array degradation causing reductions in the power output of the solar arrays on the satellites, which could cause us to lose some of our capacity, require us to forego the use of some transponders initially and to turn off additional transponders in later years; and/or
 - failure of the cells within the batteries, whose sole purpose is to power the payload and spacecraft operations during the daily eclipse periods which occur for brief periods of time during two 40-day periods around March 21 and September 21 of each year; and/or
- problems with the control systems of the satellites, including:
 - failure of the primary and/or backup satellite control processor ("SCP"); and/or
 - failure of the Xenon-Ion Propulsion System ("XIPS") used on certain Boeing satellites, which is an electronic propulsion system that maintains the spacecraft's proper in-orbit position; and/or
- general failures resulting from operating satellites in the harsh space environment, such as premature component failure or wear out, including:
 - failure of one or more gyroscope and/or associated electronics that are used to provide satellite attitude information during maneuvers.

We have experienced anomalies in each of the categories described above. Although we work closely with the satellite manufacturers to determine and eliminate the cause of these anomalies in new satellites and provide for on-satellite backups for certain critical components to minimize or eliminate service disruptions in the event of failure, we may experience anomalies in the future, whether of the types described above or arising from the failure of other systems or components. These anomalies can manifest themselves in scale from minor reductions of equipment redundancy to marginal reductions in capacity to complete satellite failure. Some of our satellites have experienced significant anomalies in the past and some have components that are now known to be susceptible to similar significant anomalies. Each of these is discussed in Item 4B—Business Overview—Satellite Health and Technology. An on-satellite backup for certain components may not be available upon the occurrence of such an anomaly.

Any single anomaly or series of anomalies could materially and adversely affect our operations, our revenues, our relationships with our current customers and our ability to attract new customers for our satellite services. In particular, future anomalies may result in the loss of individual transponders on a satellite, a group of transponders on that satellite or the entire satellite, depending on the nature of the anomaly and the availability of on-satellite backups. Anomalies and our estimates of their future effects may also cause a reduction of the expected service life of a satellite and contracted backlog. Anomalies may also cause a reduction of the revenue generated by that satellite or the recognition of an impairment loss, and in some circumstances could lead to claims from third parties for damages, if a satellite experiencing an anomaly were to cause physical damage to another satellite, create interference to the transmissions on another satellite, cause other satellite operators to incur expenses to avoid such physical damage or interference or lower operating income as a result of an impairment charge. Finally, the occurrence of anomalies may adversely affect our ability to insure our satellites at commercially reasonable premiums, if at all. While some anomalies are covered by insurance policies, others are not or may not be covered. See—Risk Factors Relating to Our Business—Our financial condition could be materially and adversely affected if we were to suffer a satellite loss that is not adequately covered by insurance.

Many of the technical problems we have experienced on our current fleet have been component failures and anomalies. Our Intelsat 804 satellite experienced a sudden and unexpected electrical power system anomaly that resulted in the total loss of the satellite in January 2005. The Intelsat 804 satellite was an LM 7000 series satellite, and as of December 31, 2016, we operated one other satellite in the LM 7000 series, Intelsat 805. We believe that the Intelsat 804 satellite failure was most likely caused by a high current event in the battery circuitry triggered by an electrostatic discharge that propagated to cause the sudden failure of the high voltage power system.

Our Intelsat 802 satellite, which was also an LM 7000 series satellite, experienced a reduction of electrical power capability that resulted in a degraded capability of the satellite in September 2006. A significant subset of transponders on Intelsat 802 was subsequently reactivated and operated normally until the end of its service life in September 2010, when it was decommissioned. We believe that the Intelsat 802 anomaly was most likely caused by an electrical short internal to the solar array harness located on the south solar array boom.

Our Galaxy 15 satellite experienced an anomaly in April 2010 resulting in our inability to command the satellite. We transitioned all media traffic on this satellite to our Galaxy 12 satellite, which was our designated in-orbit spare satellite for the North America region. Galaxy 15 is a Star-2 satellite manufactured by Orbital Sciences Corporation. On December 23, 2010, we recovered command of the spacecraft and subsequently completed diagnostic testing and uploading of software updates that protect against future anomalies of this type. Galaxy 15 continues to provide normal service.

We may also experience additional anomalies relating to the failure of the SCP in our BSS 601 satellite, various anomalies associated with XIPS in our BSS 601 HP satellites or a progressive degradation of the solar arrays in certain of our BSS 702 satellites.

Three of the BSS 601 satellites that we operated in the past, as well as BSS 601 satellites operated by others, have experienced a failure of the primary and backup SCPs. On February 1, 2010, our Intelsat 4 satellite experienced an anomaly of its backup SCP and was taken out of service. This event did not have a material impact on our operations or financial results. As of December 31, 2016, we operate only one BSS 601 satellite, Intelsat 26.

Certain of the BSS 601 HP satellites have experienced various problems associated with their XIPS. We currently operate four BSS 601 HP satellites of this type, three of which have experienced failures of both XIPS and the other has experienced a partial loss of its XIPS. We may in the future experience similar problems associated with XIPS or other propulsion systems on our satellites.

Two of the three BSS 702 HP satellites that we operate, as well as BSS 702 HP satellites of a similar design operated by others, have experienced a progressive degradation of their solar arrays causing a reduction in output power. Along with the manufacturer, we continually monitor the problem to determine its cause and its expected effect. The power reduction may require us to permanently turn off certain transponders on the affected satellites to allow for the continued operation of other transponders, which could result in a loss of revenues, or may result in a reduction of the satellite's service life. In 2004, based on a review of available data, we reduced our estimate of the service lives of both satellites due to the continued degradation.

On April 22, 2011, our Intelsat 28 satellite, formerly known as the Intelsat New Dawn satellite, was launched into orbit. Subsequent to the launch, the satellite experienced an anomaly during the deployment of its west antenna reflector, which controls communications in the C-band frequency. The anomaly had not been experienced previously on other STAR satellites manufactured by Orbital Sciences Corporation, including those in our fleet. The New Dawn joint venture filed a partial loss claim with its insurers relating to the C-band antenna reflector anomaly and all of the insurance proceeds from the partial loss claim were received in 2011. The Ku-band antenna reflector deployed and that portion of the satellite is operating as planned, entering service in June 2011. A Failure Review Board established to determine the cause of the anomaly completed its investigation in July 2011 and concluded that

the deployment anomaly of the C-band reflector was most likely due to a malfunction of the reflector sunshield. As a result, the sunshield interfered with the ejection release mechanism, and prevented the deployment of the C-band antenna. The Failure Review Board also recommended corrective actions for Orbital Sciences Corporation satellites not yet launched to prevent reoccurrence of the anomaly. Appropriate corrective actions were implemented on Intelsat 18, which was successfully launched on October 5, 2011, and on Intelsat 23, which was launched in October 2012.

During launch operations of Intelsat 19 on June 1, 2012, the satellite experienced damage to its south solar array. Although both solar arrays are deployed, the power available to the satellite is less than is required to operate 100% of the payload capacity. The Independent Oversight Board (“IOB”), formed by Space Systems/Loral, LLC (“SSL”) and Sea Launch to investigate the solar array deployment anomaly, concluded that the anomaly occurred before the spacecraft separated from the launch vehicle during the ascent phase of the launch, and originated in one of the satellite’s two solar array wings due to a rare combination of factors in the panel fabrication that was unrelated to the launch vehicle. While the satellite is operational, the anomaly resulted in structural and electrical damage to one solar array wing, which reduced the amount of power available for payload operation. Additionally, we filed a partial loss claim with our insurers relating to the solar array anomaly. We received \$84.8 million of insurance proceeds related to the claim in 2013. As planned, Intelsat 19 replaced Intelsat 8 at 166°E, in August 2012.

During the orbit raising of Intelsat 33e in September 2016, the satellite experienced a malfunction of the main satellite thruster. Orbit raising was subsequently completed using a different set of satellite thrusters. The anomaly resulted in a delay of approximately three months in the satellite reaching geostationary orbit as well as a reduction in the satellite’s estimated lifetime. Intelsat 33e entered service in January 2017, and currently, there is no evidence of any impact to the communications payload. A Failure Review Board has been established to determine the cause of the anomaly. Intelsat has filed a notice of occurrence with insurers relating to the reduction of life.

We may experience a launch failure or other satellite damage or destruction during launch, which could result in a total or partial satellite loss. A new satellite could also fail to reach its designated orbital location after launch. Any such loss of a satellite could negatively impact our business plans and could reduce our revenue.

Satellites are subject to certain risks related to failed launches. Launch failures result in significant delays in the deployment of satellites because of the need both to construct replacement satellites, which can take 24 months or longer, and to obtain other launch opportunities. Such significant delays could materially and adversely affect our operations and our revenue. In addition, significant delays could give customers who have purchased or reserved capacity on that satellite a right to terminate their service contracts relating to the satellite. We may not be able to accommodate affected customers on other satellites until a replacement satellite is available. A customer’s termination of its service contracts with us as a result of a launch failure would reduce our contracted backlog. Delay caused by launch failures may also preclude us from pursuing new business opportunities and undermine our ability to implement our business strategy.

Launch vehicles may also under-perform, in which case the satellite may still be placed into service by using its onboard propulsion systems to reach the desired orbital location, resulting in a reduction in its service life. In addition, although we have had launch insurance on all of our launches to date, if we were not able to obtain launch insurance on commercially reasonable terms and a launch failure were to occur, we would directly suffer the loss of the cost of the satellite and related costs, which could be more than \$250 million.

On February 1, 2013, the launch vehicle for our Intelsat 27 satellite failed shortly after liftoff and the satellite was completely destroyed. A Failure Review Board was established and subsequently concluded that the launch failed due to the mechanical failure of one of the first stage engine’s thrust control components. The satellite and launch vehicle were fully insured, and all of the insurance proceeds from the loss claim were received in 2013.

Since 1980, we and the entities we have acquired have launched 119 satellites. Including the Intelsat 27 satellite, seven of these satellites were destroyed as a result of launch failures, all but one of which occurred prior to 2000. In addition, certain launch vehicles that we have used or are scheduled to use have experienced launch failures in the past. Launch failure rates vary according to the launch vehicle used. As of December 31, 2016, we had seven satellites which are in the manufacturing and design phase, or recently launched, from 2017 to 2019. We also have three other satellites in development, which will not require capital expenditure.

New or proposed satellites are subject to construction and launch delays, the occurrence of which can materially and adversely affect our operations.

The construction and launch of satellites are subject to certain delays. Such delays can result from delays in the construction of satellites and launch vehicles, the periodic unavailability of reliable launch opportunities, possible delays in obtaining regulatory approvals and launch failures. We have in the past experienced delays in satellite construction and launch which have adversely affected our operations. Future delays may have the same effect. A significant delay in the future delivery of any satellite may also adversely affect our marketing plan for the satellite. If satellite construction schedules are not met, a launch opportunity may not be available at the time a satellite is ready to be launched. Further, any significant delay in the commencement of service of any of our satellites could enable customers who pre-purchased or agreed to utilize transponder capacity on the satellite to terminate their contracts and could affect our plans to replace an in-orbit satellite prior to the end of its service life. The failure to implement our satellite deployment plan on schedule could have a material adverse effect on our financial condition and results of operations. Delays in the launch of a satellite intended to replace an existing satellite that result in the existing satellite reaching its end of life before being replaced could result in loss of business to the extent an in-orbit backup is not available. As of December 31, 2016, we had seven satellites which are in the manufacturing and design phase, or recently launched, from 2017 to 2019. We also have three other satellites in development, which will not require capital expenditure.

Our dependence on outside contractors could result in increased costs and delays related to the launch of our new satellites, which would in turn adversely affect our business, operating results and financial condition.

There are a limited number of companies that we are able to use to launch our satellites and a limited number of commercial satellite launch opportunities available in any given time period. Adverse events with respect to our launch service providers, such as satellite launch failures or financial difficulties (which some of these providers have previously experienced), could result in increased costs or delays in the launch of our satellites. General economic conditions may also affect the ability of launch providers to provide launch services on commercially reasonable terms or to fulfill their obligations in terms of launch dates, pricing, or both. In the event that our launch service providers are unable to fulfill their obligations, we may have difficulty procuring alternative services in a timely manner and may incur significant additional expenses as a result. Any such increased costs and delays could have a material adverse effect on our business, operating results and financial condition.

A natural disaster could diminish our ability to provide communications service.

Natural disasters could damage or destroy our ground stations, resulting in a disruption of service to our customers. We currently have the technology to help safeguard our antennas and protect our ground stations during natural disasters such as a hurricane, but the collateral effects of disasters such as flooding may impair the functioning of our ground equipment. If a future natural disaster impairs or destroys any of our ground facilities, we may be unable to provide service to our customers in the affected area for a period of time and may incur an impairment charge lowering our operating income.

Risk Factors Relating to Regulation

We are subject to orbital slot and spectrum access requirements of the International Telecommunication Union (“ITU”) and regulatory and licensing requirements in each of the countries in which we provide services, and our business is sensitive to regulatory changes internationally and in those countries.

The telecommunications industry is highly regulated, and we depend on access to orbital slots and spectrum resources to provide satellite services. The ITU and national regulators allocate spectrum for satellite services, and may change these allocations, which could change or limit how Intelsat’s current satellites are able to be used. In addition, in connection with providing satellite capacity, ground network uplinks, downlinks and other value-added services to our customers, we need to maintain regulatory approvals, and from time to time obtain new regulatory approvals, from various countries. Obtaining and maintaining these approvals can involve significant time and expense. If we cannot obtain or are delayed in obtaining the required regulatory approvals, we may not be able to provide these services to our customers or expand into new services. In addition, the laws and regulations to which we are subject could change at any time, thus making it more difficult for us to obtain new regulatory approvals or causing our existing approvals to be revoked or adversely modified. Because the regulatory schemes vary by country, we may also be subject to regulations of which we are not presently aware and could be subject to sanctions by a foreign government that could materially and adversely affect our operations in that country. If we cannot comply with the laws and regulations that apply to us, we could lose our revenue from services provided to the countries and territories covered by these laws and regulations and be subject to criminal or civil sanctions.

If we do not maintain regulatory authorizations for our existing satellites and associated ground facilities or obtain authorizations for our future satellites and associated ground facilities, we may not be able to operate our existing satellites or expand our operations.

The operation of our existing satellites is authorized and regulated by the U.S. Federal Communications Commission (“FCC”), the U.K. Office of Communications (“Ofcom”) and the U.K. Space Agency (“UKSA”), the National Information & Communications Technology Authority of Papua New Guinea (“NICTA”), the Ministry of Internal Affairs and Communications of Japan, and the Bundesnetzagentur (“BNetzA”) in Germany.

We believe our current operations are in compliance with FCC and non-U.S. licensing jurisdiction requirements. However, if we do not maintain the authorizations necessary to operate our existing satellites, we will not be able to operate the satellites covered by those authorizations, unless we obtain authorization from another licensing jurisdiction. Some of our authorizations provide waivers of technical regulations. If we do not maintain these waivers, we will be subject to operational restrictions or interference that will affect our use of existing satellites. Loss of a satellite authorization could cause us to lose the revenue from services provided by that satellite at a particular orbital location to the extent these services cannot be provided by satellites at other orbital locations.

Our launch and operation of planned satellites require additional regulatory authorizations from the FCC or a non-U.S. licensing jurisdiction. Likewise, if any of our current operations are deemed not in compliance with applicable regulatory requirements, we may be subject to various sanctions, including fines, loss of authorizations, or denial of applications for new authorizations or renewal of existing authorizations. It is not uncommon for licenses for new satellites to be granted just prior to launch, and we expect to receive such licenses for all planned satellites. If we do not obtain required authorizations in the future, we will not be able to operate our planned satellites. If we obtain a required authorization but we do not meet milestones regarding the construction, launch and operation of a satellite by deadlines that may be established in the authorization, we may lose our authorization to operate a satellite using certain frequencies in an orbital location. Any authorizations we obtain may also impose operational restrictions or permit interference that could affect our use of planned satellites.

If we do not occupy unused orbital locations by specified deadlines, or do not maintain satellites in orbital locations we currently use, those orbital locations may become available for other satellite operators to use.

If we are unable to place satellites into currently unused orbital locations by specified deadlines and in a manner that satisfies the ITU or national regulatory requirements, or if we are unable to maintain satellites at the orbital locations that we currently use, we may lose our rights and/or priority to use these orbital locations, and the locations with ITU priority could become available for other satellite operators to use. The loss of one or more of our orbital locations could negatively affect our plans and our ability to implement our business strategy.

Coordination results may adversely affect our ability to use a satellite at a given orbital location for our proposed service or coverage area.

We are required to record frequencies and orbital locations used by our satellites with the ITU and to coordinate with other satellite operators and national administrations the use of these frequencies and orbital locations in order to avoid interference to or from other satellites. The results of coordination may adversely affect our use of satellites at particular orbital locations, as well as the type of applications or services that we can accommodate. If we are unable to coordinate our satellites by specified deadlines, we may not be able to use a satellite at a given orbital location for our proposed service or coverage area. The use of our satellites may also be temporarily or permanently adversely affected if the operation of adjacent satellite networks does not conform to coordination agreements resulting in the acceptable interference levels being exceeded (e.g., due to operational errors associated with the transmissions to adjacent satellite networks).

Our failure to maintain or obtain authorizations under the U.S. export control and trade sanctions laws and regulations could have a material adverse effect on our business.

The export of satellites and technical data related to satellites, earth station equipment and provision of services are subject to U.S. Department of State, U.S. Department of Commerce and U.S. Department of Treasury regulations. If we do not maintain our existing authorizations or obtain necessary future authorizations under the export control laws and regulations of the United States, we may be unable to export technical data or equipment to non-U.S. persons and companies, including to our own non-U.S. employees, as required to fulfill existing contracts. If we do not maintain our existing authorizations or obtain necessary future authorizations under the trade sanctions laws and regulations of the United States, we may not be able to provide satellite capacity and related administrative services to certain countries subject to U.S. sanctions. Our ability to acquire new satellites, launch new satellites or operate our satellites could also be negatively affected if our suppliers do not obtain required U.S. export authorizations.

If we do not maintain required security clearances from, and comply with our agreements with, the U.S. Department of Defense, or if we do not comply with U.S. law, we may not be able to continue to perform our obligations under U.S. government contracts.

To participate in classified U.S. government programs, we sought and obtained security clearances for one of our subsidiaries from the U.S. Department of Defense. Given our foreign ownership, we entered into a proxy agreement with the U.S. government that limits our ability to control the operations of this subsidiary, as required under the national security laws and regulations of the United States. If we do not maintain these security clearances, we will not be able to perform our obligations under any classified U.S. government contracts to which our subsidiary is a party, the U.S. government would have the right to terminate our contracts requiring access to classified information and we will not be able to enter into new classified contracts. As a result, our business could be materially and adversely affected. Further, if we materially violate the terms of the proxy agreement or if we are found to have materially violated U.S. law, we or the subsidiary holding the security clearances may be suspended or barred from performing any U.S. government contracts, whether classified or unclassified, and we could be subject to civil or criminal penalties.

Item 4. Information on the Company

A. History and Development of the Company

The Company

Our legal and commercial name is Intelsat S.A. The Company was organized as a public limited liability company (*société anonyme*) under the laws of the Grand-Duchy of Luxembourg on July 8, 2011. Our principal executive office is located at 4, rue Albert Borschette, L-1246, Luxembourg, telephone number +352 27 84 1600.

Our History

Intelsat, Ltd. was the successor entity to the International Telecommunications Satellite Organization (the “IGO”), and a Bermuda company. The IGO was a public intergovernmental organization created on an interim basis by its initial member states in 1964 and formally established in February 1973 upon entry into force of an intergovernmental agreement. The member states that were party to the treaty governing the IGO designated certain entities to market and use the IGO’s communications system within their territories and to hold investment share in the IGO.

The Privatization

In November 2000, the IGO’s Assembly of Parties unanimously approved our management’s specific plan for our privatization and set the date of privatization for July 18, 2001. On July 18, 2001, substantially all of the assets and liabilities of the IGO were transferred to us.

The IGO, referred to post-privatization as the International Telecommunications Satellite Organization (“ITSO”), was established and was to exist as an intergovernmental organization for a period of at least 12 years after July 18, 2001, and then could be terminated by a decision of a governing body of ITSO called the Assembly of Parties. The Assembly of Parties voted in 2012 to continue ITSO until at least 2021. Pursuant to a Public Services Agreement among ITSO and Intelsat, Ltd. and certain of our subsidiaries, we have an obligation to provide our services in a manner consistent with the core principles of global coverage and connectivity, lifeline connectivity and non-discriminatory access, and ITSO monitors our implementation of this obligation.

The 2005 Acquisition Transactions

On January 28, 2005, Intelsat, Ltd. was acquired by Intelsat Holdings, Ltd. (“Intelsat Holdings”) for total cash consideration of approximately \$3.2 billion, with pre-acquisition debt of approximately \$1.9 billion remaining outstanding. Intelsat Holdings was initially formed as a Bermuda company.

The PanAmSat Acquisition Transactions

In August 2005, Intelsat (Bermuda), Ltd. (“Intelsat Bermuda”), our indirect wholly-owned subsidiary now known as Intelsat (Luxembourg) S.A., PanAmSat Holding Corporation and Proton Acquisition Corporation, a wholly-owned subsidiary of Intelsat Bermuda, signed a definitive merger agreement pursuant to which on July 3, 2006, Intelsat Bermuda acquired all of the outstanding equity interests in PanAmSat for \$25.00 per common share in cash, or approximately \$3.2 billion in the aggregate (plus approximately \$0.00927 per share as the pro rata share of undeclared regular quarterly dividends).

The Sponsors Acquisition Transactions

On February 4, 2008, Serafina Acquisition Limited completed its acquisition of 100% of the equity ownership of Intelsat Holdings for total cash consideration of approximately \$5.0 billion, pursuant to a share purchase agreement among Serafina Acquisition Limited, Intelsat Holdings, certain shareholders of Intelsat Holdings and Serafina Holdings Limited (“Serafina Holdings”) (the “Sponsors Acquisition Transactions”). Serafina Holdings is an entity formed by funds controlled by BC Partners Holdings Limited (the “BCEC Funds”) and certain other investors. Subsequent to the execution of the share purchase agreement, two investment funds controlled by Silver Lake Partners, L.P. (“Silver Lake Partners”) and other equity investors joined the BCEC Funds as the equity sponsors of Serafina Holdings. We refer to the BCEC Funds, the Silver Lake Partners funds and the other equity sponsors collectively as the “Sponsors”. As a result of completion of the Sponsors Acquisition Transactions and related financing transactions, we and our subsidiaries assumed aggregate net incremental debt of approximately \$3.7 billion.

The Luxembourg Migration

On December 15, 2009, Intelsat, Ltd. and certain of its parent holding companies and subsidiaries migrated their jurisdiction of organization from Bermuda to Luxembourg (the “Migration”). As a result of the Migration, our headquarters are located in Luxembourg. Each company that migrated has continued its corporate and legal personality in Luxembourg. Subsequent to the Migration, Intelsat Global, Ltd. became known as Intelsat Global S.A., Intelsat Global Subsidiary, Ltd. became known as Intelsat Global Subsidiary S.A., Intelsat Holdings, Ltd. became known as Intelsat Holdings S.A., Intelsat, Ltd. became known as Intelsat S.A., Intelsat (Bermuda), Ltd. became known as Intelsat (Luxembourg) S.A. and Intelsat Jackson Holdings, Ltd. became known as Intelsat Jackson Holdings S.A.

The Initial Public Offering

On April 23, 2013, we completed our initial public offering, in which we issued 22,222,222 common shares, and a concurrent public offering, in which we issued 3,450,000 5.75% Series A mandatory convertible junior non-voting preferred shares (the “Series A Preferred Shares”), at public offering prices of \$18.00 and \$50.00 per share, respectively (the initial public offering together with the concurrent public offering, the “IPO”), for total proceeds of \$572.5 million (or approximately \$550 million after underwriting discounts and commissions). In connection with the IPO, on April 16, 2013, the name of the Company was changed from Intelsat Global Holdings S.A. to Intelsat S.A. In May 2016, all of the outstanding Series A Preferred Shares were converted in accordance with their terms into common shares.

B. Business Overview

Overview

We operate the world’s largest satellite services business, providing a critical layer in the global communications infrastructure. We are an industry leader, using innovative technology and new services to transform our business and that of our customers by expanding the types of applications that can be served by satellite-based solutions. Our global scale, expertise with data and video applications on every continent, technology leadership and leading portfolio of spectrum rights are attributes which position us for an increasing role in a world where connectivity everywhere, and to all devices, is viewed as a necessity for economic growth.

We provide diversified communications services to the world’s leading media companies, fixed and wireless telecommunications operators, data networking service providers for enterprise and mobile applications in the air and on the seas, multinational corporations and ISPs. We are also the leading provider of commercial satellite communication services to the U.S. government and other select military organizations and their contractors. Regionally, our business is highly diversified, and we earn a leading share in each region served.

Our network solutions are a critical component of our customers’ infrastructures and business models. Generally, our customers need the specialized connectivity that satellites provide so long as they are in business or pursuing their mission. In recent years, mobility services providers have contracted for services on our fleet that support broadband connections for passengers on commercial flights and cruise ships, connectivity that in some cases is only available through our network. In addition, our satellite neighborhoods provide our media customers with efficient and reliable broadcast distribution that maximizes audience reach, a benefit that is difficult for terrestrial services to match. In developing regions, our satellite solutions often provide higher reliability than is available from local terrestrial telecommunications services and allow our customers to reach geographies that they would otherwise be unable to serve.

In the future, we expect our Globalized Network to be an integral part of machine-to-machine networks, especially those requiring massive software updates best delivered via broadcast, such as networks connecting cars and other vehicles. As we invest in new constellations, such as our Intelsat Epic^{NG} high-throughput satellite platform and Low Earth Orbit satellites, and new ground

technologies, such as electronic antennas, we are creating a portfolio of solutions that will be interoperable with other telecommunications technologies and seamlessly integrated with other telecommunications solutions to address the immense connectivity requirements of a fully-connected and converged landscape.

We hold the largest collection of rights to well-placed orbital slots in the most valuable C- and Ku-band spectrums. From these locations, our satellites are able to offer services in the established regions historically using the most satellite capacity, as well as the higher growth emerging regions, where approximately 52% of our capacity is currently focused.

We believe our global scale, Globalized Network, leadership position and valuable customer relationships enable us to benefit from growing demand for reliable broadband connectivity, resulting from trends such as:

- Global distribution of television entertainment and news programming to fixed and mobile devices;
- Completion and extension of international, national and regional data networks, fixed and wireless, notably in emerging regions, and the upgrade of those networks to 3G/4G/5G as content is increasingly consumed on mobile devices;
- Universal access to broadband connectivity through fixed and mobile networks by consumers, corporations, government and other organizations;
- Increasing deployment of in-flight and on-board broadband access for consumer and business applications in the commercial and private flight and maritime sectors;
- Requirements for cost-efficient space-based network solutions for fixed and mobile government and military applications; and
- Global demand for services which enable connected devices, such as machine-to-machine communications and the Internet of Things (“IoT”), particularly with respect to connected car applications.

We believe that we have the largest, most reliable and most technologically advanced commercial communications network in the world. Our global communications system features a fleet of approximately 50 geosynchronous satellites that covers more than 99% of the world’s populated regions. Our satellites primarily provide services in the C- and Ku-band frequencies, which form the largest part of the FSS sector.

Our next generation high-throughput satellites, known as Intelsat Epic^{NG}, are designed specifically to reduce cost of service by optimizing performance and efficiency to the user. Our goal is to transform our network as we incorporate these next generation technologies, and we expect we will be able to provide commercial customers with services that allow them to innovate and develop new high bandwidth applications, in turn transforming their businesses and expanding the territories that they can profitably serve. Our new fleet has been designed to commercial-grade standards. This allows us to offer committed information rates for our service provider customers, as compared to satellite networks designed primarily to provide consumer “best effort”-grade services.

Our satellite capacity is complemented by our suite of IntelsatOne[®] managed services, including our Internet Protocol/Multiprotocol Label Switching terrestrial network comprised of leased fiber optic cable, access to Internet points of presence (“PoPs”), multiplexed video and data platforms and owned and operated teleports, and a growing network of partner teleports. Our satellite-based network solutions offer distinct technical and economic benefits to our target customers and provide a number of advantages over terrestrial communications systems, including the following:

- Fast, scalable, secure and high performance infrastructure deployments;
- Superior end-to-end network availability as compared to the availability of terrestrial networks, due to fewer potential points of failure;
- Highly reliable bandwidth and consistent application performance, as satellite beams effectively blanket service regions;
- Ability to extend beyond terrestrial network end points or to provide an alternative path to terrestrial infrastructure;
- Efficient content distribution through the ability to broadcast high quality signals from a single location to many locations simultaneously;
- Video neighborhoods, or capacity at orbital locations with a large number of consumer dishes or cable headend dishes pointed to them maximizing, potential distribution of television programming; and
- Rapidly deployable communications infrastructure for disaster recovery.

We believe that our hybrid satellite-terrestrial network, combined with the world’s largest collection of FSS spectrum rights, is a unique and valuable asset.

Our network architecture is flexible and, coupled with our global scale, provides strong capital and operating efficiency. We are able to re-deploy capacity, moving satellites or repositioning beams to capture demand. In 2016, we launched two of our next generation Intelsat Epic^{NG} satellites, Intelsat 29e and Intelsat 33e, placed into service during the first quarter of 2016 and 2017, respectively. Our technology has utility across a number of requirements, with minimal customization to address diverse applications.

We have a reputation for operational and engineering excellence, built on our experience of over 50 years in the communications sector. Our network delivered 99.993% network availability on all satellites to our customers in 2016. We operate our global network from a fully-integrated, centralized satellite operations facility, with regional sales and marketing offices located close to our customers. The operational flexibility of our network is an important element of our differentiation and our ability to grow.

As of December 31, 2016, our contracted backlog, which is our expected future revenue under existing customer contracts, was approximately \$8.7 billion, roughly four times our 2016 annual revenue. For the year ended December 31, 2016, we generated revenue of \$2.19 billion and net income attributable to Intelsat S.A. of \$990.2 million. Our Adjusted EBITDA, which consists of EBITDA as adjusted to exclude or include certain unusual items, certain other operating expense items and certain other adjustments, was \$1.65 billion, or 75% of revenue, for the year ended December 31, 2016.

In 2015 and 2016, the satellite sector encountered pricing pressure in certain regions and applications, which affected our business. We believe we benefit from a number of characteristics that allow us to effectively manage our business despite these competitive and geo-economic pressures:

- Significant long-term contracted backlog, providing a foundation for predictable revenue streams;
- The entry into service of our next generation Intelsat Epic^{NG} platform. Our Intelsat Epic^{NG} platform was designed to support new services representing \$2.8 billion of potential incremental growth by 2021 from expanded enterprise, wireless infrastructure, mobility, IoT and government applications;
- High operating leverage, which has allowed us to generate an average Adjusted EBITDA margin of 78% in the past three years; and
- A stable, efficient and sustainable tax profile for our global business.

We believe that our leadership position in our attractive sector, global scale, efficient operating and financial profile, diversified customer sets and sizeable contracted backlog, together with the growing worldwide demand for reliable broadband connectivity everywhere at all times, provide us with a platform for long-term success.

Recent Developments

On February 28, 2017, Intelsat entered into a combination agreement with WorldVu Satellites Limited (“OneWeb”) (the “Combination Agreement”) pursuant to which, and subject to the terms and conditions thereof, OneWeb will merge with and into Intelsat, with Intelsat being the surviving entity (the “Merger”). OneWeb is the builder of a new Low Earth Orbit (“LEO”) global communications system.

Also on February 28, 2017, the Company entered into a share purchase agreement with SoftBank Group Corp. (“SoftBank”) (the “Share Purchase Agreement”) pursuant to which, and subject to the terms and conditions thereof, SoftBank will acquire common shares and nonvoting redeemable convertible preferred shares of the Company for aggregate cash consideration of \$1.7 billion (the “SoftBank Investment” and, together with the Merger, the “Transactions”).

Under the terms of the Combination Agreement, at the effective time of the Merger, each common share of OneWeb issued and outstanding immediately prior to the effective time will be converted into the right to receive common shares of Intelsat. Intelsat’s shareholders will retain the common shares of Intelsat that they currently hold. Based on the terms of the transactions announced on February 28, 2017, current Intelsat shareholders are expected to hold approximately 19% of the common shares of Intelsat following completion of the Transaction.

Consummation of the Merger pursuant to the Combination Agreement, and of the SoftBank Investment pursuant to the Share Purchase Agreement, are cross-conditioned on one another. Consummation of the Merger and the SoftBank Investment also are subject to Intelsat’s subsidiaries completing certain debt exchange offers, as well as certain regulatory approvals and other customary closing conditions. The proceeds of the SoftBank Investment will be used in part to fund the cash payments to be made at closing of the Transactions to bondholders that participate in the exchange offers. The Combination Agreement and the Share Purchase Agreement (together, the “Transaction Agreements.”) each provide that any party thereto may terminate such agreement if sufficient

tenders are not received in the exchange offers within 90 days of the date of the agreements. Shareholders of the Company and shareholders of OneWeb have agreed to vote sufficient shares in favor of the Transactions in order to obtain the required shareholder approvals. The Company expects to complete the Transactions late in the third quarter of 2017.

There can be no assurance that the Transactions will be completed, or whether the terms will be amended from those described above.

Our Sector

Satellite services are an integral and growing part of the global communications infrastructure. Through unique capabilities, such as the ability to effectively blanket service regions, to offer point-to-multipoint distribution and to provide a flexible architecture, satellite services complement, and for certain applications are preferable to, terrestrial telecommunications services, including fiber and wireless technologies. The sector, excluding all consumer broadband, is expected to generate revenues of approximately \$12.8 billion in 2017, and transponder service revenue is expected to grow by a compound annual growth rate (“CAGR”) of 1.7% from 2016 to 2021 according to a study issued in 2016 by NSR, a leading international market research and consulting firm specializing in satellite and wireless technology and applications.

In recent years, the addressable market for FSS has expanded to include mobile applications because of satellite’s ability to provide the broadband access required by high bandwidth mobile platforms, such as for commercial ships and aircraft, as well as military mobility applications, including unmanned aerial vehicles. Satellite services provide secure bandwidth capacity ideal for global in-theater communications since military operations often occur in locations without reliable communications infrastructure. According to a study by NSR, global revenue from FSS used for government and military applications is expected to grow at a CAGR of 9.2% from 2016 to 2021.

Our sector is noted for having favorable operating characteristics, including long-term contracts, high renewal rates and strong cash flows. The fundamentals of the sector are attractive, given the global need for connectivity everywhere and explosion of global content. The continuing growth in demand in our sector, combined with the high operating margins which are characteristic of the sector, provides a resilient business model.

There is a finite number of geostationary orbital slots in which FSS satellites can be located, and many orbital locations already hold operating satellites pursuant to complex regulatory processes involving many international and national governmental bodies. These satellites typically are operated under coordination agreements designed to avoid interference with other operators’ satellites. See—Regulation below for a more detailed discussion of regulatory processes relating to the operation of satellites.

Our sector has consolidated over the course of the last decade, as the combination of large capital commitments, operational infrastructure requirements and access to spectrum has created challenges for smaller operators. Today, there are only four FSS operators, including us, providing global services, which is important as multinationals and governments seek a one-stop solution for obtaining global connectivity. In addition, there are a number of operators with fewer satellites that provide regional and/or national services. We currently hold the largest number of rights to orbital slots in the most valuable C- and Ku-band spectrums.

We believe a number of fundamental trends in our sector are creating increasing demand for satellite services:

- *Connectivity and broadband access* are essential elements of infrastructure supporting the rapid economic growth of developing nations. Globally dispersed organizations often turn to satellite-based infrastructure to provide better access, reliability and control. Similarly, regional businesses require access to broadband services, creating demand for our service provider customers. Penetration of broadband connectivity for businesses is expected to grow from 81% to 110% and from 25% to 42% in the Latin America and Africa and Middle East regions, respectively, over the period from 2016 to 2021 according to Pyramid Research, a research consultant. Wireless telecommunications companies often use satellite-based solutions to extend networks into areas where geographic or low population density makes it economically unfeasible to deploy other technology. Further deployments of wireless telecom infrastructure and the migration from 2G to 3G and 4G networks, which carry content and data, in addition to voice, also create demand for satellite bandwidth. In 2015, a number of large procurement requests featuring satellite technology were initiated by global social media and Internet leaders seeking to bring broadband connectivity to emerging regions, contemplating new business models. This acknowledgement of the near-instant infrastructure and ubiquitous reach provided by satellite communications represents potential future demand for satellite connectivity.
- *Mobility applications*, such as wireless infrastructure, maritime communications, and aeronautical services for commercial and government applications are fueling demand for mobile connectivity. Commercial applications, such as broadband services for consumer air flights and cruise ships, as well as broadband requirements from the maritime and oil and gas sectors, provide increased demand for satellite-based services. Rapid growth in cellular services for developing regions is

transitioning from demand for voice only services to demand for data and video services over time, with 2G, 3G and 4G network deployments, resulting in increased network bandwidth requirements. Global satellite services revenue related to demand for broadband mobility applications from land, aeronautical and maritime is expected to grow at a CAGR of 17.5% for the period from 2016 to 2021, according to NSR.

- *Globalization* of economic activities is increasing the geographic expansion of corporations and the communications networks that support them, while creating new audiences for content. Globalization also increases the communications requirements for governments supporting embassy and military applications.
- *The emergence of new content consumers resulting from economic growth in developing regions* leads to increased demand for free-to-air and pay-TV content, including cable and DTH. Demand for capacity to support DTH applications is expected to grow at a CAGR of 3.3% for the period from 2016 to 2021, according to NSR.
- *Proliferation of formats and new sources of entertainment content* result in increased bandwidth requirements, as content owners seek to maximize distribution to multiple viewing audiences across multiple technologies. HDTV, the introduction of Ultra HD television, Internet distribution of traditional television programming known as “Over the Top” or “OTT”, and video to mobile devices are all examples of the expanding format and distribution requirements of media programmers, the implementation of which varies greatly from developed to emerging regions. In its 2016 study, NSR forecasted that the number of standard and high definition (“HD”) television channels distributed worldwide for cable, broadcast and DTH is expected to grow at a CAGR of 4.5% for the period from 2016 to 2021.
- *Connected Devices*, such as those contemplated by machine-to-machine communications, the IoT and other future technology trends, will require ubiquitous coverage that might be best provided by satellite technology for certain applications in certain regions, and also for applications where ubiquitous, global access is required, such as enabling software downloads for connected cars marketed by the automotive sector. This represents an important potential source of longer-term demand.

In total, transponder service revenue (excluding consumer broadband) is expected to grow at a CAGR of 1.7% for the period from 2016 to 2021, according to NSR.

Our Customer Sets and Growing Applications

We focus on business-to-business services that indirectly enable enterprise, government and consumer applications through our customers. Our customer contracts offer four different service types: transponder services, managed services, channel services and mobile satellite services and other. See Item 5—Operating and Financial Review and Prospects—Revenue for further discussion of our service types. Characteristics of our customer sets are summarized below:

Customer Set	Representative Customers	Year	Annual Revenue ⁽¹⁾⁽²⁾	% of 2016 Total Revenue ⁽²⁾	% of 2016 Backlog ⁽¹⁾⁽²⁾	Backlog to 2016 Revenue Multiple
Network Services	Marlink, BT, Orange, Speedcast, Global Eagle, Verizon, Vodafone, America Movil, Gogo, Panasonic Avionics, Telecom Italia Mobile	2012	\$ 1,193			
		2013	\$ 1,202			
		2014	\$ 1,150			
		2015	\$ 1,056			
		2016	\$ 900	41%	28%	2.7x
Media	Discovery Communications, Fox Entertainment Group, MultiChoice, Home Box Office, AT&T, The Walt Disney Company, Turner Broadcasting Company	2012	\$ 859			
		2013	\$ 884			
		2014	\$ 881			
		2015	\$ 882			
		2016	\$ 868	40%	65%	6.5x
Government	Australian Defence Force, U.S. Department of Defense, U.S. Department of State, U.S. Air Force, Leonardo	2012	\$ 524			
		2013	\$ 486			
		2014	\$ 410			
		2015	\$ 385			
		2016	\$ 387	18%	6%	1.4x

(1) Dollars in millions; backlog as of December 31, 2016.

(2) Does not include satellite-related services and other.

We provide satellite capacity and related communications services for the transmission of video, data and voice signals. Our customer contracts cover on- and off-network capacity with four different service types:

On-Network:

- Transponder services
- Managed services
- Channel services

Off-Network:

- Transponder services
- Mobile satellite services and other

We also perform satellite-related consulting services and technical services for various third parties, such as operating satellites for other satellite owners.

Network Services

Network services is our largest customer set and accounted for 41% of our revenue for the year ended December 31, 2016 and \$2.4 billion of our contracted backlog as of December 31, 2016. Our business generated from the network services sector is generally characterized by non-cancellable, one to five year contracts with many of the world's leading communications providers. This includes fixed and wireless telecommunications companies, such as global carriers and regional and national providers in emerging regions, corporate network service providers, such as VSAT services providers to vertical markets including banks, value-added services providers, such as those serving the aeronautical and maritime industries, and multinational corporations and other organizations operating globally.

According to Euroconsult, we are the world's largest provider of satellites capacity for network services, with a 30% global share. Our satellite services, comprised of satellite capacity, and terrestrial network comprised of leased fiber, teleports and data networking platforms, enable the transmission of video and data to and from virtually any point on the surface of the earth. Basic communications and broadband connectivity in developed and emerging regions are meaningful contributors to economic growth. We provide an essential element of the communications infrastructure enabling the rapid expansion of wireless services that support businesses, communities and governments in many emerging regions.

Our network services offerings are an essential component of our customers' services, providing backbone infrastructure, expanded service areas and connectivity where reliability or geography is a challenge. We believe that we are a preferred provider because of our global service capability and our expertise in delivering services with enterprise-grade network availability and efficient network control.

Furthermore, as mobile communications have become essential to global networking and Internet use, our satellite solutions, such as those provided by the Intelsat Epic^{NG} platform, are being increasingly used for mobility applications. This includes broadband services for maritime vessels, ranging from maritime enterprise VSAT services to broadband connectivity for cruise ships. In addition to maritime applications, Intelsat's satellite solutions are increasingly utilized by service providers to deliver broadband connectivity for in-flight entertainment and wi-fi services for the aeronautical industry.

Our IntelsatOne managed services, including our new IntelsatOne Flex service, involve regional shared data networking platforms at our teleports that are connected to approximately 40 of our satellites. As a result, our customers can quickly establish highly reliable services across multiple regions, yet operate them on a centralized basis. Our satellite-based solutions allow customers to rapidly expand their service territories, flexibly customize the access speed and capabilities for their existing networks and efficiently address new customer and end-user requirements.

Our leading position in this part of our business has been under pressure as new capacity from satellite operators and improved access to fiber links have changed the competitive environment in certain regions. The increase in satellite supply has resulted in significant declines in pricing, particularly in our Africa region. The increase in the availability of fiber has resulted in the accelerated retirement of our channel business, which essentially reached end of lifecycle at 2015 year end, and our international trunking services, which we expect to be a continuing source of decline through 2018. The new and differentiated capacity of our next generation Intelsat Epic^{NG} satellites will provide inventory to help offset these recent trends, providing bandwidth for wireless infrastructure, mobility and enterprise applications. With the increased volume of services provided by our Intelsat Epic^{NG} fleet, we believe that the level of business activity in this sector is stabilizing as compared to performance in the preceding two years.

Highlights of our network services business include the following:

- Our largest network services customer type is enterprise networking. We are the world's largest provider of satellite capacity for satellite-based private data networks, including VSAT networks, according to Euroconsult;
- Infrastructure for wireless operators and fixed line telecommunications services represent our second and third largest network services customer types, respectively. We believe we are the leading provider of satellite capacity for cellular backhaul applications in emerging regions, connecting cellular access points to the global telecommunications network, a global segment expected to generate over \$700 million in revenue in 2017, according to NSR. Approximately 100 of our customers use our satellite-based backhaul services as a core component of their network infrastructure due to unreliable or non-existent terrestrial infrastructure. Our cellular backhaul customers include the top 10 mobile groups in Africa, which represent 70% of the region's subscribers;
- The fastest growing customer type in our network services business is mobility services for the aeronautical and maritime sectors. We believe we hold a leading share of the aeronautical broadband services powering in-flight passenger connectivity. FSS revenue growth related to capacity demand for broadband aeronautical services is expected to grow from approximately \$111 million to \$822 million annually, for the period from 2016 to 2025, at a CAGR of 25%. We believe we also hold a leading share of the maritime broadband sector. Of the approximately 250 largest cruise vessels, Intelsat is the exclusive provider of broadband connectivity to approximately 87% of the ships, and the non-exclusive provider for nearly all of the remaining vessels;
- Approximately 150 value-added network operators use our IntelsatOne broadband hybrid infrastructure to deliver their regional and global services. Applications for these services include corporate networks for multinationals, Internet access and broadband for maritime applications. C, Ku, Ka-band and HTS revenue from capacity demand for mobility applications is expected to grow at a CAGR of 17.5% for the period from 2016 to 2021, according to NSR; and
- The fixed enterprise VSAT sector (excluding all non-GEO HTS bandwidth) is expected to generate capacity revenues of approximately \$2.5 billion in 2017, and capacity revenues are expected to grow at a CAGR of 3.9% from 2016 to 2021, according to NSR.

Media

Media customers are our second largest customer set and accounted for 40% of our revenue for the year ended December 31, 2016 and \$5.6 billion of our contracted backlog as of December 31, 2016. Our business generated from the media sector is generally characterized by non-cancellable, long-term contracts with terms of up to 15 years with premier customers, including national and global broadcasters, content providers and distributors, television programmers and DTH platform operators.

We are the world's largest provider of satellite capacity for media services, according to Euroconsult, with a 21% global share. We have delivered television programming to the world since the launch of our first satellite, Early Bird, in 1965. We provide satellite capacity for the transmission of entertainment, news, sports and educational programming for approximately 350 broadcasters, content providers and DTH platform operators worldwide. We have well-established relationships with our media customers, and in some cases have distributed their content on our satellites for over 25 years.

Broadcasters, content providers and television programmers seek efficient distribution of their content to make it easily obtainable by affiliates, cable operators and DTH platforms; satellites' point-to-multipoint capability is difficult to replicate via terrestrial alternatives. Our strong cable distribution neighborhoods offer media customers high penetration of regional and national audiences.

Broadcasters, content providers and television programmers also select us because our global capabilities enable the distribution or retrieval of content to or from virtually any point on earth. For instance, we regularly provide fully integrated global distribution networks for content providers that need to distribute their products across multiple continents. DTH platform operators use our services because of our attractive orbital locations and because the scale and flexibility of our fleet can provide speed to market and lowers their operating risk, as we have multiple satellites serving every region.

We believe that we enjoy a strong reputation for delivering the high network reliability required to serve the demanding media sector.

Our fully integrated satellite, fiber and teleport facilities provide enhanced quality control for programmers. In addition to basic satellite services, we offer bundled, value-added services under our IntelsatOne brand that include managed fiber services, digital encoding of video channels and up-linking and down-linking services to and from our satellites and teleport facilities. Our IntelsatOne bundled services address programmers' interests in delivering content to multiple distribution channels, such as television and Internet, and their needs for launching programs to new regions in a cost-efficient manner.

Highlights of our media business include the following:

- 28 of our satellites host premium video neighborhoods, offering programmers superior audience penetration, with eight serving the United States, five serving Europe, eight serving Latin America, three serving Asia and four serving Africa and the Middle East;
- We are a leading provider of services used in global content distribution to media customers, according to Euroconsult. Our top 10 video distribution customers buy service on our network, on average, across three or more geographic regions, demonstrating the value provided by the global reach of our network;
- We believe that we are the leading provider of satellite service capacity for the distribution of cable television programming in North America, with thousands of cable headends pointed to our satellites. Our Galaxy 13 satellite provided the first HD neighborhood in North America, and today, our Galaxy fleet distributes nearly 350 HD channels, and we distribute over 5,600 TV channels, including 900 HD channels, on a global basis. In its 2016 study, NSR forecasted that the number of standard and HD television channels distributed worldwide for cable, broadcast and DTH is expected to grow at a CAGR of 4.5% for the period from 2016 to 2021;
- We are a leading provider of satellite services for DTH providers, according to NSR, delivering programming to over 45 million subscribers and supporting more than 30 DTH platforms around the world, including AT&T DIRECTV in Latin America, Orion Express in Russia, Telefonica in Brazil, MultiChoice in Africa, and Canal+ in multiple regions;
- We are a leading provider of services used in video contribution managed occasional use services, supporting coverage of major events for news and sports organizations, according to NSR. For instance, we have carried programming on a global basis for every Olympiad since 1968, including use of our new Intelsat 29e satellite for transmission of certain programming for the 2016 Olympics in Rio de Janeiro, Brazil; and
- Global FSS transponder revenue from video applications is forecasted to grow at an overall CAGR of approximately 0.1% for the period from 2016 to 2021, according to NSR.

We expect continued growth in this part of our business in 2017, supported by our new Intelsat 31 and Intelsat 36 satellites launched in 2016. This will be offset somewhat by acceleration of compression technologies, which reduce bandwidth requirements in our North American business. In time, we expect new demand for capacity to support the new 4K format, also known as Ultra HD, which could compensate for reductions in demand related to compression.

Government

We are the leading provider of commercial satellite services to the government sector, according to NSR, with a 28% share of the U.S. military and government use of commercial satellite capacity worldwide. With 50 years of experience serving this customer set, we have built a reputation as a trusted partner for the provision of highly customized, secure and mission critical satellite-based solutions. The government sector accounted for 18% of our revenue for the year ended December 31, 2016 and \$535 million of our contracted backlog as of December 31, 2016.

Our satellite communication services business generated from the U.S. government sector is generally characterized by single year contracts that are cancellable by the customer upon payment of termination for convenience charges and include annual options to renew for periods of up to four additional years. In addition to communication services, our business generated from hosted payloads is generally characterized by contracts with service periods extending up to the 15 year life of the satellite, cancellable upon payment of termination penalties defined by the respective contracts.

Our customer base includes many of the leading U.S. government communications providers, including U.S. military and allied partners, civilian agencies and commercial customers serving the defense sector. We consider each party within the U.S. Department of Defense and other U.S. governmental agencies that has the ability to initiate a purchase requisition and select a contractor to provide services to be a separate customer, although such party may not be the party that awards us the contract for the services.

We attribute our strength in serving U.S. military and government users to our global infrastructure of satellites and our IntelsatOne network of teleports and fiber that complement the U.S. government's own networks and satellites. Our fleet is flexible and provides secure, global network capacity, resilience and critical surge capabilities. In some instances, we provide our U.S. government customers managed, end-to-end secured networks, combining our resources in space and on the ground, for fixed and mobile applications.

In responding to certain unique customer requirements, we also procure and integrate satellite services provided by other satellite operators, either to supplement our capacity or to obtain capacity in frequencies not available on our fleet, such as L-band, X-band and other spectrums not available on our network. These off-network services are primarily low risk in nature, typically with the

terms and conditions of the third party capacity and services we procure matched to contractual commitments from our customer. We are an attractive supplier to the government sector because of our ability to leverage not only our assets but also other space-based solutions, providing a single contracting source for multiple, integrated technologies.

Highlights of our government business include the following:

- The reliability and scale of our fleet and planned launches of new and replacement satellites allow us to address changing demand for satellite coverage and to provide mission-critical communications capabilities. For instance, a European defence network being provided by Airbus Defence and Space uses multiple Intelsat satellites to provide a secure communications service. The C- and Ku- band satellite solutions support national and international voice and data applications for the end-user well into the next decade;
- The U.S. government and military is one of the largest users of commercial satellites for U.S. government/military applications on a global basis. In 2016, we served approximately 100 customers that are U.S. government customers, resellers to U.S. government customers or integrators; and
- According to a study by NSR, global revenue from FSS used for U.S. government and military applications is expected to grow at a CAGR of 9.2% for the period from 2016 to 2021.

While the government business has stabilized compared to prior years, we expect lower revenue in 2017 as a result of the loss of a major contract, which was reported in 2016. Overall, business activity in this customer set reflects the current tempo of our end-customers' operations and the budgetary constraints of the U.S. government; visibility remains low and the pace of new business and subsequent awards remain slow.

Over the mid-term, we believe our reputation as a provider of secure solutions, our global fleet, our customer relationships, our ability to provide turn-key services and our demonstrated willingness to reposition or procure capacity to support specific requirements position us to successfully compete for commercial satellite solutions for bandwidth intensive military and civilian applications. We expect our government business to benefit from the increasing demands for mobility services from the U.S. government for aeronautical and ground mobile requirements, especially as our next generation Intelsat Epic^{NG} services are deployed across regions where the U.S. government has active ground forces. We also note progress in U.S. government procurement practices, with some specific instances of contracting for services for periods in excess of the more typical one year term, and interest in exploring creative contracting constructs such as hosted payloads and outsourcing of certain space-based functions.

Our Diverse Business

Our revenue and backlog diversity spans customer sets and applications, as discussed above, as well as geographic regions and satellites. We believe our diversity allows us to recognize trends to capture new growth opportunities, and gain experience that can be transferred to customers in different regions. For further details regarding geographic distribution of our revenue, see Note 17 to our consolidated financial statements included elsewhere in this Annual Report.

We believe we are the sector leader by transponder share in all but two of the geographic regions covered by our network, and our leading positions align to the regions identified by industry analysts as those that either purchase the most satellite capacity or are emerging regions that have the highest growth prospects, such as Africa and Latin America.

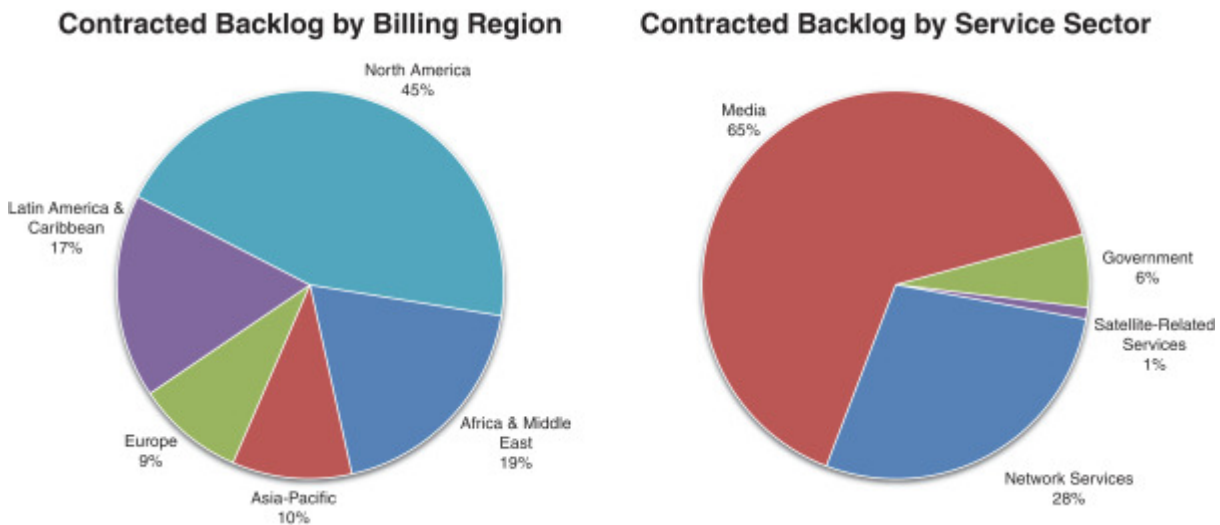
(\$ in millions)

Region	FSS Industry Forecast 2016-2021 Revenue CAGR	2015 FSS Industry Wholesale Revenue	Intelsat Rank ²
Sub-Saharan Africa	1.9%	\$575	#1
Eastern Europe / Russia ¹	0.3%	\$920	#2
Asia-Pacific ¹	0.2%	\$2,381	#1
Latin America & Caribbean	0.6%	\$1,388	#1
Middle East & North Africa	(0.9)%	\$1,228	#1
Western Europe	(3.2)%	\$1,910	#3
North America	(4.2)%	\$1,547	#1

Source: Euroconsult 2016-Satellite Communications & Broadcasting Market Survey, as referenced in the Intelsat S.A. 2015 20-F
¹ Eastern Europe / Russia includes Central Asia; Asia-Pacific includes Southern Asia, North Asia, China, South East Asia PDR.
² Euroconsult 2016-Satellite Communications & Broadcasting Market Survey-Traditional bands only (excludes HTS); shows only utilized transponders as of 12/31/15.

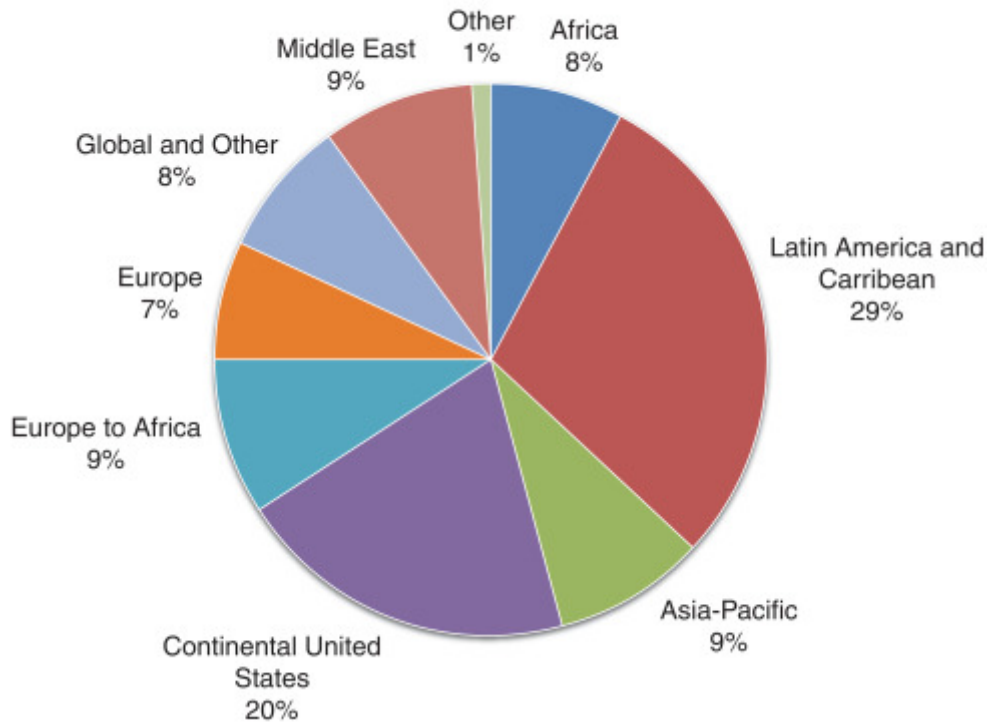
The scale of our fleet can also reduce the financial impact of satellite failures and protect against service interruption. No single satellite generated more than 6% of our revenue and no single customer accounted for more than 8% of our revenue for the year ended December 31, 2016.

The following chart shows the geographic diversity of our contracted backlog as of December 31, 2016 by region and service sector, based upon the billing address of the customer.



The majority of our on-network revenue aligns to emerging regions, based upon the position of our satellites and beams. The following chart shows the breakdown of our on-network revenue by the region in which the service is delivered as of December 31, 2016:

On-Network Revenue by Service Delivery Region



Our Strategy: Transforming Our Business and Our Sector

We are transforming our business and sector, investing in and deploying innovative new technologies that will change the types of applications that we can serve and increase our share of the global demand for broadband connectivity everywhere—for all communities and for all devices.

Our strategy is built around four competitive advantages that strengthen our ability to reach our goals:

- Our global footprint, which is essential given that the fastest growing applications, such as mobility, require consistent global platforms;
- Scale, with customer relationships in nearly 200 countries and territories, which is important to new opportunities, such as connected car and machine-to-machine. The ability to serve these applications on a global basis creates new satellite-based communication solutions with multi-billion dollar revenue potential, particularly as machines are increasingly dependent upon software which can be updated through satellite broadcasts;
- Our innovative technology, which is already in-orbit and is building further depth and resilience as we complete our current investment program through 2018, and our expertise in integrating this new technology into network solutions providing our customers first to market advantage and experience; and
- Our portfolio of spectrum rights, which provides unmatched flexibility and agility as we look at new opportunities.

Our strategy is to seek revenue growth by:

- Building upon our core business stabilization, employing a disciplined yield management approach to the market and enhancing our distribution strategies;
- The continued deployment of our next generation Intelsat Epic^{NG} satellite fleet, which has been designed to capture growth from new applications and evolving customer requirements, leveraging our ‘first to market’ position;
- Design and deployment of differentiated managed service offerings based upon our scale and global footprint, leveraging the higher performance and better economics of our Intelsat Epic^{NG} fleet; and

- Identification of new distribution channels, partnering and investing in innovations across the value chain, transforming our capabilities to include broader solutions such as value-added services and making satellite-based solutions an attractive and simple source of connectivity.

Our strategy also involves improving our operating and capital efficiency; this includes using technology to extend the life of assets and ground investments that complement our space-based assets using partnerships and other relationships for improved return on our investment and developing and investing in technology that will streamline the provisioning of our service offerings.

We believe that developing differentiated services and investing in related technology will allow us to unlock opportunities that are essential, but have been slow to develop due to cost and/or technology challenges. Our new services and technologies will also open new sectors that are much larger, and growing much faster, than the sectors we support today. Examples include:

- Providing network infrastructure for 2G/3G/4G/5G wireless in developing regions;
- Providing flexible broadband services for enterprise networks and for commercial and government-related aeronautical, maritime and other mobile applications, using our high-throughput platform and global footprint to provide differentiated services;
- Optimizing content distribution networks that support OTT programming and other multiscreen viewing applications; and
- Providing ubiquitous broadband for global deployment of connected devices, such as the connected car, and the continuing formation of the IoT.

Below is a discussion of our five business strategies.

Build upon the stabilization in our core business by delivering differentiated services for attractive and growing broadband, mobility, media and government applications

Network Services: Broadband

- Capture multinational enterprise broadband access demand resulting from increased bandwidth requirements from data and media intensive applications, by supplying higher performance connectivity combined with improved ground networking technologies that reduce installation and operations costs, such as that provided by the flat panel and electronically steerable antenna technologies in which we are investing;
- Increase our share of satellite-based cellular network infrastructure, supporting the migration of these cellular networks from 2G to 3G and 4G. Our solution, which combines our high performance capacity with cost effective, easier to deploy 3G/4G ground access hardware, will be marketed by our strong wireless infrastructure distribution partners; and
- The introduction of IntelsatOne Flex Enterprise managed services (see—Design and deploy global managed service offerings...—, below).

Network Services: Mobility

- Use our global footprint, density and first-to-market capability to further penetrate the rapidly expanding mobility sector, where service providers are striving to satisfy passengers that are clamoring for on-board experience that rivals home networks. Also develop new capabilities for cargo shipping operations, including solutions which address operational efficiencies and machine-to-machine applications. By the end of 2017, we expect to have five Intelsat Epic^{NG} satellites deployed, creating a footprint and density of broadband performance that is not yet available from other satellite operators. We are using our Intelsat Epic^{NG} services, combined with our IntelsatOne capabilities, to also provide managed services to our mobility verticals (see—Design and deploy global managed service offerings....—, below).
 - Our leading in-flight entertainment connectivity infrastructure is integrated into the networks of the three largest commercial in-flight entertainment and connectivity service providers, each of which are building global networks in Ku-band. We are differentiated by our density of coverage and global resilience as more airlines with international flights demand consistent commercial-grade, interoperable connectivity. We will also capitalize upon our open architecture which is preferred by service providers and airlines seeking to make independent hardware choices and customize throughput; and
 - Expand our maritime broadband position by increasing our support of our distributors, which include the world's four largest providers of broadband services, including to cruiselines, off-shore oil and gas and commercial shipping, among other applications. Overtime, build distribution relationships and IntelsatOne Flex managed services that address the entire spectrum of maritime opportunity, from small craft to tankers.

Media:

- Grow by supporting our programmer and broadcaster customers seeking new global distribution capabilities to deliver content—whether in new regions, new formats, such as HD and UHD, or new platforms, such as DTH or Digital Terrestrial Television, especially as we develop and add new assets in Latin America, Africa and Asia;
- Defend and grow our leading global media neighborhoods as our customers seek to capitalize on the 1.1 billion in pay TV subscriber growth expected through 2019; and
- Introduce services that provide efficient infrastructure for distribution of live linear OTT programming, and continue to invest in technology, such as our IntelsatOne terrestrial network that provides operating efficiencies including outsourcing opportunities to our programmer customers.

Government:

- Maintain and grow our revenues by driving government use of Intelsat Epic^{NG} as a cost efficient, commercial alternative to government-owned space-based solutions, especially given the expanding use of remotely piloted vehicles;
- Grow the government market for our services by developing commercialization opportunities as government customers strive for greater operational efficiency. These types of opportunities include outsourcing of space-related activities, such as flight operations, to commercial satellite operators and hosted payload projects which fill capacity gaps by co-locating government space assets on commercial satellites; and
- Use IntelsatOne Flex managed services to enable our government customers fast access to our globalized network (see—Design and deploy global managed service offerings...—, below).

Continue development of our next generation Intelsat Epic^{NG} satellite fleet which has been designed to capture growth from new applications and evolving customer requirements

Our fleet is large and diversified by coverage, manufacturer and age. As satellites reach the end of their service lives, we have an ongoing opportunity to refresh the technology we use to serve our customers, resulting in flexibility to address new opportunities as they are identified.

Our customers require increasing amounts of bandwidth, with more efficiency, in order to expand the types of applications they can support and grow their addressable markets. Our next generation network investment strategy seeks to deploy space and terrestrial network elements that will allow us to deliver high performance bandwidth while improving unit costs through efficiency and simplified access.

We are incorporating our next generation satellite technology, Intelsat Epic^{NG}, into our fleet as we complete the scheduled replacement of our IX-series satellites. The Intelsat Epic^{NG} platform features high-throughput spot beam technology, utilizing frequency reuse in order to significantly increase the amount of throughput on the satellites. Our Globalized Network also features a fiber network and our strategy includes investing in enhanced technology for our terrestrial network to deliver converging video and IP content, thus expanding the services we provide to the media and telecommunications industries.

The innovative Intelsat Epic^{NG} design is in contrast to other high-throughput platforms. Intelsat Epic^{NG} emphasizes open architecture and backwards compatibility, which provide our customer base with complete flexibility to leverage existing ground hardware capital investments, a significant element when analyzing total cost of ownership, and the ability to transition easily to the newer technology. Our open architecture ensures that Intelsat and our customers will be able to progressively integrate advances in ground technology over time, thereby capturing improved efficiency and throughput.

Our design optimizes throughput to the user terminal, maximizing the performance at the user level, including a much higher performing return link which is better suited to data patterns which are increasingly balanced to and from the Internet, reflecting the transport of more users or remote-end generated video back to the Internet. Our design allows us to provide enterprise-grade services supporting both committed information rates, and managed services such as IntelsatOne Flex, as compared to the ‘best efforts’ offerings associated with satellites designed for consumer-grade applications.

In addition, Intelsat Epic^{NG} features the industry’s first all-digital payload, which allows connectivities in any bandwidth increment from any beam to any beam. This attribute enables independent frequency selection of the uplink and downlink. Combined, these features provide unprecedented adaptability for a customer’s network configuration and topology, allowing customers to leverage installed hardware and to operate mixed spectrum networks.

Finally, we intend to leverage our frequent satellite launches and collection of orbital rights to address opportunities to supply specialized capabilities for large media companies and government applications. This could include launching and operating satellites with specific regional footprints and capabilities, such as our agreement with the Telecommunications Ministry of Myanmar, for which we are providing customized capacity on Intelsat 39 to support the country's digital inclusion initiative.

Design and deploy global managed service offerings based upon our scale and global footprint, leveraging the higher performance and better economics of our Intelsat Epic^{NG} fleet

Among the primary benefits of the Intelsat Epic^{NG} fleet is its backwards compatibility with the existing global footprint of the Intelsat fleet, together with our ability to create virtual private networks within beams. With this design construct, we can attach shared data networking platforms to our satellite infrastructure that can be operated as virtual private networks by our customers. This provides all of the benefits of global high-throughput satellite networking, without each service provider needing to invest in dedicated ground infrastructure. Because of our architecture, our service provider customers will be able to offer highly differentiated service offerings, using their own network operations standard and committed information rates, while accelerating time to market as new application or regional opportunities arise.

We are implementing a global managed service strategy that will make it easier for our customers to incorporate high-throughput technology into their respective networks. Our current and planned managed services include:

- IntelsatOne Flex Maritime
- IntelsatOne Flex Enterprise
- IntelsatOne Flex Aeronautical
- IntelsatOne Flex Government
- IntelsatOne Prism

Our managed services incorporate features that are customized to each vertical customer set. For instance, our IntelsatOne Flex Maritime service will allow our maritime service provider customers to expand into new service regions and also scale their network as business dictates, effectively allowing them to move connectivity commitments between regions, which is important due to seasonality considerations. We believe this operational flexibility and capital efficiency will allow our customers to accelerate their expansions into new regions and applications with lower business risk, creating value for their operations.

Also, Intelsat Mobile Reach is planned for deployment in 2017, bringing high performance Intelsat Epic^{NG} services, new hardware and feature sets to the wireless sector. We also expect to further build upon our service platforms for our media customers, such as our IntelsatOne Prism managed service. This service uses enhanced technology that is incorporated within our terrestrial network to deliver converging video and IP content with a simple user interface that allows customers to schedule multiple format transmissions simultaneously, increasing their operational efficiency

Innovate, identify new distribution channels, partner and invest across the value chain, transforming our capabilities and making satellite-based solutions an attractive and simple source of connectivity

Complementing our innovation on our space-based assets, we are investing in a new generation of ground hardware that is expected to simplify access to satellite communications, potentially opening much larger and faster growing sectors than those traditionally served by our industry.

In the first quarter of 2015, we announced the first of a series of investments in ground antennas that use metamaterials and other innovations to reduce the physical profile of the antennas and allow electronic steering, significantly simplifying installations in the field and unlocking new applications for satellite communications. Since that time, we have continued to progress our development partnership with Kymeta Inc., which includes an equity investment, that we expect to result in an affordable, flat antenna that could be installed in the automotive sector, enabling connected cars on a global basis, as well as other mobility applications. We are also an investor in Phasor, a company developing antenna technology that has a form factor to support broadband communications for the business jet sector.

We will also use new distribution agreements with partners that complement our capabilities and expand our reach into new vertical applications. This will improve our operating efficiency and also amplify our marketing efforts on a global basis.

We work closely with the entire ecosystem of satellite networking hardware manufacturers with the intent to accelerate the introduction of next generation technologies. As reduced physical footprints and improved installation and operations features are introduced, such as solar-powered modems and software definable modems, we will improve access to our satellites and make use of satellite solutions more attractive to users needing connectivity.

We also plan to expand our use of partnering to extend into new applications. As we build on these relationships, we will be able to enhance our solutions with value-added services that leverage our global scale.

Going forward, we will also consider select acquisitions of complementary businesses or technologies that enhance our product and geographic portfolio and can benefit from our scale, scope and status as a global leader. For instance, in 2015 we invested in a new low earth orbit project, OneWeb, that will complement our geostationary fleet by providing fully interoperable global capacity, including over the North and South Poles, which is desirable for serving mobility applications. OneWeb and Intelsat will enable a larger and richer ecosystem, positioning Ku-band as the spectrum of choice for commercial applications, with complementary low-latency offerings for enterprise, government, cellular backhaul and mobility segments, providing our customers the ability to scale beyond that of today's satellite sector.

Improve our operating and capital efficiency; this includes using technology to extend the life of assets, ground investments that complement our space-based assets, use of partnerships and other relationships for improved return on our investment, and developing and investing in technology that will streamline the provisioning of our service offerings.

We intend to maximize the revenues and returns generated by our assets by developing and managing capacity in a disciplined and efficient manner. Key elements of our strategy include:

- Expanding our use of innovative in-orbit servicing technology, when appropriate, given regional and application requirements and forecasts for future demand. In 2016, we signed a contract for a mission extension vehicle, which will allow us to extend the life of one of our existing, healthy, in-orbit satellites by five years, thus lengthening the revenue-generation opportunity for the asset and deferring replacement capital expenditure;
- Relocating bandwidth in order to support growth for mobile and network services customers, particularly in emerging markets;
- Joining with other satellite operators and business partners to combine interests at certain orbital locations in order to capture new opportunities. Examples would include our strategic cooperation agreement with Azercosmos, with respect to a satellite to be known as Intelsat 38, and our third joint venture satellite with JSAT, known as Horizons 3e;
- Allocating capital based on expected returns and market demand, and being disciplined in the selection of the number, size and characteristics of replacement and new satellites to be launched. We do not expect to replace our existing fleet of approximately 50 satellites, on a one-for-one basis; and
- Investing in new service management platforms that will allow us to automate provisioning of new sites and to dynamically manage network traffic, accelerating acquisition of new revenues and improving customer experience.

Sales, Marketing and Distribution Channels

We strive to maintain a close working relationship with our customers. Our primary sales and marketing operations are located in the United Kingdom and the United States. In addition, we have established local sales and marketing support offices in the following countries around the world:

- Australia
- Brazil
- China
- France
- Germany
- India
- Mexico
- Senegal
- Singapore
- South Africa
- United Arab Emirates
- Japan

By establishing local offices closer to our customers and staffing those offices with experienced personnel, we believe that we are able to provide flexible and responsive service and technical support to our customers. Our sales and marketing organization reflects our corporate focus on our three principal customer sets of network services, media and government. Our sales team includes technical marketing and sales engineering application expertise and a sales approach focused on creating integrated solutions for our customers' communications requirements.

We use a range of direct and wholesale distribution methods to sell our services, depending upon the region, the vertical application, regulatory requirements and customer application.

Our Network

Our global network is comprised of approximately 50 satellites and ground facilities, including teleports, access to Internet PoPs and leased fiber that support our commercial services and the operation and control of our satellites.

Our customers depend on our global communications network and our operational and engineering leadership. Highlights of our network include:

- Prime orbital locations, reflecting a valuable portfolio of coordinated fixed satellite spectrum rights;
- Highly reliable services, including transponder availability of 99.993% on all satellites for the year ended December 31, 2016;
- Flexibility to relocate satellites to other orbital locations as we manage fleet replacement, demand patterns change or in response to new customer requirements;
- Design features and steerable beams on many of our satellites that enable us to reconfigure capacity to provide different areas of coverage; and
- Resilience, with multiple satellites serving each region, allowing for improved restoration alternatives should a satellite anomaly occur.

As we design our new satellites, we work closely with our strategic customers to incorporate technology and service coverage that provide them with a cost-effective platform for their respective requirements.

The table below provides a summary of our satellite fleet as of December 31, 2016, except where noted.

Satellite	Manufacturer	Orbital Location	Launch Date	Estimated End of Service Life ⁽¹⁾
Station-Kept in Primary Orbital Role ⁽²⁾ :				
Intelsat 901	SSL ⁽⁵⁾	342°E	Jun-01	Q2 2018
Intelsat 902	SSL	62°E	Aug-01	Q3 2019
Intelsat 904	SSL	60°E	Feb-02	Q2 2019
Intelsat 903	SSL	325.5°E	Mar-02	Q3 2018
Intelsat 905	SSL	335.5°E	Jun-02	Q4 2019
Galaxy 3C	BSS ⁽⁴⁾	95.05°W	Jun-02	Q1 2023
Intelsat 906	SSL	64.15°E	Sep-02	Q3 2020
Intelsat 907	SSL	332.5°E	Feb-03	Q1 2020
Galaxy 23 ⁽⁶⁾	SSL	121°W	Aug-03	Q1 2023
Galaxy 13/Horizons 1 ⁽⁷⁾	BSS	127°W	Oct-03	Q1 2023
Intelsat 1002 ⁽⁸⁾	AIRBUS	359°E	Jun-04	Q3 2021
Galaxy 28	SSL	89°W	Jun-05	Q3 2022
Galaxy 14	ORB ⁽⁹⁾	125°W	Aug-05	Q2 2021
Galaxy 15	ORB	133°W	Oct-05	Q3 2023
Galaxy 16	SSL	99°W	Jun-06	Q4 2024
Galaxy 17	Thales ⁽¹⁰⁾	91°W	May-07	Q1 2024
Intelsat 11	ORB	317°E	Oct-07	Q3 2022
Horizon 2 ⁽¹¹⁾	ORB	84.85°E	Dec-07	Q4 2024
Galaxy 18	SSL	123°W	May-08	Q2 2026
Intelsat 25	SSL	328.5°E	Jul-08	Q3 2024
Galaxy 19	SSL	97°W	Sep-08	Q3 2026
Intelsat 14	SSL	315°E	Nov-09	Q3 2027
Intelsat 15	ORB	85.15°E	Nov-09	Q3 2026
Intelsat 16	ORB	76.2°W	Feb-10	Q1 2028
Intelsat 17	SSL	66°E	Nov-10	Q2 2027
Intelsat 28 ⁽¹²⁾	ORB	32.8°E	Apr-11	Q4 2024
Intelsat 18	ORB	180°E	Oct-11	Q3 2028
Intelsat 22 ⁽¹³⁾	BSS	72.1°E	Mar-12	Q2 2028
Intelsat 19	SSL	166°E	Jun-12	Q2 2028
Intelsat 20	SSL	68.5°E	Aug-12	Q3 2030

Satellite	Manufacturer	Orbital Location	Launch Date	Estimated End of Service Life ⁽¹⁾
Intelsat 21	BSS	302°E	Aug-12	Q3 2030
Intelsat 23	ORB	307°E	Oct-12	Q4 2030
Intelsat 30	SSL	95°W	Oct-14	Q4 2032
Intelsat 31	SSL	95°W	Jun-16	Q2 2032
Intelsat 34	SSL	304.5°E	Aug-15	Q3 2032
Intelsat 36	SSL	68.5°E	Aug-16	Q3 2033
Intelsat 29e	BSS	50°W	Jan-16	Q2 2031
Station-Kept Satellites, Redeployed ⁽¹⁴⁾ :				
Intelsat 805	LM ⁽³⁾	330.5°E	Jun-98	Q1 2018
Galaxy 25	SSL	93.1°W	May-97	Q2 2019
Intelsat 8	SSL	169°E	Nov-98	Q3 2016
Intelsat 1R	BSS	310°E	Nov-00	Q3 2018
Galaxy 12	ORB	129°W	Apr-03	Q2 2018
Galaxy 11	BSS	45°E	Dec-99	Q4 2018
Inclined Orbit:				
Intelsat 701	SSL	330.5°E	Oct-93	Q2 2017
Intelsat 26	BSS	64.25°E	Feb-97	Q2 2020
Intelsat 5	BSS	157°E	Aug-97	Q4 2020
Intelsat 9	BSS	316.9°E	Jul-00	Q3 2019
Intelsat 10	BSS	47.5°E	May-01	Q3 2026
Intelsat 12	SSL	45°E	Oct-00	Q4 2017

- (1) Engineering estimates of the service life as of December 31, 2016 as determined by remaining fuel levels, consumption rates and other considerations (including power) and assuming no relocation of the satellite. Such estimates are subject to change based upon a number of factors, including updated operating data from manufacturers.
- (2) Primary orbital roles are those that are populated with station-kept satellites, generally, but not always, in their initial service positions, and where our general expectation is to provide continuity of service over the long-term.
- (3) Lockheed Martin Corporation.
- (4) Boeing Satellite Systems, Inc., formerly Hughes Aircraft Company.
- (5) Space Systems/Loral, LLC (“SSL”).
- (6) EchoStar Communications Corporation owns all of this satellite’s Ku-band transponders and a portion of the common elements of the satellite.
- (7) Horizons Satellite Holdings, LLC (“Horizons Holdings”), our joint venture with JSAT International, Inc. (“JSAT”), owns and operates the Ku-band payload on this satellite. We are the exclusive owner of the C-band payload.
- (8) Telenor owns 18 Ku-band transponders (measured in equivalent 36 MHz transponders) on this satellite. EADS Astrium was renamed AIRBUS Defence & Space.
- (9) Orbital Sciences Corporation.
- (10) Thales Alenia Space.
- (11) Horizons Holdings owns the payload on this satellite and we operate the payload for the joint venture.
- (12) Intelsat 28 was formerly known as Intelsat New Dawn.
- (13) Intelsat 22 includes a UHF payload owned by the Australian Defence Force.
- (14) Certain of our orbital roles are populated with satellites that generally, but not always, have been redeployed from their primary orbital role but still have significant remaining station-kept life.

Satellite Systems

There are three primary types of commercial communications satellite systems: low-earth orbit systems, medium-earth orbit systems and geosynchronous systems. All of our satellites are geosynchronous satellites and are located approximately 22,200 miles, or 35,800 kilometers, above the equator. These satellites can receive radio frequency communications from an origination point, relay those signals over great distances and distribute those signals to a single receiver or multiple receivers within the coverage areas of the satellites’ transmission beams.

Geosynchronous satellites send these signals using various parts of the radio frequency spectrum. The spectrum available for use at each orbital location includes the following frequency bands in which most commercial satellite services are offered today:

- *C-band*—low power, broad beams requiring use of relatively larger antennae, valued as spectrum least susceptible to transmission impairments such as rain;
- *Ku-band*—high power, narrow to medium size beams facilitating use of smaller antennae favored by businesses; and
- *Ka-band*—very high power, very narrow beams facilitating use of very small transmit/receive antennae, but somewhat less reliable due to high transmission weather-related impairments. The Ka-band is utilized for various applications, including consumer broadband services.

Substantially all of the station-kept satellites in our fleet are designed to provide capacity using the C- and/or Ku-bands of this spectrum.

A geosynchronous satellite is referred to as geostationary, or station-kept, when it is operated within an assigned orbital control, or station-keeping box, which is defined by a specific range of latitudes and longitudes. Geostationary satellites revolve around the earth with a speed that corresponds to that of the earth's rotation and appear to remain above a fixed point on the earth's surface at all times. Geosynchronous satellites that are not station-kept are in inclined orbit. The daily north-south motion of a satellite in inclined orbit exceeds the specified range of latitudes of its assigned station-keeping box, and the satellite appears to oscillate slowly, moving above and below the equator every day. An operator will typically operate a satellite in inclined orbit toward the end of its service life because the operator is able to save significant amounts of fuel by not controlling the north-south position of the satellite and is thereby able to substantially extend the service life of the satellite. The types of services and customers that can access an inclined orbit satellite have traditionally been limited due to the movement of the satellite relative to a fixed ground antenna. However, recent technology innovations now allow the use of inclined orbit capacity for certain applications. As a result, we anticipate demand for inclined orbit capacity may increase over the next few years if these applications are successfully introduced. As of December 31, 2016, six of our satellites were operating in an inclined orbit, with most continuing to earn revenue beyond our original estimated life for each of these satellites.

In-Orbit Satellites

We believe that our strong operational performance is due primarily to our satellite procurement and operations philosophy. Our operations and engineering staff is involved from the design through the decommissioning of each satellite that we procure. Our staff works at the manufacturers' and launchers' sites to monitor progress, allowing us to maintain close technical collaboration with our contractors during the process of designing, manufacturing and launching a satellite. We continue our engineering involvement throughout the operating lifetime of each satellite. Extensive monitoring of earth station operations and around-the-clock satellite control and network operations support and ensure our consistent operational quality, as well as timely corrections when problems occur. In addition, we have in place contingency plans for technical problems that may occur during the lifetime of a satellite.

These features also contribute to the resilience of our network, which enables us to ensure the continuity of service that is important for our customers and to retain revenue in the event that we need to move customers to alternative capacity. The design flexibility of some of our satellites enables us to meet customer demand and respond to changing market conditions.

As of December 31, 2016, our in-orbit fleet of satellites had approximately 1,225 and 950 36-MHz equivalent transponders available for transmitting in the C-band and the Ku-band, respectively. These totals measure transponders on station-kept satellites. The average system fill factor for our satellites, which represents the percentage of our total available transponder capacity that is in use or that is reserved at a given time (including guaranteed reservations for service), was 75%, 76%, 77% and 77% in the quarters ended March 31, June 30, September 30, and December 31, 2016, respectively. The factors resulting in the trends in average system fill factor over this period were primarily related to a net decline of in-use transponders related to the release of restoration capacity following the resolution of an anomaly, the non-renewal and terminations of certain services and a decision to relocate a satellite, which resulted in it being temporarily out of service, partially offset by new and expanded customer services. Total available capacity decreased slightly over this period as a result of a new satellite launch offset by satellites deorbited and satellites temporarily out of service due to relocation at the end of the period.

The design life of a satellite is the length of time that the satellite's hardware is designed by the manufacturer to remain operational under normal operating conditions. In contrast, a satellite's orbital maneuver life is the length of time the satellite has enough fuel to remain operational. A satellite's service life is based upon fuel levels and other considerations, including power. Satellites launched in the recent past are generally expected to remain in service for the lesser of maneuver life and 16 years. Satellites typically have enough fuel to maintain between 16 and 18 years of station-kept operations. The average remaining service life of our satellites was approximately 9.8 years as of December 31, 2016, weighted on the basis of nominally available capacity for the station-kept satellites we own.

Satellites on Order

As of December 31, 2016, we had placed orders for the following four satellites. Generally, these satellites are being built over a period of three years.

<u>Satellite</u>	<u>Manufacturer</u>	<u>Role</u>	<u>Earliest Launch Date</u>	<u>Expected Launch Provider</u>
Intelsat 35e	Boeing	Next generation Intelsat Epic ^{NG} satellite offering high-throughput, open-architecture platform to be located at 325.5°E	2017	SpaceX Falcon 9
Intelsat 37e	Boeing	Next generation Intelsat Epic ^{NG} satellite offering high-throughput, open-architecture platform	2017	Arianespace
Intelsat 39	SSL	Large capacity satellite with a combination of C-band and Ku-band beams to be located at the 62°E, certain of which are customized for the digital inclusion requirements of an Asian nation	2018	Arianespace
Epic ^{NG} class	Boeing	Next generation Intelsat Epic ^{NG} satellite offering high-throughput, open-architecture platform	TBA	TBA

In addition to these ordered satellites, we have custom payloads being built on third party-owned satellites, including Intelsat 32e, a small Intelsat Epic^{NG} payload, and Intelsat 38. Intelsat 32e was launched in February 2017, and is located at 43.1°W. A launch date is not yet set for Intelsat 38, which will be located at 45°E. Further, we have a joint venture satellite, Horizons 3e, which is in development and will be located at 169°E; the satellite is planned for launch in 2018.

Future Satellites

We would expect to replace other existing satellites, as necessary, with satellites that meet customer needs and that have a compelling economic rationale. We periodically conduct evaluations to determine the current and projected strategic and economic value of our existing and any planned satellites and to guide us in redeploying satellite resources as appropriate.

Network Operations and Current Ground Facilities

We control and operate each of our satellites and manage the communications services for which each satellite is used from the time of its initial deployment through the end of its operational life, and we believe that our technical skill in performing these critical operations differentiates us from our competition. We provide most of these services from our satellite operations centers in McLean, Virginia and Long Beach, California, and our customer service center in Ellenwood, Georgia. In the event of a natural disaster or other situation disabling one of the facilities, each satellite operations center has the functional ability to provide instantaneous restoration of services on behalf of the other, demonstrating the efficiency and effectiveness of our network. Utilizing state of the art satellite command and control hardware and software, our satellite operations centers analyze telemetry from our satellites in order to monitor their status and track their location.

Our satellite operations centers use a network of ground facilities to perform their functions. This network includes 19 earth stations that provide tracking, telemetry and commanding (“TT&C”) services for our satellites and various other earth stations worldwide. Through our ground facilities, we constantly monitor signal quality, protect bandwidth from piracy or other interference and maintain customer installed equipment.

Our customer service center located in Ellenwood, Georgia includes an RF Operations Center, a Managed Services Operations Center and an Intelsat Secured Operations Center. This facility is responsible for managing the communications services that we provide to our customers and is the first point of contact for customers needing assistance in using our network. We also maintain a back-up operations facility and data center a relatively short distance from our McLean, Virginia facility in Hagerstown, Maryland. This facility provides back-up emergency operational services in the event that our Ellenwood, Georgia customer service center experiences an interruption.

We have invested heavily in our fully integrated IntelsatOne terrestrial network which complements our satellite network. Our network includes teleport, leased fiber and network performance monitoring systems and enables us to provide end-to-end managed solutions to our customers. In addition to leased fiber connecting high-density routes, our ground network also features strategically located PoPs, which are drop-off points for our customers’ traffic that are close to major interconnection hubs for telecommunications applications, video transmissions and trunking to the Internet backbone. Our terrestrial network is an all IP network environment that results in improved ground support of high bandwidth applications such as HD video. The network architecture allows us to converge our media and network services terrestrial network infrastructures, resulting in reduced costs, and provides opportunities for generating additional revenue from existing and new customers by bundling combinations of media and network services products that can be offered through a single access circuit into our network.

Capacity Sparing and Backup and General Satellite Risk Management

As part of our satellite risk management, we continually evaluate, and design plans to mitigate, the areas of greatest risk within our fleet, especially for those satellites with known technical risks. We believe that the availability of spare transponder services capacity, together with the overlapping coverage areas of our satellites and flexible satellite design features described in—Our Network—Satellite Systems above, are important aspects of our ability to provide reliable service to our customers. In addition, these factors could help us to mitigate the financial impact to our operations attributable to the occurrence of a major satellite anomaly, including the loss of a satellite. Although we do not maintain backup for all of our transponder services operating capacity, we generally maintain some form of backup capacity for each satellite designated as being in primary operating service. Our restoration backup capacity may include any one or more of the following:

- designated reserve transponders on the satellite or other on-board backup systems or designed-in redundancies,
- an in-orbit spare satellite, or
- interim restoration capacity on other satellites.

In addition, we provide some capacity on a preemptible basis and could preempt the use of this capacity to provide backup capacity in the event of a loss of a satellite.

We typically obtain launch insurance for our satellites before launch and will decide whether or not to obtain such insurance taking into consideration launch insurance rates, terms of available coverage and alternative risk management strategies, including the availability of backup satellites and transponders in the event of a launch failure. Launch insurance coverage is typically in an amount equal to the fully capitalized cost of the satellite, which generally includes the construction costs, the portion of the insurance premium related to launch, the cost of the launch services and capitalized interest (but may exclude any unpaid incentive payments to the manufacturer).

As of December 31, 2016, four of the satellites in our fleet were covered by in-orbit insurance. In-orbit insurance coverage may initially be for an amount comparable to launch insurance levels, generally decreases over time and is typically based on the declining book value of the satellite. We do not currently insure against lost revenue in the event of a total or partial loss of a satellite.

Satellite Health and Technology

Our satellite fleet is diversified by manufacturer and satellite type, and is generally healthy, with 99.993% transponder availability on all satellites during the year ended December 31, 2016. We have experienced some technical problems with our current fleet but have been able to minimize the impact of these problems on our customers, our operations and our business in recent years. Many of these problems have been component failures and anomalies that have had little long-term impact to date on the overall transponder availability in our satellite fleet. All of our satellites have been designed to accommodate an anticipated rate of equipment failures with adequate redundancy to meet or exceed their orbital design lives, and to date, this redundancy design scheme has proven effective. After each anomaly we have generally restored services for our customers on the affected satellite, provided alternative capacity on other satellites in our fleet, or provided capacity that we purchased from other satellite operators.

Significant Anomalies

On January 14, 2005, our Intelsat 804 satellite experienced a sudden and unexpected electrical power system anomaly that resulted in the total loss of the satellite. Intelsat 804 was a Lockheed Martin 7000 series (the “LM 7000 series”) satellite, and as of December 31, 2016 we operated one other satellite in the LM 7000 series, Intelsat 805. Based on the report of the Failure Review Board that we established with Lockheed Martin Corporation, we believe that the Intelsat 804 failure was not likely to have been caused by an Intelsat 804 specific workmanship or hardware element, but was most likely caused by a high current event in the battery circuitry triggered by an electrostatic discharge that propagated to cause the sudden failure of the high voltage power system. We therefore believe that although this risk exists for our other LM 7000 series satellite, the risk of any individual satellite having a similar anomaly is low.

On April 5, 2010, our Galaxy 15 satellite experienced an anomaly resulting in our inability to command the satellite. Galaxy 15 is a Star-2 satellite manufactured by Orbital Sciences Corporation. On December 23, 2010, we recovered command of the spacecraft and we have since uploaded flight software code to protect against future anomalies of this type. As of December 31, 2016, Galaxy 15 continues to provide normal service.

On April 22, 2011, our Intelsat 28 satellite, formerly known as the Intelsat New Dawn satellite, was launched into orbit. Subsequent to the launch, the satellite experienced an anomaly during the deployment of its west antenna reflector, which controls communications in the C-band frequency. The anomaly had not been experienced previously on other STAR satellites manufactured

by Orbital Sciences Corporation, including those in our fleet. The New Dawn joint venture filed a partial loss claim with its insurers relating to the C-band antenna reflector anomaly and all of the insurance proceeds from the partial loss claim were received in 2011. The Ku-band antenna reflector deployed and that portion of the satellite is operating as planned, entering service in June 2011. A Failure Review Board established to determine the cause of the anomaly, completed its investigation in July 2011 and concluded that the deployment anomaly of the C-band reflector was most likely due to a malfunction of the reflector sunshield. As a result, the sunshield interfered with the ejection release mechanism, and prevented the deployment of the C-band antenna. The Failure Review Board also recommended corrective actions for Orbital Sciences Corporation satellites not yet launched to prevent reoccurrence of the anomaly. Appropriate corrective actions were implemented on Intelsat 18, which was successfully launched on October 5, 2011, and on Intelsat 23, which was launched in October 2012.

During launch operations of Intelsat 19 on June 1, 2012, the satellite experienced damage to its south solar array. Although both solar arrays are deployed, the power available to the satellite is less than is required to operate 100% of the payload capacity. An Independent Oversight Board (“IOB”) was formed by SSL and Sea Launch to investigate the solar array deployment anomaly. The IOB concluded that the anomaly occurred before the spacecraft separated from the launch vehicle, during the ascent phase of the launch, and originated in one of the satellite’s two solar array wings due to a rare combination of factors in the panel fabrication and was unrelated to the launch vehicle. While the satellite is operational, the anomaly resulted in structural and electrical damage to one solar array wing, which reduced the amount of power available for payload operation. Additionally, we filed a partial loss claim with our insurers relating to the solar array anomaly. We received \$84.8 million of insurance proceeds related to the claim in 2013. As planned, Intelsat 19 replaced Intelsat 8 at 166°E, in August 2012.

On February 1, 2013, the launch vehicle for our Intelsat 27 satellite failed shortly after liftoff and the satellite was completely destroyed. A Failure Review Board was established and subsequently concluded that the launch failed due to the mechanical failure of one of the first stage engine’s thrust control components. The satellite and launch vehicle were fully insured, and we received \$406.2 million of insurance proceeds in 2013.

During orbit raising of Intelsat 33e in September 2016, the satellite experienced a malfunction of the main satellite thruster. Orbit raising was subsequently completed using a different set of satellite thrusters. The anomaly resulted in a delay of approximately three months in reaching the geostationary orbit, as well as a reduction in the projected lifetime of the satellite. Intelsat 33e entered service in January 2017, and currently, there is no evidence of any impact to the communications payload. A Failure Review Board has been established to determine the cause of the anomaly. Intelsat has filed a notice of occurrence with insurers relating to the reduction of life.

Other Anomalies

We have also identified five other types of common anomalies among the satellite models in our fleet, which have had an operational impact in the past and could, if they materialize, have an impact in the future. These are:

- failure of the on-board SCP in Boeing 601 (“BSS 601”) satellites;
- failure of the on-board XIPS used to maintain the in-orbit position of Boeing 601 High Power Series (“BSS 601 HP”) satellites;
- accelerated solar array degradation in early Boeing 702 High Power Series (“BSS 702 HP”) satellites;
- electrical distribution anomalies on older SSL FS 1300 satellites; and
- failure of gyroscopes on certain SSL satellites.

SCP Failures. Many of our satellites use an on-board SCP to provide automatic on-board control of many operational functions. SCPs are a critical component in the operation of such satellites. Each such satellite has a backup SCP, which is available in the event of a failure of the primary SCP. Certain BSS 601 satellites have experienced SCP failures. The risk of SCP failure appears to decline as these satellites age.

As of December 31, 2016, we operated one BSS 601 satellite, Intelsat 26. This satellite was identified as having heightened susceptibility to the SCP problem. Intelsat 26 has been in continuous operation since 1997. Both primary and backup SCPs on this satellite are monitored regularly and remain fully functional. Accordingly, we believe it is unlikely that additional SCP failures will occur; however, should they occur, we do not anticipate an interruption in business or early replacement of this satellite as a result.

BSS 601 HP XIPS. The BSS 601 HP satellite uses XIPS as its primary propulsion system. There are two separate XIPS on each satellite, each one of which is capable of maintaining the satellite in its orbital position. The BSS 601 HP satellite also has a completely independent chemical propulsion system as a backup to the XIPS. As a result, the failure of a XIPS on a BSS 601 HP

satellite typically would have no effect on the satellite's performance or its operating life. However, the failure of both XIPS would require the use of the backup chemical propulsion system, which could result in a shorter operating life for the satellite depending on the amount of chemical fuel remaining. XIPS failures do not typically result in a catastrophic failure of the satellite or affect the communications capability of the satellite.

As of December 31, 2016, we operated four BSS 601 HP satellites, Intelsat 5, Intelsat 9, and Intelsat 10, which are now in inclined orbit, and Galaxy 13/Horizons-1. Galaxy 13/Horizons-1 has one XIPS system available as its primary propulsion system. Intelsat 5, Intelsat 9 and Intelsat 10 have experienced the failure of both XIPS and are operating on their backup chemical propulsion systems. Intelsat 5 was redeployed in 2012 following its replacement by Intelsat 8, which was subsequently replaced by Intelsat 19. Also in 2012, Intelsat 9 and Intelsat 10 were redeployed following their replacements by Intelsat 21 and Intelsat 20, respectively. No assurance can be given that we will not have further XIPS failures that result in shortened satellite lives. We have decommissioned three satellites that had experienced failure of both XIPS. Intelsat 6B was replaced by Intelsat 11 during the first quarter of 2008, Galaxy 10R was replaced by Galaxy 18 during the second quarter of 2008, and Galaxy 4R was decommissioned in March 2009.

BSS 702 HP Solar Arrays. All of our satellites have solar arrays that power their operating systems and transponders and recharge the batteries used when solar power is not available. Solar array performance typically degrades over time in a predictable manner. Additional power margins and other operational flexibility are designed into satellites to allow for such degradation without loss of performance or operating life. Certain BSS 702 HP satellites have experienced greater than anticipated degradation of their solar arrays resulting from the design of the solar arrays. Such degradation, if continued, results in a shortened operating life of a satellite or the need to reduce the use of the communications payload.

As of December 31, 2016, we operated three BSS 702 HP satellites, two of which are affected by accelerated solar array degradation, Galaxy 11 and Intelsat 1R. Service to customers has not been affected, and we expect that both of these satellites will continue to serve customers until we replace or supplement them with new satellites. Along with the manufacturer, we continually monitor the problem to determine its cause and its expected effect. Due to this continued degradation, Galaxy 11 was redeployed following its replacement by Intelsat 34. Intelsat 1R was redeployed following its replacement by Intelsat 14. The third BSS 702 HP satellite that we operated as of December 31, 2016, Galaxy 3C, was launched after the solar array anomaly was identified, and it has a substantially different solar array design intended to eliminate the problem. This satellite has been in service since September 2002 and has not experienced similar degradation problems.

SSL gyroscopes. All of our satellites use gyroscopes to provide 3-axes attitude information during orbit inclination maneuvers. Certain SSL satellites use gyroscopes that have been identified as having a higher probability of failing. There are four gyroscopes on each of these SSL satellites, three of which are needed for normal operation, and the fourth is a spare. The failure of a single gyroscope on a given satellite would have no effect on the satellite's performance or its operating life. A failure of two or more gyroscopes on a given satellite would require us to use an alternative method for inclination control. This alternative method would likely result in a reduction in the remaining life of the satellite. As of December 31, 2016, we operated 12 SSL satellites that use these gyroscopes, two of which are in inclined orbit. While in inclined orbit, inclination maneuvers are no longer required. Of the 10 satellites in station-kept orbit, one satellite had two gyro failures and is being operated through an alternative method for inclination control.

Competition

We compete in the communications market for the provision of video, data and voice connectivity worldwide. Communications services are provided using various communications technologies, including satellite networks, which provide services as a substitute for, or as a complement to, the capabilities of terrestrial networks. We also face competition from suppliers of terrestrial communications capacity.

We operate on a global scale. Our competition includes providers of FSS of varying size. We compete with other satellite operators for both point-to-multipoint and point-to-point services.

We also compete with providers of terrestrial fiber optic cable capacity on certain routes and networks, principally for point-to-point services. As a result, we have been experiencing, and expect to continue to experience, a decline in certain of our revenues due to the build-out of fiber optic cable capacity. However, we believe that satellites have advantages over fiber optic cables in certain regions and for certain applications. The primary use of fiber optic cable is carrying high-volume communications traffic from point to point, and fiber capacity is available at substantially lower prices than satellite capacity once operational. Consequently, the growth in fiber optic cable capacity has led voice, data and video contribution customers that require service between major city hubs to migrate from satellite to fiber optic cable. However, satellite capacity remains competitive for signals that need to be transmitted beyond the main termination points of fiber optic cable for point-to-multipoint transmissions, such as for video broadcast, and for signals seeking to bypass congested terrestrial networks. Satellite capacity is also competitive in parts of the world where providing fiber optic cable

capacity is not yet cost-effective, reliable or is physically not feasible. We believe that in those applications and regions where we do compete with fiber optic cable companies, the basis for competition is primarily price. See—Our Sector for a description of the FSS sector generally and the advantages of satellite communications.

In the last four years, a number of providers of commercial satellite services, selling traditional and high-throughput capacity, entered the African market, significantly increasing the amount of FSS capacity. Concurrent to this market dynamic, the region benefitted from newly established sea and land fiber connectivity. These two events have resulted in heightened competition in this region, the effect of which has been significant price reductions for both fiber and satellite connectivity used for fixed and mobile data networking applications. As a result, Intelsat's revenues have been reduced as services were terminated by customers moving to fiber alternatives, and also as contracts were renewed at much lower prices. As contracts come up for renewal for a small portion on our remaining business, we will continue to adjust pricing to current market rates.

We also face competition from resellers of satellite and fiber capacity. Resellers purchase FSS or fiber capacity from current or future providers and then resell the capacity to their customers.

Regulation

As an operator of a privately owned global satellite system, we are subject to U.S. government regulation, regulation by foreign national telecommunications authorities and the ITU frequency coordination process and regulations.

U.S. Government Regulation

FCC Regulation. The majority of the satellites in our current constellation are licensed and regulated by the FCC. We have final or temporary FCC authorization for all of our U.S.-licensed operating satellites. The special temporary authorizations ("STAs") in effect relating to our satellites cover various time periods, and thus the number held at any given time varies. In some cases, we have sought STAs because we needed temporary operational authority while we are awaiting grant of identical permanent authority. In others, we sought STAs because the activity was temporary in nature, and thus no permanent authority was needed. Historically, we have been able to obtain the STAs that we have needed on a timely basis. FCC satellite licenses have a fifteen-year term. At the end of a license term, we can request an extension to continue operating a satellite. In addition, our FCC satellite licenses that relate to use of those orbital locations and associated frequencies that were transferred to the United States at the time of our privatization in July 2001 are conditioned on our remaining a signatory to the Public Services Agreement with ITSO. Furthermore, any transfer of these licenses by us to a successor-in-interest is only permitted if such successor-in-interest has undertaken to perform our obligations under the Public Services Agreement. Some of our authorizations contain waivers of technical regulations. Many of our technical waivers were required when our satellites were initially licensed by the United States at privatization in 2001 because, as satellites previously operated by an intergovernmental entity, they had not been built in compliance with certain U.S. regulations. Since privatization, several replacement satellites for satellites licensed at privatization also have needed technical waivers as they are technically similar to the satellites they are replacing.

Changes to our satellite system generally require prior FCC approval. From time to time, we have pending applications for permanent or temporary changes in orbital locations, frequencies and technical design. From time to time, we also file applications for replacement or additional satellites. Replacement satellite applications are eligible for streamlined processing if they seek authority for the same orbital location, frequency bands and coverage area as an existing satellite and will be brought into use at approximately the same time, but no later than, the existing satellite is retired. The FCC processes satellite applications for new orbital locations or frequencies on a first come, first served basis. The FCC requires licensees of new, non-replacement, geostationary satellites to post a bond and to comply with a milestone to launch and operate the satellite within five years of the license grant. The bond starts at \$1 million and increases, pro rata, in proportion to the time that has elapsed since the license was granted to the time of the launch and operate milestone. At the end of the five-year period, the bond amount will be \$3 million. A satellite licensee that does not satisfy the launch and operate milestone will lose its license and must forfeit the bond absent circumstances warranting a milestone extension under the FCC's rules and policies. An operator that elects to relinquish its license prior to the five-year launch and operate milestone will forfeit the amount of accrued bond as of the date the license is relinquished. We hold other FCC licenses, including earth station licenses associated with technical facilities located in several states. We must pay FCC filing fees in connection with our space station and earth station applications, and we must also pay annual regulatory fees to the FCC. Violations of the FCC's rules can result in various sanctions including fines, loss of authorizations or the denial of applications for new authorizations or the renewal of existing authorizations.

One of our subsidiaries holds a Section 214 authorization. However, we currently do not sell services as a common carrier. Therefore, we are not subject to rate regulation or the obligation not to discriminate among customers.

U.S. Export Control Requirements and Sanctions Regulation. Intelsat must comply with U.S. export control and trade sanctions laws and regulations as follows:

Under the ongoing Export Control Reform (“ECR”) effort, authorized by Congress and the President, the control of commercial communications satellites along with their associated ground control equipment, related software, and technology was moved, effective November 10, 2014, from the International Traffic in Arms Regulations (“ITAR”) to the Export Administration Regulations (“EAR”). Originally there was a two year timeframe allowed for companies to make this change; this has since been extended to allow an additional year for the transition. Intelsat has transitioned our export authorizations in response to the new regulatory licensing requirements created by this reform. Intelsat has moved all programs to EAR authorizations, as needed.

The Arms Export Control Act, implemented by ITAR and administered by the U.S. Department of State’s Directorate of Defense Trade Controls (“DDTC”), regulates the export of certain satellites with defined military and government end use capabilities and characteristics, certain associated hardware, defense services, and technical information relating to satellites to non-U.S. persons (including satellite manufacturers, component suppliers, launch services providers, insurers, customers, Intelsat employees, and other non-U.S. persons). Intelsat has made the regulatory transition from the ITAR to the EAR, and few of our controlled exports currently remain under our obtained ITAR licenses. Standard satellite operations were de-controlled as part of the regulatory update, and that technology is now being transferred without license use. Certain of Intelsat’s contracts for consulting, manufacture, launch, and insurance of Intelsat’s and third-party satellites involve the export to non-U.S. persons of technical data and/or hardware; these exports are those that were regulated by the ITAR are now controlled under the EAR, and have been transitioned to EAR authorizations. The only remaining active ITAR authorizations are those that did not require technical assistance agreement (“TAA”) amendment prior to the end of a business contract, where the parties chose to remain under the existing ITAR TAA until the end of Intelsat’s involvement in the program. We believe that we have obtained all of the ITAR authorizations currently needed in order to fulfill our obligations under contracts with non-U.S. entities, and we believe that the terms of these licenses are sufficient given the scope and duration of the contracts to which they pertain.

The Export Administration Act/International Emergency Economic Powers Act, implemented by the EAR and administered by the U.S. Department of Commerce’s Bureau of Industry and Security (“BIS”), regulates exports of non-ITAR, dual-use, controlled items, which as a result of ECR now includes commercial communications satellites, associated ground equipment, related software, and technology. The EAR also controls non-ITAR equipment exported to earth stations in our ground network located outside of the United States and to customers as needed. Intelsat uses EAR approved licensing exceptions for many of our export controlled programs, and EAR licenses as required. It is our practice to obtain all licenses necessary, or correctly document the license exception authorized, for the furnishing of original or spare equipment for the operation of our TT&C ground stations, other network stations, and customer locations in a timely manner in order to facilitate the shipment of this equipment when needed.

Trade sanctions laws and regulations administered by the U.S. Department of Treasury’s Office of Foreign Assets Control (“OFAC”) regulate the provision of services to certain countries subject to U.S. trade sanctions. As required, Intelsat holds the authorizations needed to provide satellite capacity and related administrative services to U.S.-sanctioned countries.

U.S. Department of Defense Security Clearances. To participate in classified U.S. government programs, we entered into a proxy agreement with the U.S. government that allows one of our subsidiaries to obtain security clearances from the U.S. Department of Defense as required under the national security laws and regulations of the United States. Such a proxy agreement is required to insulate the subsidiary performing this work from inappropriate foreign influence and control by Intelsat S.A., a Luxembourg company with significant non-U.S. investments and employees. Security clearances are subject to ongoing scrutiny by the issuing agency, as well as renewal every five years. Intelsat must maintain the security clearances obtained from the U.S. Department of Defense, or else lose the ability to perform our obligations under any classified U.S. government contracts to which our subsidiary is a party. Under those circumstances, the U.S. government would have the right to terminate our contracts requiring access to classified information and we would not be able to enter into new classified contracts. Compliance with the proxy agreement is regularly monitored by the U.S. Department of Defense and reviewed at least annually, and if we materially violate the terms of the proxy agreement, the subsidiary holding the security clearances may be suspended or debarred from performing any U.S. government contracts, whether classified or unclassified. Our current proxy agreement is subject to extension every five years with the agreement of the U.S. Department of Defense.

Regulation by Non-U.S. National Telecommunications Authorities

U.K. Regulation. The United Kingdom is the licensing jurisdiction for the Intelsat 12 and Intelsat 26 satellites, as well as the BSS portion of the Ku-band on the Intelsat 805 satellite. Satellite operators in the United Kingdom are regulated by the U.K.’s Office of Communications (“Ofcom”) and by the U.K. Space Agency (“UKSA”).

Papua New Guinea Regulation. The National Information & Communications Technology Authority of Papua New Guinea (“NICTA”) regulates the use of certain spectrum and orbital resources associated with the operation of the Intelsat 26 and Galaxy 23 satellites and with future satellites. We are required to pay annual fees to NICTA in connection with our use of the orbital locations at which these satellites operate. In 2003, the FCC added the C-band payload of the Galaxy 23 satellite to its “Permitted Space Station List,” enabling use of the payload to provide non-DTH services in the United States.

German Regulation. We hold licenses from the BNetzA for several earth stations in Germany, as well as authorizations to use spectrum and orbital resources associated with the operation of the Intelsat 10, Intelsat 12 and Galaxy 11 satellites and with future satellites.

Australian Regulation. We hold licenses from the Australian Communications and Media Authority (“ACMA”) for several earth stations in Australia, as well as a Carrier License.

Japanese Regulation. We hold licenses from the Ministry of Internal Affairs and Communications for several earth stations in Japan, as well as a Carrier registration. We and JSAT are the sole members of Horizons Holdings, and in 2002 the Japanese telecommunications ministry authorized Horizons to operate the Ku-band payload on the Galaxy 13/Horizons-1 satellite. In 2003, the FCC added this Ku-band payload to its “Permitted Space Station List,” enabling Horizons to use the payload to provide non-DTH services in the United States. In May 2004, the FCC expanded this authority to include one-way DTH services. We are the exclusive owner of the C-band payload on Galaxy 13/Horizons-1, which the FCC has licensed us to operate.

Other National Telecommunications Authorities. As a provider of satellite capacity, we are also subject to the national communications and broadcasting laws and regulations of many other countries in which we operate. In addition, in some cases our ability to operate a satellite in a non-U.S. jurisdiction also arises from a contractual arrangement with a third party. Some countries require us to obtain a license or other form of written authorization from the regulator prior to offering satellite capacity services. We have obtained these licenses or written authorizations in all countries that have required us to obtain them. As satellites are launched or relocated, we determine whether such licenses or written authorizations are required and, if so, we obtain them. Most countries allow authorized telecommunications providers to own their own transmission facilities and to purchase satellite capacity without restriction, facilitating customer access to our services. Other countries maintain strict monopoly regimes or otherwise regulate the provision of our services. In order to provide services in these countries, we may need to negotiate an operating agreement with a monopoly entity that covers the types of services to be offered by each party, the contractual terms for service and each party’s rates. As we have developed our ground network and expanded our service offerings, we have been required to obtain additional licenses and authorizations. To date, we believe that we have identified and complied with all of the regulatory requirements applicable to us in connection with our ground network and expanded services.

The International Telecommunication Union Frequency Coordination Process and Associated Regulations

Our use of orbital locations is subject to the frequency coordination and recording process of the International Telecommunication Union (“ITU”). In order to protect satellite networks from harmful radio frequency interference from other satellite networks, the ITU maintains a Master International Frequency Register (“MIFR”) of radio frequency assignments and their associated orbital locations. Each ITU notifying administration is required by treaty to give notice of, coordinate and record its proposed use of radio frequency assignments and associated orbital locations with the ITU’s Radiocommunication Bureau.

When a frequency assignment is recorded in the MIFR, the ITU publishes this information so that all potential users of frequencies and orbital locations are aware of the need to protect the recorded assignments associated with a given orbital location from subsequent or nonconforming interfering uses by Member States of the ITU. The ITU’s Radio Regulations do not contain mandatory dispute resolution or enforcement mechanisms. The Radio Regulations’ arbitration procedure is voluntary and neither the ITU specifically, nor international law generally, provides clear remedies if this voluntary process fails. Only nation states have full standing as ITU members. Therefore, we must rely on governments to represent our interests before the ITU, including obtaining new rights to use orbital locations and resolving disputes relating to the ITU’s regulations.

An operator may submit an ITU satellite network filing to the FCC for forwarding to the ITU prior to the operator filing a complete FCC license application. Submission of such an ITU filing will reserve for the operator a place in the FCC’s first come, first served licensing queue provided the operator posts a \$500,000 bond. If the operator fails within two years to file a complete FCC license application for the orbital location, frequencies and polarization proposed in the ITU satellite network filing, the bond will be forfeited.

Environmental Matters

Our operations are subject to various laws and regulations relating to the protection of the environment, including those governing the management, storage and disposal of hazardous materials and the cleanup of contamination. As an owner or operator of property and in connection with current and historical operations at some of our sites, we could incur significant costs, including cleanup costs, fines, sanctions and third-party claims, as a result of violations of or liabilities under environmental laws and regulations. For instance, some of our operations require continuous power supply, and, as a result, current and past operations at our teleports and other technical facilities include fuel storage and batteries for back-up power generators. We believe, however, that our operations are in substantial compliance with environmental laws and regulations.

C. Organizational Structure

Intelsat S.A. is a holding company with 57 subsidiaries incorporated in the U.S., Luxembourg, Bermuda, Australia, Brazil, China, Hong Kong, Cayman Islands, France, Germany, Gibraltar, India, Ireland, Mexico, Singapore, South Africa, and the United Kingdom. All of the aforementioned subsidiaries are wholly-owned by us. A list of our significant subsidiaries as of December 31, 2016 is set forth in Exhibit 8.1 to this Annual Report.

D. Property, Plants and Equipment

We lease approximately 213,650 square feet of office space in McLean, Virginia for our permanent U.S. administrative headquarters and primary satellite operations center in a new building that was completed in June 2014. The building also houses the majority of our sales and marketing support staff and other administrative personnel. The lease for the building expires on July 31, 2029.

We own a facility in Ellenwood, Georgia in which our primary customer service center is located, together with our Atlanta Teleport. The facility has approximately 129,000 square feet of office space and operations facilities, which are based in two buildings and multiple antenna shelters and 65 antennas on the property. See Item 4B—Business Overview—Our Network—Network Operations and Current Ground Facilities for a description of this facility.

We also leased approximately 33,000 square feet in Bethesda, Maryland, where the employees of our Intelsat General subsidiary used to be located. The lease expired in January 2017.

Our backup satellite operations center is located at a facility that we own in Long Beach, California, which includes approximately 68,875 square feet for administrative and operational facilities. We have entered into two lease agreements for 20,900 square feet with two third party tenants.

We use a worldwide terrestrial ground network to operate our satellite fleet and to manage the communications services that we provide to our customers. This network is comprised of 61 owned and leased earth station and teleport facilities around the world, including 19 teleports that allows us to perform TT&C services.

The eight teleports in our terrestrial ground network that we own are located in Hagerstown, Maryland, Ellenwood, Georgia, Castle Rock, Colorado, Fillmore, Napa and Riverside, California, Paumalu, Hawaii and Fuchsstadt, Germany. We lease facilities at 53 other locations for satellite and commercial operations worldwide. We also contract with the owners of some of these facilities for the provision of additional services. The locations of other earth stations in our ground network include Argentina, Australia, Bahrain, Canada, Chile, Colombia, Germany, India, Italy, Kazakhstan, Kenya, Mongolia, the Netherlands, New Zealand, Nigeria, Peru, South Korea, South Africa, Taiwan, Uruguay and the United Arab Emirates. Our network also consists of the leased communications links that connect the earth stations to our satellite operations center located at our McLean, Virginia location and to our back-up operations facility.

We have established PoPs connected by leased fiber at key traffic exchange points around the world, including Atlanta, Los Angeles, New York, McLean, Miami, Palo Alto, and London. We lease our facilities at these traffic exchange points. We have also established video PoPs connected by leased fiber at key video exchange points around the world, including Los Angeles, Denver, New York, Washington, D.C., Miami and London. We lease our facilities at these video exchange points. We use our teleports and PoPs in combination with our satellite network to provide our customers with managed data and video services.

We lease office space in Luxembourg and London, England. Our Luxembourg office serves as the global headquarters for us and our Luxembourg parents and subsidiaries. Our London office houses the employees of Intelsat Global Sales and Marketing Ltd., our sales and marketing subsidiary, and administrative support, and functions as our global sales headquarters.

We also lease office space in Florida, Australia, Brazil, China, France, Germany, India, Japan, Mexico, Singapore, South Africa, Senegal and the United Arab Emirates for our local sales and marketing and administrative support offices.

The leases relating to our TT&C earth stations, teleports, PoPs and office space expire at various times. We do not believe that any such properties are individually material to our business or operations, and we expect that we could find suitable properties to replace such locations if the leases were not renewed at the end of their respective terms.

Item 4A. Unresolved Staff Comments

Not applicable.

Item 5. Operating and Financial Review and Prospects

This discussion should be read together with Item 3A—Selected Financial Data and our consolidated financial statements and their notes included elsewhere in this Annual Report. Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States, or U.S. GAAP, and, unless otherwise indicated, the other financial information contained in this Annual Report has also been prepared in accordance with U.S. GAAP. See “Forward-Looking Statements” and Item 3D—Risk Factors, for a discussion of factors that could cause our future financial condition and results of operations to be different from those discussed below. Certain monetary amounts, percentages and other figures included in this Annual Report have been subject to rounding adjustments. Accordingly, figures shown as totals in certain tables may not be the arithmetic aggregation of the figures that precede them, and figures expressed as percentages in the text may not total 100% or, as applicable, when aggregated may not be the arithmetic aggregation of the percentages that precede them. Unless otherwise indicated, all references to “dollars” and “\$” in this Annual Report are to, and all monetary amounts in this Annual Report are presented in, U.S. dollars.

Overview

We operate the world’s largest satellite services business, providing a critical layer in the global communications infrastructure.

We provide diversified communications services to the world’s leading media companies, fixed and wireless telecommunications operators, data networking service providers for enterprise and mobile applications in the air and on the seas, multinational corporations and ISPs. We are also the leading provider of commercial satellite capacity to the U.S. government and other select military organizations and their contractors.

Our customers use our Global Network for a broad range of applications, from global distribution of content for media companies to providing the transmission layer for commercial aeronautical consumer broadband connectivity, to enabling essential network backbones for telecommunications providers in high-growth emerging regions.

Our network solutions are a critical component of our customers’ infrastructures and business models. Generally, our customers need the specialized connectivity that satellites provide so long as they are in business or pursuing their mission. For instance, our satellite neighborhoods provide our media customers with efficient and reliable broadcast distribution that maximizes audience reach, a benefit that is difficult for terrestrial services to match. In addition, our satellite solutions provide higher reliability than is available from local terrestrial telecommunications services in many regions and allow our customers to reach geographies that they would otherwise be unable to serve.

Critical Accounting Policies

The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect reported amounts and related disclosures. We consider an accounting estimate to be critical if: (1) it requires assumptions to be made that were uncertain at the time the estimate was made; and (2) changes in the estimate, or selection of different estimates, could have a material effect on our consolidated results of operations or financial condition.

We believe that some of the more important estimates and related assumptions that affect our financial condition and results of operations are in the areas of revenue recognition, the allowance for doubtful accounts, satellites and other property and equipment, business combinations, asset impairments, share-based compensation, pension and other post-retirement benefits, income taxes and fair value measurements. There were no accounting policies adopted during 2015 or 2016 that had a material effect on our financial condition or results of operations.

While we believe that our estimates, assumptions, and judgments are reasonable, they are based on information presently available. Actual results may differ significantly. Additionally, changes in our assumptions, estimates or assessments as a result of unforeseen events or otherwise could have a material impact on our financial position or results of operations.

Revenue Recognition, Accounts Receivable and Allowance for Doubtful Accounts

Revenue Recognition. We earn revenue primarily from satellite utilization services and, to a lesser extent, from providing managed services to our customers. In general, we recognize revenue in the period during which the services are provided. While the majority of our revenue transactions contain standard business terms and conditions, there are certain transactions that contain non-standard business terms and conditions. Additionally, we may enter into certain sales transactions that involve multiple element arrangements (arrangements with more than one deliverable). As a result, significant contract interpretation is sometimes required to determine the appropriate accounting for these transactions, including:

- whether an arrangement contains a service contract or a lease;
- whether an arrangement should be reported gross as a principal versus net as an agent;
- whether we can develop reasonably dependable estimates about the extent of progress towards contract completion, contract revenues and costs; and
- how the arrangement consideration should be allocated among potential multiple elements, and when to recognize revenue related to those elements.

In addition, our revenue recognition policy requires an assessment as to whether collection is reasonably assured, which requires us to evaluate the creditworthiness of our customers. Changes in judgments in making these assumptions and estimates could materially impact the timing and/or amount of revenue recognition.

Allowance for Doubtful Accounts. Our allowance for doubtful accounts is determined through a subjective evaluation of the aging of our accounts receivable, and considers such factors as the likelihood of collection based upon an evaluation of the customer's creditworthiness, the customer's payment history and other conditions or circumstances that may affect the likelihood of payment, such as political and economic conditions in the country in which the customer is located. If our estimate of the likelihood of collection is not accurate, we may experience lower revenue or a change in our provision for doubtful accounts. When we determine that the collection of payments is not reasonably assured at the time the service is provided, we defer recognition of the revenue until such time as collection is believed to be reasonably assured or the payment is received.

Satellites and Other Property and Equipment

Satellites and other property and equipment are depreciated and amortized on a straight-line basis over their estimated useful lives. The remaining depreciable lives of our satellites range from less than one year to 16 years as of December 31, 2016. We make estimates of the useful lives of our satellites for depreciation purposes based upon an analysis of each satellite's performance, including its orbital design life and its estimated service life. The orbital design life of a satellite is the length of time that the manufacturer has contractually committed that the satellite's hardware will remain operational under normal operating conditions. In contrast, a satellite's service life is the length of time the satellite is expected to remain operational as determined by remaining fuel levels and consumption rates. Our in-orbit satellites generally have orbital design lives ranging from 10 to 15 years and service lives as long as 20 years. The useful depreciable lives of our satellites generally exceed the orbital design lives and are less than the service lives. Although the service lives of our satellites have historically extended beyond their depreciable lives, this trend may not continue. We periodically review the remaining estimated useful lives of our satellites to determine if any revisions to our estimates are necessary based on the health of the individual satellites. Changes in our estimate of the useful lives of our satellites could have a material effect on our financial position or results of operations.

We charge to operations the carrying value of any satellite lost as a result of a launch or in-orbit failure upon the occurrence of the loss. In the event of a partial failure, we record an impairment charge to operations upon the occurrence of the loss if the undiscounted future cash flows are less than the carrying value of the satellite. We measure the impairment charge as the excess of the carrying value of the satellite over its estimated fair value as determined by the present value of estimated expected future cash flows using a discount rate commensurate with the risks involved. We reduce the charge to operations resulting from either a complete or a partial failure by the amount of any insurance proceeds received or expected to be received by us, and by the amount of any deferred satellite performance incentives that are no longer applicable following the failure. See—Asset Impairment Assessments below for further discussion.

Asset Impairment Assessments

Goodwill. We account for goodwill and other intangible assets in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC” or the “Codification”) Topic 350—*Intangibles—Goodwill and Other*. Under this topic, goodwill acquired in a business combination and determined to have an indefinite useful life is not amortized but is tested for impairment annually or more often if an event or circumstances indicate that an impairment loss has been incurred. We are required to identify reporting units at a level below the company’s identified operating segments for impairment analysis. We have identified only one reporting unit for the goodwill impairment test. Additionally, our identifiable intangible assets with estimable useful lives are amortized based on the expected pattern of consumption for each respective asset.

Assumptions and Approach Used. We make our qualitative evaluation considering, among other things, general macroeconomic conditions, industry and market considerations, cost factors, overall financial performance and other relevant entity-specific events.

During the fourth quarter of 2015, our share price experienced a sustained reduction in trading values. In addition, the trading values of our debt securities also showed sustained deterioration. This was also reflective of broader difficulties in the credit markets for high yield issuers. Furthermore, our annual business planning process which we undertook in the fourth quarter showed a decline in our forecasted results as compared to previous levels. Based on our examination of these and other qualitative factors at December 31, 2015, we concluded that further testing of goodwill was required. See below for details of testing performed.

Based on our examination of the qualitative factors at December 31, 2016, we concluded that there was not a likelihood of more than 50% that the fair value of our reporting unit was less than its carrying value; therefore, no further testing of goodwill was required.

The second step of the process applied at December 31 2015, required us to calculate a hypothetical purchase allocation to compare the current implied value of the goodwill to the current carrying value of the goodwill. The implied fair value of goodwill is determined in the same manner as the amount of goodwill recognized in a business combination, which is the excess of the fair value of the reporting unit over the aggregate fair values of the individual assets, liabilities and identifiable intangibles. If the implied fair value of goodwill as described above exceeds recorded goodwill, there is no impairment. If the recorded goodwill exceeds the implied fair value, an impairment charge would be recorded for the excess. Furthermore, an impairment loss cannot exceed the amount of goodwill assigned to a reporting unit. After recognizing the impairment loss, the corresponding loss establishes a new basis in the goodwill. Subsequent reversals of goodwill impairment losses are not permitted under applicable accounting standards.

At December 31, 2015, we determined the estimated fair value of our reporting unit using discounted cash flow analysis, along with independent source data related to the comparative market multiples and, when available, recent transactions, each of which is considered a Level 3 input within the fair value hierarchy under, *Fair Value Measurements and Disclosure* (“FASB ASC 820”). The discounted cash flows were derived from a five-year projection of cash flows plus a residual value, with the resulting projected cash flows discounted at an appropriate weighted average cost of capital.

In estimating the undiscounted cash flows, we primarily used our internally prepared budgets and forecast information. The key assumptions included in our model were projected growth rates, cost of capital, effective tax rates, and industry and economic trends. A change in the estimated future cash flows or other assumptions could change our estimated fair values and result in future impairments. The outcome of our analysis resulted in a non-cash impairment charge of \$4.2 billion for the year ended December 31, 2015, which is included within impairment of goodwill and other intangibles in the consolidated statement of operations.

The analysis was performed using information available at that time and was based on estimates of fair values of the assets acquired and liabilities. We believe that the estimates and assumptions underlying the valuation methodologies are reasonable.

The assessment of qualitative factors requires significant judgment. Alternative interpretations of the qualitative factors could have resulted in a different conclusion as to whether it was not more likely than not that the fair value of our reporting unit was less than its carrying value. A different conclusion would require a more detailed quantitative analysis to be performed, which could, in future years, result in an additional impairment charge for goodwill.

Orbital Locations. Intelsat is authorized by governments to operate satellites at certain orbital locations—i.e., longitudinal coordinates along the Clarke Belt. The Clarke Belt is the part of space approximately 35,800 kilometers above the plane of the equator where geostationary orbit may be achieved. Various governments acquire rights to these orbital locations through filings made with the ITU, a sub-organization of the United Nations. We will continue to have rights to operate satellites at our orbital locations so long as we maintain our authorizations to do so. See Part I—Item 3D—Risk Factors—Risk Factors Relating to Regulation.

Our rights to operate at orbital locations can be used and sold individually; however, since satellites and customers can be and are moved from one orbital location to another, our rights are used in conjunction with each other as a network that can be adapted to meet the changing needs of our customers and market demands. Due to the interchangeable nature of orbital locations, the aggregate value of all of the orbital locations is used to measure the extent of impairment, if any.

At December 31, 2015, we determined the estimated fair value of our rights to operate at orbital locations by using the build-up method to determine cash flows for the income approach, with the resulting projected cash flows discounted at an appropriate weighted average cost of capital. In instances where the build-up method did not generate positive value for the rights to operate at an orbital location, but the rights were expected to generate revenue, we assigned a value based upon independent source data for recent transactions relating to similar orbital locations, each of which is considered a Level 3 input within the fair value hierarchy under FASB ASC 820.

The key assumptions used in estimating the fair values for our rights to operate at our orbital locations included: (i) market penetration leading to revenue growth, (ii) profit margin, (iii) duration and profile of the build-up period, (iv) estimated start-up costs and losses incurred during the build-up period and (v) weighted average cost of capital. In instances where the build-up method did not generate positive value for the rights to operate at an orbital location, but the rights were expected to generate revenue, we assigned a value based upon independent source data for transactions relating to similar orbital locations, each of which is considered a Level 3 input within the fair value hierarchy under FASB ASC 820.

At December 31, 2015, we completed our analysis of our orbital locations in connection with the analysis of goodwill described above, and concluded that there was no impairment. At December 31, 2016, we updated our assessment based on an examination of qualitative factors and concluded that there was no impairment related to our orbital slots.

Trade Name. We have implemented the relief from royalty method to determine the estimated fair value of the Intelsat trade name. The relief from royalty analysis is comprised of two major steps: i) a determination of the hypothetical royalty rate, and ii) the subsequent application of the royalty rate to projected revenue. In determining the hypothetical royalty rate utilized in the relief from royalty approach, we considered comparable license agreements, operating earnings benchmark rule of thumb, an excess earnings analysis to determine aggregate intangible asset earnings, and other qualitative factors, each of which is considered a Level 3 input within the fair value hierarchy under FASB ASC 820.

The key assumptions used in our model to estimate the fair value of the Intelsat trade name include forecasted revenues, the tax rate and the discount rate. A change in the estimated tax rates or discount rate could result in future impairments. At December 31, 2015, we completed our analysis of the Intelsat trade name in connection with the analysis of goodwill, and it resulted in an impairment of our trade name intangible of \$5.2 million, which is included within goodwill and other intangibles in the consolidated statement of operations. At December 31, 2016, we updated our assessment based on an examination of qualitative factors and concluded that there was no impairment related to the Intelsat trade name.

Long-Lived and Amortizable Intangible Assets. We review our long-lived and amortizable intangible assets to assess whether an impairment has occurred in accordance with the guidance provided under FASB ASC Topic 360—*Property, Plant and Equipment*, whenever events or changes in circumstances indicate, in our judgment, that the carrying amount of an asset may not be recoverable. These indicators of impairment can include, but are not limited to, the following:

- satellite anomalies, such as a partial or full loss of power;
- under-performance of an asset as compared to expectations; and
- shortened useful lives due to changes in the way an asset is used or expected to be used.

The recoverability of an asset to be held and used is measured by a comparison of the carrying amount of the asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the asset exceeds its estimated undiscounted future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds its fair value, determined by either a quoted market price, if any, or a value determined by utilizing discounted cash flow techniques. Additionally, when assets are expected to be used in future periods, a shortened depreciable life may be utilized if appropriate, resulting in accelerated depreciation.

Assumptions and Approach Used. We employ a discounted future cash flow approach to estimate the fair value of our long lived intangible assets when an impairment assessment is required.

Share-Based Compensation

Awards are measured at the grant date based on the fair value as calculated using the Black-Scholes option pricing model for share options, a Monte Carlo simulation model for awards with market conditions, or the closing market price at the grant date for awards of shares or restricted shares units. The expense is recognized over the requisite service period, based on attainment of certain vesting requirements.

The determination of the value of certain awards requires considerable judgment, including estimating expected volatility, expected term and risk-free rate. The Company's expected volatility is based on the average volatility rates of similar actively-traded companies over the range of each award's estimated expected term, which is based on the midpoint between the expected vesting time and the remaining contractual life. The risk-free rate is derived from the applicable Constant Maturity Treasury rate.

Income Taxes

We account for income taxes in accordance with the guidance provided under the Income Taxes topic of the Codification ("FASB ASC 740"). We are subject to income taxes in the United States as well as a number of foreign jurisdictions. Significant judgment is required in the calculation of our tax provision and the resultant tax liabilities and in the recoverability of our deferred tax assets that arise from temporary differences between the tax and financial statement recognition of revenue and expense and net operating loss and credit carryforwards.

We regularly assess the likelihood that our deferred tax assets can be recovered. A valuation allowance is required when it is more likely than not that all or a portion of the deferred tax asset will not be realized. We evaluate the recoverability of our deferred tax assets based in part on the existence of deferred tax liabilities that can be used to realize the deferred tax assets.

During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. We evaluate our tax positions to determine if it is more likely than not that a tax position is sustainable, based solely on its technical merits and presuming the taxing authorities have full knowledge of the position, and access to all relevant facts and information. When a tax position does not meet the more likely than not standard, we record a liability for the entire amount of the unrecognized tax benefit. Additionally, for those tax positions that are determined more likely than not to be sustainable, we measure the tax position at the largest amount of benefit more likely than not (determined by cumulative probability) to be realized upon settlement with the taxing authority.

Fair Value Measurements

FASB ASC 820 requires disclosure of the extent to which fair value is used to measure financial assets and liabilities, the inputs utilized in calculating valuation measurements, and the effect of the measurement of significant unobservable inputs on earnings, or changes in net assets, as of the measurement date. FASB ASC 820 defines fair value as the price that would be received in the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, and establishes a three-level valuation hierarchy based upon the transparency of inputs utilized in the measurement and valuation of financial assets or liabilities as of the measurement date:

- Level 1—unadjusted quoted prices for identical assets or liabilities in active markets;
- Level 2—quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs other than quoted market prices that are observable or that can be corroborated by observable market data by correlation; and
- Level 3—unobservable inputs based upon the reporting entity's internally developed assumptions which market participants would use in pricing the asset or liability.

We performed an evaluation of our financial assets and liabilities under the fair value framework of FASB ASC 820. As a result of that evaluation, we concluded that investments in marketable securities and interest rate financial derivative instruments were items as to which disclosures were required under FASB ASC 820.

We determined that the valuation measurement inputs of marketable securities represent unadjusted quoted prices in active markets and, accordingly, have classified such investments within Level 1 of the FASB ASC 820 hierarchy framework.

The fair value of our interest rate financial derivative instruments reflects the estimated amounts that we would pay or receive to terminate the agreement at the reporting date, taking into account current interest rates, the market expectation for future interest rates and current creditworthiness of both our counterparties and ourselves. Observable inputs utilized in the income approach valuation technique incorporate identical contractual notional amounts, fixed coupon rates, periodic terms for interest payments and contract

maturity. Although we have determined that the majority of the inputs used to value our derivatives fall within Level 2 of the fair value hierarchy, the credit valuation adjustments, if any, associated with our derivatives utilize Level 3 inputs, such as the estimates of current credit spread, to evaluate the likelihood of default by us or our counterparties. We also considered the existence of offset provisions and other credit enhancements that serve to reduce the credit exposure associated with the asset or liability being fair valued. We have assessed the significance of the inputs of the credit valuation adjustments to the overall valuation of our derivative positions and have determined that the credit valuation adjustments are not significant to the overall valuation of our derivatives. As a result, we have determined that our derivative instrument valuations in their entirety are classified in Level 2 of the fair value hierarchy.

We valued the contingent put option embedded within Intelsat Connect Finance S.A.'s 12 ½% Senior Notes due 2022 (the "2022 ICF Notes") using a valuation technique which reflects the estimated date and probability of a change in control, the fair value of the 2022 ICF Notes, and a credit valuation adjustment reflecting our credit spreads. We identified the inputs used to calculate the fair value as Level 3 inputs and concluded that the valuation in its entirety was classified as Level 3 within the fair value hierarchy.

Pension and Other Postretirement Benefits

We maintain a noncontributory defined benefit retirement plan covering substantially all of our employees hired prior to July 19, 2001. The cost of providing benefits to eligible participants under the defined benefit retirement plan is calculated using the plan's benefit formulas, which take into account the participants' remuneration, dates of hire, years of eligible service, and certain actuarial assumptions. In addition, as part of the overall medical plan, we provide postretirement medical benefits to certain current retirees who meet the criteria under the medical plan for postretirement benefit eligibility.

Expenses for our defined benefit retirement plan and for postretirement medical benefits that are provided under our medical plan are developed from actuarial valuations. Any significant decline in the fair value of our defined benefit retirement plan assets or other adverse changes to the significant assumptions used to determine the plan's funded status would negatively impact its funded status and could result in increased funding in future periods.

Key assumptions, including discount rates used in determining the present value of future benefit payments and expected return on plan assets, are reviewed and updated on an annual basis. The discount rates reflect market rates for high-quality corporate bonds. We consider current market conditions, including changes in interest rates, in making assumptions. The Society of Actuaries ("SOA") issued new mortality and mortality improvement tables in 2014, and modified those tables in 2015 and 2016. Our December 31, 2016 valuation used mortality and improvement tables based on the SOA tables, adjusted to reflect (1) an ultimate rate of mortality improvement consistent with both historical experience and U.S. Social Security long-term projections, and (2) a shorter transition period to reach the ultimate rate, which is consistent with historical patterns. In establishing the expected return on assets assumption, we review the asset allocations considering plan maturity and develop return assumptions based on different asset classes. The return assumptions are established after reviewing historical returns of broader market indexes, as well as historical performance of the investments in the plan.

Recently Issued Accounting Pronouncements

In May 2014, the FASB issued Accounting Standard Update ("ASU") 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which will supersede the revenue recognition requirements in FASB ASC Topic 605—*Revenue Recognition*. The guidance in ASU 2014-09 clarifies the principles for recognizing revenue and improves financial reporting by creating a common revenue standard for U.S. GAAP and International Financial Reporting Standards.

- In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, to defer the effective date of ASU 2014-09 by one year. Public entities can now elect to defer implementation of ASU 2014-09 to interim and annual periods beginning after December 15, 2017. Additionally, ASU 2015-14 permits early adoption of the standard but not before the original effective date, i.e. annual periods beginning after December 15, 2016. The standard permits the use of either the retrospective or cumulative effect transition method.
- In February 2016, the FASB issued ASU 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*. The standard amends the principal versus agent guidance in ASU 2014-09 and clarifies that the analysis must focus on whether the entity has control of the goods or services before they are transferred to the customer.
- In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*. The standard amends the guidance in ASU 2014-09 about identifying performance obligations and accounting for licenses of intellectual property.

- In May 2016, the FASB issued ASU 2016-12, *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients*. The standard makes narrow-scope amendments to ASU 2014-09 and provides practical expedients to simplify the transition to the new standard and to clarify certain aspects of the standard.
- In December 2016, the FASB issued ASU 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*. The standard affects certain narrow aspects of the guidance issued in ASU 2014-09.

We are still in the process of evaluating the impact that these standards will have on our consolidated financial statements and associated disclosures, and have not yet selected a transition method. Based on our initial assessment, we believe that the main changes from the new revenue standard will include: adjustments to the promised amount of consideration for effects of the time value of money for prepayment contracts with a significant financing component; capitalization of incremental costs for obtaining a contract; allocation of transaction price to all performance obligations in arrangements, irrespective of whether goods or services are provided before consideration is paid; changes to the accounting for contract modifications; and additional disclosures.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* to increase transparency and comparability by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. ASU 2016-02 is effective for interim and annual periods beginning after December 15, 2018, on a modified retrospective basis with early adoption allowed. We are in the process of evaluating the impact that ASU 2016-02 will have on our consolidated financial statements and associated disclosures.

In March 2016, the FASB issued ASU 2016-09, *Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, which is intended to improve accounting for share-based payment transactions as part of the FASB's simplification initiative. ASU 2016-09 changes several aspects of accounting for share-based payment award transactions, including changes to accounting for income taxes and forfeitures. The ASU is effective for fiscal years beginning after December 15, 2016, and interim periods within those years for public business entities. We will adopt ASU 2016-09 in the first quarter of 2017 and do not expect the adoption of ASU 2016-09 to have a material impact on our consolidated financial statements and associated disclosures.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which changes how companies measure and recognize credit impairment for any financial assets. The standard will require companies to immediately recognize an estimate of credit losses expected to occur over the remaining life of the financial assets that are within the scope of the standard. ASU 2016-13 is effective for interim and annual periods beginning after December 15, 2019 for public business entities that are SEC filers, on a modified retrospective basis. Early adoption is permitted for interim and annual periods beginning after December 15, 2018. We are in the process of evaluating the impact that ASU 2016-13 will have on our consolidated financial statements and associated disclosures.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*, which addresses specific issues relating to diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. Additionally, in November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash (a consensus of the FASB Emerging Issues Task Force)*, which requires that amounts described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-15 and ASU 2016-18 are effective for interim and annual periods beginning after December 15, 2017 for public business entities, on a retrospective basis. Early adoption is permitted for both standards in any interim or annual period, for ASU 2016-15 with a condition that the entire ASU is adopted in the same period. We do not expect the adoption of ASU 2016-05 to have a material impact on our consolidated financial statements and associated disclosures. The amendments in ASU 2016-18 will change the presentation of cash flows from restricted cash from supplemental disclosure of non-cash financing activities to cash flows from financing activities in our consolidated statement of cash flows. For the year ended December 31, 2016, the amendments in ASU 2016-18 would have resulted in a reclassification of \$480.2 million, currently presented as debt financing and restricted cash received and restricted cash used under supplemental disclosure of non-cash financing activities, to proceeds from issuance of long-term debt and repayments of long-term debt under cash flows from financing activities.

In October 2016, the FASB issued ASU 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory*, which is intended to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. The amendments in ASU 2016-16 eliminate the current requirement to defer the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. ASU 2016-16 is effective for interim and annual periods beginning after December 15, 2017 for public business entities, on a modified retrospective basis. Early adoption is permitted as of the beginning of an annual reporting period for which interim or annual financial statements have not been issued. We plan to adopt the amendments in the first quarter of 2018 and expect the effect of ASU 2016-16 to be a cumulative benefit to retained earnings on January 1, 2018. Based on our existing intercompany structure, we expect the benefit to retained earnings to be between

\$4 million and \$10 million. The benefit relates to certain deferred intercompany gains/losses, mostly in connection with a series of intercompany transactions in 2011 and related steps that reorganized the ownership of our assets among our subsidiaries.

In January 2017, the FASB issued ASU 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*, which is intended to simplify the subsequent measurement of goodwill. The amendments in ASU 2017-04 modify the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. An entity will no longer determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities, as if that reporting unit had been acquired in a business combination. ASU 2017-04 will be effective for interim and annual goodwill impairment tests in fiscal years beginning after December 15, 2019 for public business entities, on a prospective basis. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. When adopted, we expect the amendments in ASU 2017-04 to simplify the process of testing for goodwill impairment, if required.

Revenue

Revenue Overview

We earn revenue primarily by providing services over satellite transponder capacity to our customers. Our customers generally obtain satellite capacity from us by placing an order pursuant to one of several master customer service agreements. The master customer agreements and related service orders under which we sell services specify, among other things, the amount of satellite capacity to be provided, whether service will be non-preemptible or preemptible and the service term. Most services are full time in nature, with service terms ranging from one year to as long as 16 years. Occasional use services used for video applications can be for much shorter periods, including increments of one hour. Our master customer service agreements offer different service types, including transponder services, managed services, and channel, which are all services that are provided on, or used to provide access to, our global network. We refer to these services as on-network services. Our customer agreements also cover services that we procure from third parties and resell, which we refer to as off-network services. These services can include transponder services and other satellite-based transmission services sourced from other operators, often in frequencies not available on our network. The following table describes our primary service types:

Service Type	Description
On-Network Revenues:	
Transponder Services	<p>Commitments by customers to receive service via, or to utilize capacity on, particular designated transponders according to specified technical and commercial terms. Transponder services also include revenues from hosted payload capacity. Transponder services are marketed to each of our primary customer sets, as follows:</p> <ul style="list-style-type: none"> • Network Services: fixed and wireless telecom operators, data network operators, enterprise operators of private data networks, and value-added network operators for fixed and mobile broadband network infrastructure. • Media: broadcasters (for distribution of programming and full time contribution, or gathering, of content), programmers and DTH operators. • Government: civilian and defense organizations, for use in implementing private fixed and mobile networks, or for the provision of capacity or capabilities through hosted payloads.

Service Type	Description
Managed Services	<p>Hybrid services based upon IntelsatOne, which combine satellite capacity, teleport facilities, satellite communications hardware such as broadband hubs or video multiplexers and fiber optic cable and other ground facilities to provide managed and monitored broadband, trunking, video and private network services to customers. Managed services are marketed to each of our customer sets as follows:</p> <ul style="list-style-type: none"> • Network Services: cellular operators and fixed and mobile value-added service providers, providing applications such as maritime and aeronautical broadband, which develop service offerings based upon our integrated broadband platforms. • Media: programmers outsourcing elements of their transmission infrastructure and part time occasional use services used primarily by news and sports organizations to gather content from remote locations. • Government: users seeking secured, integrated, end-to-end solutions.
Channel	<p>Standardized services of predetermined bandwidth and technical characteristics, primarily used for point-to-point bilateral services for telecommunications providers. Channel is not considered a core service offering due to changing market requirements and the proliferation of fiber alternatives for point-to-point customer applications. Channel services are exclusively marketed to traditional telecommunications providers in our network services customer set.</p>
Off-Network and Other Revenues:	
Transponder, Mobile Satellite Services and Other	<p>Capacity for voice, data and video services provided by third-party commercial satellite operators for which the desired frequency type or geographic coverage is not available on our network. These services include L-band mobile satellite services (“MSS”), for which Intelsat General is a reseller. In addition, this revenue category includes the sale of customer premises equipment and other hardware. These products are primarily marketed to:</p> <ul style="list-style-type: none"> • Government: direct government users, government contractors working on programs where aggregation of capacity is required.
Satellite-related Services	<p>Services include a number of satellite-related consulting and technical services that involve the lifecycle of satellite operations and related infrastructure, from satellite and launch vehicle procurement through TT&C services and related equipment sales. These services are typically marketed to other satellite operators.</p>

We market our services on a global basis, with almost every populated region of the world contributing to our revenue. The diversity of our revenue allows us to benefit from changing market conditions and lowers our risk from revenue fluctuations in our service applications and geographic regions.

Trends Impacting Our Revenue

Our revenue at any given time is dependent upon a number of factors, including but not limited to demand for our services from existing and emerging applications; the supply of capacity available on our fleet in a given region, which is determined in part by our launch programs; our relocations of capacity; competition from supply provided by other satellite operators; and by competing technologies such as fiber optic cable networks. See Item 4B—Business Overview—Our Sector for a discussion of the global trends creating demand for our services. Trends in revenue can be impacted by:

- Growth in demand from wireless telecommunications companies seeking to complete or enhance broadband infrastructure, particularly those operating in developing regions or regions with geographic challenges;
- Growth in demand for broadband connectivity for enterprises and government organizations providing fixed and mobile services and value-added applications on a global basis;
- Satellite capacity needed to provide broadband connectivity for mobile networks on ships, planes and oil and gas platforms;
- Increasing popularity of DTH television services which use our capacity for program distribution;
- The global demand for television content in standard, HDTV and ultra-high definition television formats, which uses our satellite network and IntelsatOne terrestrial services for distribution;
- Increased popularity of OTT content distribution, which will increase the demand for broadband infrastructure in the developing world, but could decrease demand in developed markets as niche and ethnic programming transitions from satellite to Internet distribution;
- The use of commercial satellite services by governments for military and other operations, but which has slowed with the tightening U.S. budget; and
- Our use of third party or off-network services to satisfy government demand for capacity not available on our network. These services are low risk in nature, with no required up-front investment and terms and conditions of the procured capacity which typically match the contractual commitments from our customers. Demand for certain of these off-network services has declined with reductions in troop deployment in regions of conflict.

See Item 4B—Business Overview—Our Customer Sets and Growing Applications for a discussion of our customers' uses of our services and see Item 4B—Business Overview—Our Strategy for a discussion of our strategies with respect to marketing to our various customer sets.

Customer Applications

Our transponder services, managed services, MSS and channel are used by our customers for three primary customer applications: network service applications, media applications and government applications.

Pricing

Pricing of our services is based upon a number of factors, including, but not limited to, the region served by the capacity, the power and other characteristics of the satellite beam, the amount of demand for the capacity available on a particular satellite and the total supply of capacity serving any particular region. In 2014, we experienced relatively stable global pricing trends, with unfavorable price trends in Africa and the Middle East. In 2015, pricing trends were stable to lower, especially in the second half of the year with respect to capacity used for network services applications, and to a lesser degree with respect to government applications. The most significant price reductions in 2015 were accompanied by high volume commitments. Regions beyond Africa and the Middle East, experienced an increase in supply, including high-throughput services in other spectrum bands, resulting in pricing pressure in many of our other regions and applications. In 2016, pricing trends were fairly stable throughout the year albeit lower than 2015, with a slight decline in network services and government applications offset by stronger media application pricing. However, increased global supply may continue to pressure pricing. Similar to 2015, the most significant price reductions in 2016 were accompanied by high volume global commitments, which drove Ku-band pricing down slightly, whereas C-band pricing trends were steady across the year. According to Euroconsult, the annual average price per transponder for C- and Ku- band capacity is forecasted to be on a slight downward trend globally from \$1.43 million to \$1.27 million per 36 MHz transponder over the period from 2016 to 2021, reflecting increasing supply from new satellite entrants, among other factors.

The pricing of our services is generally fixed for the duration of the service commitment. New and renewing service commitments are priced to reflect regional demand and other factors as discussed above.

Operating Expenses

Direct Costs of Revenue (Excluding Depreciation and Amortization)

Direct costs of revenue relate to costs associated with the operation and control of our satellites, our communications network and engineering support, and the purchase of off-network capacity. Direct costs of revenue consist principally of salaries and related employment costs, in-orbit insurance, earth station operating costs and facilities costs. Our direct costs of revenue fluctuate based on the number and type of services offered and under development, particularly as sales of off-network transponder services and sales of customer premises equipment fluctuate. We expect our direct costs of revenue to increase as we add customers and expand our managed services and use of off-network capacity.

Selling, General and Administrative Expenses

Selling, general and administrative expenses relate to costs associated with our sales and marketing staff and our administrative staff, which include legal, finance, corporate information technology and human resources. Staff expenses consist primarily of salaries and related employment costs, including stock compensation, travel costs and office occupancy costs. Selling, general and administrative expenses also include building maintenance and rent expenses and the provision for uncollectible accounts. Selling, general and administrative expenses generally fluctuate with the number of customers served and the number and types of services offered. These expenses also include research and development expenses, and fees for professional services.

Depreciation and Amortization

Our capital assets consist primarily of our satellites and associated ground network infrastructure. Included in capitalized satellite costs are the costs for satellite construction, satellite launch services, insurance premiums for satellite launch and the in-orbit testing period, the net present value of deferred satellite performance incentives payable to satellite manufacturers, and capitalized interest incurred during the satellite construction period.

Capital assets are depreciated or amortized on a straight-line basis over their estimated useful lives. The remaining depreciable lives of our satellites range from less than one year to 16 years as of December 31, 2016.

Contracted Backlog

We benefit from strong visibility of our future revenues. Our contracted backlog is our expected future revenue under existing customer contracts, and includes both cancellable and non-cancellable contracts. Our contracted backlog was approximately \$8.7 billion as of December 31, 2016, approximately 89% of which related to contracts that were non-cancellable and approximately 10% related to contracts that were cancellable subject to substantial termination fees. As of December 31, 2016, the weighted average remaining customer contract life was approximately 5 years. We expect to deliver services associated with approximately \$1.8 billion, or approximately 21%, of our December 31, 2016 contracted backlog during the year ending December 31, 2017, of which \$3.9 million is from our channel services, a product near the end of its lifecycle. The amount included in backlog represents the full service charge for the duration of the contract and does not include termination fees. The amount of the termination fees, which is not included in the backlog amount, is generally calculated as a percentage of the remaining backlog associated with the contract. In certain cases of breach for non-payment or customer financial distress or bankruptcy, we may not be able to recover the full value of certain contracts or termination fees. Our contracted backlog includes 100% of the backlog of our consolidated ownership interests, which is consistent with the accounting for our ownership interest in these entities.

Our contracted backlog as of December 31, 2016 was as follows (in millions):

<u>Period</u>	<u>Amount</u>
2017	\$ 1,807.5
2018	1,367.8
2019	1,115.9
2020	925.8
2021	667.6
2022 and thereafter	2,777.1
Total	<u>\$ 8,661.7</u>

Our contracted backlog by service type as of December 31, 2016 was as follows (in millions, except percentages):

Service Type	Amount	Percent
Transponder services	\$ 7,133.0	82%
Managed services	1,324.1	15%
Off-Network and Other	196.1	3%
Channel	8.5	0%
Total	\$ 8,661.7	100%

We believe this backlog and the resulting predictable cash flows in the FSS sector make our net cash provided by operating activities less volatile than that of typical companies outside our industry.

A. Operating Results Years Ended December 31, 2015 and 2016

The following table sets forth our comparative statements of operations for the periods shown with the increase (decrease) and percentage changes, except those deemed not meaningful (“NM”), between the periods presented (in thousands, except percentages):

	Year Ended December 31, 2015	Year Ended December 31, 2016	Year Ended December 31, 2015 Compared to Year Ended December 31, 2016	
			Increase (Decrease)	Percentage Change
Revenue	\$ 2,352,521	\$ 2,188,047	\$ (164,474)	(7)%
Operating expenses:				
Direct costs of revenue (excluding depreciation and amortization)	328,501	341,147	12,646	4
Selling, general and administrative	199,412	231,397	31,985	16
Impairment of goodwill and other intangibles	4,165,400	—	(4,165,400)	NM
Depreciation and amortization	687,729	694,891	7,162	1
Total operating expenses	5,381,042	1,267,435	(4,113,607)	(76)
Income (loss) from operations	(3,028,521)	920,612	3,949,133	NM
Interest expense, net	890,279	938,501	48,222	5
Gain on early extinguishment of debt	7,061	1,030,092	1,023,031	NM
Other expense, net	(6,201)	(2,105)	(4,096)	(66)
Income (loss) before income taxes	(3,917,940)	1,010,098	4,928,038	NM
Provision for income taxes	1,513	15,986	14,473	NM
Net income (loss)	(3,919,453)	994,112	4,913,565	NM
Net income attributable to noncontrolling interest	(3,934)	(3,915)	(19)	(0)
Net income (loss) attributable to Intelsat	\$ (3,923,387)	\$ 990,197	\$ 4,913,584	NM
Cumulative preferred dividends	(9,919)	—	(9,919)	NM
Net income (loss) attributable to common shareholders	\$ (3,933,306)	\$ 990,197	\$ 4,923,503	NM

Revenue

The following table sets forth our comparative revenue by service type, with Off-Network and Other Revenues shown separately from On-Network Revenues for the periods below (in thousands, except percentages):

	Year Ended December 31, 2015	Year Ended December 31, 2016	Year Ended December 31, 2015 Compared to Year Ended December 31, 2016	
			Increase (Decrease)	Percentage Change
On-Network Revenues				
Transponder services	\$ 1,705,568	\$ 1,561,108	\$ (144,460)	(8)%
Managed services	405,330	414,758	9,428	2
Channel	38,872	9,134	(29,738)	(77)
Total on-network revenues	2,149,770	1,985,000	(164,770)	(8)
Off-Network and Other Revenues				
Transponder, MSS and other off-network services	160,063	157,212	(2,851)	(2)
Satellite-related services	42,688	45,835	3,147	7
Total off-network and other revenues	202,751	203,047	296	—
Total	\$ 2,352,521	\$ 2,188,047	\$ (164,474)	(7)%

Total revenue for the year ended December 31, 2016 decreased by \$164.5 million, or 7%, as compared to the year ended December 31, 2015. By service type, our revenues increased or decreased due to the following:

On-Network Revenues:

- *Transponder services*—an aggregate decrease of \$144.5 million, primarily due to a \$141.2 million decrease in revenue from network services customers, together with a net decline from media customers. The network services decline was mainly due to non-renewals and renewal pricing at lower rates for enterprise and wireless infrastructure services. The network services decline also reflects previously discussed reduced volumes from non-renewals of point-to-point connectivity, which is shifting to fiber alternatives. The net media decrease resulted primarily from lower volumes due to certain North American customers migrating to new compression standards and single format distribution, as well as declines in the Asia-Pacific region due to non-renewals, partially offset by growth in DTH television services in the Latin America and Caribbean region.
- *Managed services*—an aggregate increase of \$9.4 million, largely due to an increase of \$35.6 million in revenue from network services customers for broadband services for air and maritime mobility applications and an increase of \$7.4 million in revenue from government customers, partially offset by declines in revenues of \$21.4 million, primarily from network services customers for point-to-point trunking applications, which are switching to fiber alternatives, and \$5.5 million from media customers for reduced occasional video solutions.
- *Channel*—an aggregate decrease of \$29.7 million due to the continued migration of international point-to-point satellite traffic to fiber optic cable. This legacy product is no longer actively marketed to our customers.

Off-Network and Other Revenues:

- *Transponder, MSS and other off-network services*—an aggregate decrease of \$2.9 million, primarily due to decreases in services for government applications largely related to renewal pricing and non-renewals, and lower revenue from MSS, partially offset by an increase from sales of customer premises equipment.
- *Satellite-related services*—an aggregate increase of \$3.1 million, primarily due to increased revenue from support for third-party satellite services.

Operating Expenses

Direct Costs of Revenue (Excluding Depreciation and Amortization)

Direct costs of revenue increased by \$12.6 million, or 4%, to \$341.1 million for the year ended December 31, 2016 as compared to the year ended December 31, 2015. The increase was primarily due to the following:

- an increase of \$11.0 million due to higher cost of sales for customer premises equipment mainly in support of our government business;
- an increase of \$4.6 million in staff-related expenses;
- an increase of \$4.6 million in office and operational expenses primarily driven by expenses related to our global network connectivity initiatives; and
- an increase of \$3.8 million in satellite-related insurance costs due to recent launches; offset by
- a decrease of \$12.2 million in the cost of third-party fixed satellite services, managed services and MSS capacity purchased in support of our government business.

Selling, General and Administrative

Selling, general and administrative expenses increased by \$32.0 million, or 16%, to \$231.4 million for the year ended December 31, 2016 as compared to the year ended December 31, 2015. The increase was primarily due to the following:

- an increase of \$17.2 million in bad debt expense, primarily related to a limited number of customers in the Latin America region;
- an increase of \$9.1 million in staff-related expenses; and
- an increase of \$6.1 million in professional fees primarily due to our liability management initiatives.

Impairment of Goodwill and Other Intangibles

Impairment of goodwill and other intangibles was \$4.2 billion for the year ended December 31, 2015, with no comparable amount in the year ended December 31, 2016. We recorded a non-cash impairment charge of \$4.2 billion for goodwill and other intangibles during the year ended December 31, 2015, reducing goodwill from \$6.8 billion to \$2.6 billion, and reducing non-amortizable intangible assets from \$2.46 billion to \$2.45 billion as a result of our annual goodwill and trade name impairment analysis.

Depreciation and Amortization

Depreciation and amortization expense increased by \$7.1 million, or 1%, to \$694.9 million for the year ended December 31, 2016 as compared to the year ended December 31, 2015. Significant items impacting depreciation and amortization included:

- an increase of \$52.7 million in depreciation expense resulting from the impact of satellites placed in service; partially offset by
- a net decrease of \$34.8 million in depreciation expense due to the timing of certain satellites and ground equipment becoming fully depreciated, and other satellite related expenses; and
- a decrease of \$11.7 million in amortization expense primarily due to changes in the pattern of consumption of amortizable intangible assets, as these assets primarily include acquired backlog, which relates to contracts covering varying periods that expire over time, and acquired customer relationships, for which the value diminishes over time.

Interest Expense, Net

Interest expense, net consists of the gross interest expense we incur together with gains and losses on interest rate swaps (which reflect net interest accrued on the interest rate swaps as well as the change in their fair value), offset by interest income earned and the amount of interest we capitalize related to assets under construction. As of December 31, 2015, we held interest rate swaps with an aggregate notional amount of \$1.6 billion to economically hedge the variability in cash flow on a portion of the floating-rate term loans under our senior secured credit facilities. The swaps had not been designated as hedges for accounting purposes. The swaps matured in January 2016.

Interest expense, net increased by \$48.2 million, or 5.4%, to \$938.5 million for the year ended December 31, 2016, as compared to \$890.3 million for the year ended December 31, 2015. The increase in interest expense, net was principally due to the following:

- a net increase of \$62.2 million in interest expense primarily driven by our new note issuances offset by certain repurchases and exchanges in 2016 (see—Liquidity and Capital Resources—Long-Term Debt); partially offset by
- a decrease of \$12.0 million from higher capitalized interest primarily resulting from increased levels of satellites and related assets under construction; and
- a net decrease of \$3.5 million in interest resulting from the expiration of the interest rate swaps in January 2016.

The non-cash portion of total interest expense, net was \$24.6 million for the year ended December 31, 2016. The non-cash interest expense was due to the amortization of deferred financing fees and the accretion and amortization of discounts and premiums.

Gain on Early Extinguishment of Debt

Gain on early extinguishment of debt was \$1.0 billion for the year ended December 31, 2016 as compared to a gain of \$7.1 million for the year ended December 31, 2015. The gains were related to certain debt transactions that occurred during each of the respective years (see Liquidity and Capital Resources—Long-Term Debt). The gains on early extinguishment of debt consisted of the difference between the carrying value of the debt redeemed or exchanged and the fair value of the debt issued, if applicable, and the total cash amount paid (including related fees), together with write-offs of unamortized debt issuance costs.

Other Expense, Net

Other expense, net was \$2.1 million for the year ended December 31, 2016 as compared to \$6.2 million for the year ended December 31, 2015. The decrease of \$4.1 million was primarily due to decreases in expenses and other costs related to our business conducted in Brazilian *reais*.

Provision for Income Taxes

Our income tax expense increased by \$14.5 million to \$16.0 million for the year ended December 31, 2016, as compared to \$1.5 million for the year ended December 31, 2015. The increase in expense over the prior year was principally due to the recognition of previously unrecognized tax benefits related to our U.S. subsidiaries for the year ended December 31, 2015 as compared to December 31, 2016.

Cash paid for income taxes, net of refunds, totaled \$22.7 million and \$26.3 million for the years ended December 31, 2016 and 2015, respectively.

Net Income (Loss) Attributable to Intelsat S.A.

Net income attributable to Intelsat S.A. for the year ended December 31, 2016 totaled \$990.2 million. Net income increased from a comparable period loss in 2015 by \$4.9 billion, reflecting the various items discussed above.

Cumulative Preferred Dividends

Cumulative preferred dividends declared during the year ended December 31, 2015 were \$9.9 million, with no comparable amount during the year ended December 31, 2016.

Net Income (Loss) Attributable to Common Shareholders

Net income attributable to common shareholders for the year ended December 31, 2016 totaled \$990.2 million. Net income increased from a comparable period loss in 2015 by \$4.9 billion, reflecting the various items discussed above.

Operating Results Years Ended December 31, 2014 and 2015

The following table sets forth our comparative statements of operations for the periods shown with the increase (decrease) and percentage changes, except those deemed not meaningful (“NM”), between the periods presented (in thousands, except percentages):

	Year Ended December 31, 2014 Compared to Year Ended December 31, 2015			
	Year Ended December 31, 2014	Year Ended December 31, 2015	Increase (Decrease)	Percentage Change
Revenue	\$ 2,472,386	\$ 2,352,521	\$ (119,865)	(5)%
Operating expenses:				
Direct costs of revenue (excluding depreciation and amortization)	348,348	328,501	(19,847)	(6)
Selling, general and administrative	197,407	199,412	2,005	1
Impairment of goodwill and other intangibles	—	4,165,400	4,165,400	NM
Depreciation and amortization	679,351	687,729	8,378	1
Total operating expenses	1,225,106	5,381,042	4,155,936	NM
Income (loss) from operations	1,247,280	(3,028,521)	(4,275,801)	NM
Interest expense, net	944,787	890,279	(54,508)	(6)
Gain (loss) on early extinguishment of debt	(40,423)	7,061	47,484	NM
Other expense, net	(2,593)	(6,201)	3,608	NM
Income (loss) before income taxes	259,477	(3,917,940)	(4,177,417)	NM
Provision for income taxes	22,971	1,513	(21,458)	(93)
Net income (loss)	236,506	(3,919,453)	(4,155,959)	NM
Net income attributable to noncontrolling interest	(3,974)	(3,934)	(40)	(1)
Net income (loss) attributable to Intelsat	\$ 232,532	\$ (3,923,387)	\$ (4,155,919)	NM
Cumulative preferred dividends	(9,917)	(9,919)	2	NM
Net income (loss) attributable to common shareholders	\$ 222,615	\$ (3,933,306)	\$ (4,155,921)	NM

Revenue

The following table sets forth our comparative revenue by service type, with Off-Network and Other Revenues shown separately from On-Network Revenues, for the periods shown (in thousands, except percentages):

	Year Ended December 31, 2014 Compared to Year Ended December 31, 2015			
	Year Ended December 31, 2014	Year Ended December 31, 2015	Increase (Decrease)	Percentage Change
On-Network Revenues				
Transponder services	\$ 1,779,458	\$ 1,705,568	\$ (73,890)	(4)%
Managed services	415,269	405,330	(9,939)	(2)
Channel	58,669	38,872	(19,797)	(34)
Total on-network revenues	2,253,396	2,149,770	(103,626)	(5)
Off-Network and Other Revenues				
Transponder, MSS and other off-network services	171,637	160,063	(11,574)	(7)
Satellite-related services	47,353	42,688	(4,665)	(10)
Total off-network and other revenues	218,990	202,751	(16,239)	(7)
Total	\$ 2,472,386	\$ 2,352,521	\$ (119,865)	(5)%

Total revenue for the year ended December 31, 2015 decreased by \$119.9 million as compared to the year ended December 31, 2014. By service type, our revenues decreased due to the following:

On-Network Revenues:

- *Transponder services*—an aggregate decrease of \$73.9 million, primarily due to a \$76.3 million decline from network services customers, partially offset by a \$10.5 million increase from media customers. The network services decline was mainly due to reduced volumes resulting from non-renewals of point-to-point connectivity and certain cellular backhaul services which are shifting to fiber alternatives, together with non-renewals and renewal pricing at lower rates for enterprise network services, and non-renewals of certain consumer broadband services which are migrating to the customer's own satellite. The media increase resulted primarily from higher volumes of DTH services delivered in Latin America, offset in part by lower volumes due to certain North American customers migrating to new compression standards and single format distribution. The aggregate decrease also reflects \$22.6 million in currency-related reductions of our contracts in Brazil and Russia, across our network services and media businesses. Our sector is undergoing a period of increased supply across all regions; the resulting competitive environment is causing pricing pressure in certain regions and applications, primarily with respect to our network services business, and we expect this to continue to impact our business negatively in the near to mid-term.
- *Managed services*—an aggregate decrease of \$9.9 million, largely due to an \$8.2 million decrease in revenue from media customers for occasional use services and video solutions and a \$3.3 million decrease in managed network services for our government applications. These decreases were partially offset by an increase of \$2.5 million from network services customers.
- *Channel*—an aggregate decrease of \$19.8 million related to a continued decline due to the migration of international point-to-point satellite traffic to fiber optic cable, a trend which we expect will continue.

Off-Network and Other Revenues:

- *Transponder, MSS and other off-network services*—an aggregate decrease of \$11.6 million, primarily due to declines in the sales of off-network transponder services, largely related to government applications.
- *Satellite-related services*—an aggregate decrease of \$4.7 million, due in part to decreased revenue from government professional services.

Operating Expenses

Direct Costs of Revenue (Excluding Depreciation and Amortization)

Direct costs of revenue decreased by \$19.8 million, or 6%, to \$328.5 million for the year ended December 31, 2015 as compared to the year ended December 31, 2014. The decrease was primarily due to the following:

- a decrease of \$11.8 million in staff-related expenses; and
- a net decrease of \$8.4 million reflecting declines in cost of off-network FSS capacity purchased, direct costs related to a joint venture and the cost of MSS capacity purchased.

Selling, General and Administrative

Selling, general and administrative expenses increased by \$2.0 million, or 1%, to \$199.4 million for the year ended December 31, 2015 as compared to the year ended December 31, 2014. The increase was primarily due to the following:

- an increase of \$5.1 million in bad debt expense due to an expense of \$2.2 million related to the Africa and Middle East regions as compared to a \$3.5 million reduction in the prior year due to improved collections for that same region;
- an increase of \$3.6 million in professional fees; and
- an increase of \$3.6 million in development expense related to our antenna innovation initiatives; partially offset by
- a decrease of \$7.7 million in staff-related expenses; and
- a \$3.5 million decrease in litigation-related expenses due to expenses incurred in 2014 with no comparable amounts in 2015.

Impairment of Goodwill and Other Intangibles

Impairment of goodwill and other intangibles was \$4.2 billion for the year ended December 31, 2015, with no comparable amounts in the year ended December 31, 2014. We recorded a non-cash impairment charge of \$4.2 billion for goodwill and other intangibles during the year ended December 31, 2015, reducing goodwill from \$6.8 billion to \$2.6 billion, and reducing non-amortizable intangible assets from \$2.46 billion to \$2.45 billion as a result of our annual goodwill and trade name impairment analysis.

Depreciation and Amortization

Depreciation and amortization expense increased by \$8.4 million, or 1%, to \$687.7 million for the year ended December 31, 2015 as compared to the year ended December 31, 2014. This decrease was primarily due to the following:

- an increase of \$23.6 million in depreciation expense resulting from the impact of satellites placed into service in late 2014 and 2015; partially offset by
- a decrease of \$8.0 million in amortization expense, largely due to changes in the expected pattern of consumption of amortizable intangible assets, as these assets primarily include acquired backlog, which relates to contracts covering periods that expire over time, and acquired customer relationships, for which the value diminishes over time; and
- a net decrease of \$7.9 million in depreciation expense primarily due to ground assets that became fully depreciated in 2015.

Interest Expense, Net

Interest expense, net consists of the interest expense we incur together with gains and losses on interest rate swaps (which reflect net interest accrued on the interest rate swaps as well as the change in their fair value), offset by interest income earned and the amount of interest we capitalize related to assets under construction. As of December 31, 2015, we held interest rate swaps with an aggregate notional amount of \$1.6 billion to economically hedge the variability in cash flow on a portion of the floating-rate term loans under our senior secured credit facilities. The swaps were not designated as hedges for accounting purposes, and are no longer outstanding. Interest expense, net decreased by \$54.5 million, or 6%, to \$890.3 million for the year ended December 31, 2015, as compared to \$944.8 million for the year ended December 31, 2014. The decrease in interest expense, net was principally due to the following:

- a decrease of \$37.8 million in interest expense primarily as a result of our debt redemption in 2014 (see—Liquidity and Capital Resources—Long-Term Debt); and
- a decrease of \$15.4 million resulting from higher capitalized interest of \$86.3 million for the year ended December 31, 2015 as compared to \$70.9 million for the year ended December 31, 2014, resulting from increased levels of satellites and related assets under construction.

The non-cash portion of total interest expense, net was \$20.1 million for the year ended December 31, 2015. The non-cash interest expense was due to the amortization of deferred financing fees incurred as a result of new or refinanced debt and the amortization and accretion of discounts and premiums.

Gain (Loss) on Early Extinguishment of Debt

Gain on early extinguishment of debt was \$7.1 million for the year ended December 31, 2015 as compared to a loss of \$40.4 million for the year ended December 31, 2014. The 2015 gain related to certain debt repurchases during the year (see—Liquidity and Capital Resources—Long-Term Debt—2015 Debt Transactions). In connection with the repurchases, we recognized a gain on early extinguishment of debt of \$7.1 million, consisting of the difference between the carrying value of the debt repurchased and the total cash amount paid, together with a write-off of unamortized debt issuance costs.

The 2014 loss related to the redemption of Intelsat Jackson Holdings S.A.'s 8 ½% Senior Notes due 2019 (see—Liquidity and Capital Resources—Long-Term Debt—2014 Debt Transactions). In connection with the redemption, we recognized a loss on early extinguishment of debt of \$40.4 million, consisting of the difference between the carrying value of the debt redeemed and the total cash amount paid (including related fees), and a write-off of unamortized debt discount and debt issuance costs.

Other Expense, Net

Other expense, net was \$6.2 million for the year ended December 31, 2015 as compared to \$2.6 million for the year ended December 31, 2014. The increase of \$3.6 million was primarily due to a \$4.8 million increase in exchange rate losses, mainly related to our business conducted in Brazilian *reais*.

Provision for Income Taxes

Our income tax expense decreased by \$21.5 million to \$1.5 million for the year ended December 31, 2015 as compared to \$23.0 million for the year ended December 31, 2014. The decrease in expense over the prior year was principally due to the recognition of previously unrecognized tax benefits related to our U.S. subsidiaries for the year ended December 31, 2015 compared to December 31, 2014.

Cash paid for income taxes, net of refunds, totaled \$37.8 million and \$26.3 million for the years ended December 31, 2014 and 2015, respectively.

Net Income (loss) Attributable to Intelsat S.A.

Net loss attributable to Intelsat S.A. for the year ended December 31, 2015 totaled \$3.9 billion. Net loss increased from a comparable period of income in 2014 by \$4.2 billion, reflecting the various items discussed above.

Cumulative Preferred Dividends

Cumulative preferred dividends declared during the years ended December 31, 2015 and December 31, 2014 were \$9.9 million.

Net Income (loss) Attributable to Common Shareholders

Net loss attributable to common shareholders for the year ended December 31, 2015 totaled \$3.9 billion. Net loss increased from a comparable period of income in 2014 by \$4.2 billion, reflecting the various items discussed above.

EBITDA

EBITDA consists of earnings before net interest, loss (gain) on early extinguishment of debt, taxes and depreciation and amortization. Given our high level of leverage, refinancing activities are a frequent part of our efforts to manage our costs of borrowing. Accordingly, we consider loss (gain) on early extinguishment of debt an element of interest expense. EBITDA is a measure commonly used in the FSS sector, and we present EBITDA to enhance the understanding of our operating performance. We use EBITDA as one criterion for evaluating our performance relative to that of our peers. We believe that EBITDA is an operating performance measure, and not a liquidity measure, that provides investors and analysts with a measure of operating results unaffected by differences in capital structures, capital investment cycles and ages of related assets among otherwise comparable companies. However, EBITDA is not a measure of financial performance under U.S. GAAP, and our EBITDA may not be comparable to similarly titled measures of other companies. EBITDA should not be considered as an alternative to operating income (loss) or net income (loss) determined in accordance with U.S. GAAP, as an indicator of our operating performance, or as an alternative to cash flows from operating activities determined in accordance with U.S. GAAP, as an indicator of cash flows, or as a measure of liquidity. A reconciliation of net income (loss) to EBITDA for the periods shown is as follows (in thousands):

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Net income (loss)	\$ 236,506	\$ (3,919,453)	\$ 994,112
Add (Subtract):			
Interest expense, net	944,787	890,279	938,501
Loss (gain) on early extinguishment of debt	40,423	(7,061)	(1,030,092)
Provision for (benefit from) income taxes	22,971	1,513	15,986
Depreciation and amortization	679,351	687,729	694,891
EBITDA	<u>\$ 1,924,038</u>	<u>\$ (2,346,993)</u>	<u>\$ 1,613,398</u>

Adjusted EBITDA

In addition to EBITDA, we calculate a measure called Adjusted EBITDA to assess the operating performance of Intelsat S.A. Adjusted EBITDA consists of EBITDA of Intelsat S.A. as adjusted to exclude or include certain unusual items, certain other operating expense items and certain other adjustments as described in the table and related footnotes below. Our management believes that the presentation of Adjusted EBITDA provides useful information to investors, lenders and financial analysts regarding our financial condition and results of operations because it permits clearer comparability of our operating performance between periods. By excluding the potential volatility related to the timing and extent of non-operating activities, such as impairments of asset value and other non-recurring items, our management believes that Adjusted EBITDA provides a useful means of evaluating the success of our operating activities. We also use Adjusted EBITDA, together with other appropriate metrics, to set goals for and measure the operating performance of our business, and it is one of the principal measures we use to evaluate our management's performance in determining compensation under our incentive compensation plans. Adjusted EBITDA measures have been used historically by investors, lenders and financial analysts to estimate the value of a company, to make informed investment decisions and to evaluate performance. Our management believes that the inclusion of Adjusted EBITDA facilitates comparison of our results with those of companies having different capital structures.

Adjusted EBITDA is not a measure of financial performance under U.S. GAAP and may not be comparable to similarly titled measures of other companies. Adjusted EBITDA should not be considered as an alternative to operating income (loss) or net income (loss) determined in accordance with U.S. GAAP as an indicator of our operating performance, as an alternative to cash flows from operating activities determined in accordance with U.S. GAAP, as an indicator of cash flows, or as a measure of liquidity.

A reconciliation of net income (loss) to EBITDA and EBITDA to Adjusted EBITDA is as follows (in thousands):

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Net income (loss)	\$ 236,506	\$ (3,919,453)	\$ 994,112
Add (Subtract):			
Interest expense, net	944,787	890,279	938,501
Loss (gain) on early extinguishment of debt	40,423	(7,061)	(1,030,092)
Provision for (benefit from) income taxes	22,971	1,513	15,986
Depreciation and amortization	679,351	687,729	694,891
EBITDA	1,924,038	(2,346,993)	1,613,398
Add (Subtract):			
Compensation and benefits ⁽¹⁾	22,921	26,235	23,222
Non-recurring and other non-cash items ⁽²⁾	11,723	9,877	14,050
Impairment of goodwill and other intangibles ⁽³⁾	—	4,165,400	—
Adjusted EBITDA	\$ 1,958,682	\$ 1,854,519	\$ 1,650,670

- (1) Reflects non-cash expenses incurred relating to our equity compensation plans and a portion of the expenses related to our defined benefit retirement plan and other postretirement benefits.
- (2) Reflects certain non-recurring gains and losses and non-cash items, including the following: costs associated with development activities; professional fees primarily related to certain liability management initiatives in 2016; non-cash expenses related to the recognition of expense on a straight-line basis for certain office space leases in 2014 and 2015; non-recurring litigation expenses in 2014; severance and retention payments; expenses associated with the relocation of our U.S. administrative headquarters and primary satellite operations center in 2014; expenses associated with the relocation of our government business subsidiary to our U.S. administrative headquarters facility in 2015; and other various non-recurring expenses. These costs were partially offset by non-cash income related to the recognition of deferred revenue on a straight-line basis for certain prepaid capacity service contracts.
- (3) Reflects a non-cash goodwill and other intangibles impairment charge due to our annual impairment test which indicated that both our goodwill and our non-amortizable intangible trade name asset exceeded their estimated fair values.

B. Liquidity and Capital Resources

Overview

We are a highly leveraged company and our contractual obligations, commitments and debt service requirements over the next several years are significant. At December 31, 2016, the aggregate principal amount of our debt outstanding not held by affiliates was \$14.5 billion. Our interest expense, net for the year ended December 31, 2016 was \$938.5 million, which included \$24.6 million of non-cash interest expense. We also expect to make significant capital expenditures in 2017 and future years, as set forth below in—Capital Expenditures.

Our primary source of liquidity is and will continue to be cash generated from operations as well as existing cash. At December 31, 2016, cash and cash equivalents were approximately \$666.0 million. At December 31, 2016, Intelsat Jackson had \$432.8 million of available borrowing capacity (\$450 million revolving credit facility, net of standby letters of credit outstanding) under its revolving credit facility. In January 2017, Intelsat Jackson permanently reduced the revolving credit commitments as defined in the Intelsat Jackson Secured Credit Agreement from \$450 million to \$35 million (see—Long-Term Debt—Senior Secured Credit Facilities).

We currently expect to use cash on hand, cash flows from operations and refinancing of our third party debt to fund our most significant cash outlays, including debt service requirements and capital expenditures, in the next twelve months and beyond, and expect such sources to be sufficient to fund our requirements over that time and beyond. In past years, our cash flows from operations and cash on hand have been sufficient to fund interest obligations (\$894.5 million and \$872.1 million in 2015 and 2016, respectively) and significant capital expenditures (\$724.4 million and \$714.6 million in 2015 and 2016, respectively). However, an inability to generate sufficient cash flow to satisfy our debt service obligations or to refinance our obligations on commercially reasonable terms would have an adverse effect on our business, financial position, results of operations and cash flows, as well as on our and our subsidiaries' ability to satisfy their obligations in respect of their respective debt. See Item 3D—Risk Factors—Risk Factors Relating to Our Business—We have a substantial amount of indebtedness, which may adversely affect our cash flow and our ability to operate our business, remain in compliance with debt covenants, and make payments on our indebtedness. We also continually evaluate ways to simplify our capital structure and opportunistically extend our maturities and reduce our costs of debt. In addition, we may from time to time retain any future earnings to purchase, repay, redeem or retire any of our outstanding debt securities in privately negotiated or open market transactions, by tender offer or otherwise.

In June 2015, the shareholders of Intelsat S.A. declared a \$9.9 million dividend to be paid to holders of our Series A Preferred Shares in four installments through May 2016, in accordance with the terms of the Series A Preferred Shares.

Cash Flow Items

Our cash flows consisted of the following for the periods shown (in thousands):

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Net cash provided by operating activities	\$ 1,046,170	\$ 910,031	\$ 683,506
Net cash used in investing activities	(645,250)	(749,354)	(730,589)
Net cash provided by (used) in financing activities	(519,003)	(102,986)	541,596
Net change in cash and cash equivalents	(124,643)	48,394	494,483

Net Cash Provided by Operating Activities

Net cash provided by operating activities decreased by \$226.5 million to \$683.5 million for the year ended December 31, 2016 as compared to the year ended December 31, 2015. The primary drivers of the decrease were lower cash inflows from operations and lower inflows related to lower customer prepayments received under our long-term service contracts; partially offset by higher inflows related to the amount and timing of interest payments, higher inflows from receivables resulting from improved collections, and higher inflows from accounts payable and accrued expenses. During the year ended December 31, 2016, cash flows from operating activities reflected a \$58.8 million outflow related to deferred revenue from amortization of existing customer prepayments and a \$51.3 million cash outflow related to prepaid expenses and other assets; partially offset by a \$47.1 million inflow related to the amount and timing of interest payments and a \$35.9 million inflow related to fewer payments of accounts payable.

Net Cash Used in Investing Activities

Net cash used in investing activities decreased by \$18.8 million to \$730.6 million during the year ended December 31, 2016 as compared to the year ended December 31, 2015. The decrease was primarily due to fewer purchases of cost method investments and lower capital expenditures, partially offset by capital contributions to a joint venture.

Net Cash Provided by (Used in) Financing Activities

Net cash from financing activities increased by \$644.6 million to \$541.6 million during the year ended December 31, 2016 as compared to the year ended December 31, 2015. The increase was primarily due to net proceeds from the issuance of \$1.25 billion aggregate principal amount of senior secured notes by Intelsat Jackson in March 2016, partially offset by a \$328.9 million repayment of long-term debt, and \$331.7 million in debt issuance costs and payments primarily in connection with tender offer, debt exchange and consent solicitation transactions completed in 2016.

Long-Term Debt

This section describes the changes to our long-term debt during the years ended December 31, 2014, 2015 and 2016. For detail regarding our outstanding long-term indebtedness as of December 31, 2016, see Note 12 to our consolidated financial statements included elsewhere in this Annual Report.

Senior Secured Credit Facilities

Intelsat Jackson Senior Secured Credit Facilities

On January 12, 2011, Intelsat Jackson entered into a secured credit agreement (the “Intelsat Jackson Secured Credit Agreement”), which included a \$3.25 billion term loan facility and a \$500.0 million revolving credit facility, and borrowed the full \$3.25 billion under the term loan facility. The term loan facility required regularly scheduled quarterly payments of principal equal to 0.25% of the original principal amount of the term loan beginning six months after January 12, 2011, with the remaining unpaid amount due and payable at maturity.

Up to \$350.0 million of the revolving credit facility is available for issuance of letters of credit. Additionally, up to \$70.0 million of the revolving credit facility is available for swingline loans. Both the face amount of any outstanding letters of credit and any swingline loans reduce availability under the revolving credit facility on a dollar for dollar basis. Intelsat Jackson is required to pay a commitment fee for the unused commitments under the revolving credit facility, if any, at a rate per annum of 0.375%.

On October 3, 2012, Intelsat Jackson entered into an Amendment and Joinder Agreement (the “Jackson Credit Agreement Amendment”), which amended the Intelsat Jackson Secured Credit Agreement. As a result of the Jackson Credit Agreement Amendment, interest rates for borrowings under the term loan facility and the revolving credit facility were reduced. In April 2013, our corporate family rating was upgraded by Moody’s, and as a result, the interest rate for the borrowing under the term loan facility and revolving credit facility were further reduced to LIBOR plus 3.00% or the Above Bank Rate (“ABR”) plus 2.00%.

On November 27, 2013, Intelsat Jackson entered into a Second Amendment and Joinder Agreement (the “Second Jackson Credit Agreement Amendment”), which further amended the Intelsat Jackson Secured Credit Agreement. The Second Jackson Credit Agreement Amendment reduced interest rates for borrowings under the term loan facility and extended the maturity of the term loan facility. In addition, it reduced the interest rates applicable to \$450 million of the \$500 million total revolving credit facility and extended the maturity of such portion. As a result of the Second Jackson Credit Agreement Amendment, interest rates for borrowings under the term loan facility and the new tranche of the revolving credit facility are (i) LIBOR plus 2.75%, or (ii) the ABR plus 1.75%. The LIBOR and the ABR, plus applicable margins, related to the term loan facility and the new tranche of the revolving credit facility are determined as specified in the Intelsat Jackson Secured Credit Agreement, as amended by the Second Jackson Credit Agreement Amendment, and the LIBOR will not be less than 1.00% per annum. The maturity date of the term loan facility was extended from April 2, 2018 to June 30, 2019 and the maturity of the new \$450 million tranche of the revolving credit facility was extended from January 12, 2016 to July 12, 2017. The interest rates and maturity date applicable to the \$50 million tranche of the revolving credit facility that was not amended did not change. The Second Jackson Credit Agreement Amendment further removed the requirement for regularly scheduled quarterly principal payments under the term loan facility.

On December 22, 2016, Intelsat Jackson, Intelsat Luxembourg and Intelsat Connect Finance S.A., a subsidiary of Intelsat Luxembourg and parent of Intelsat Jackson (“ICF”), entered into a Joinder Agreement and a Release Agreement, which further amended the Intelsat Jackson Secured Credit Agreement. These agreements provided for the entry of ICF into the Intelsat Jackson Secured Credit Agreement, as amended, in place of Intelsat Luxembourg and the release of Intelsat Luxembourg from certain of its previous obligations thereunder.

As of December 31, 2016, Intelsat Jackson had \$432.8 million of undrawn capacity under its revolving credit facility. However, use of such capacity was subject to the covenants contained in its other debt agreements. As a result of the completion of senior secured note issuances in March, June and September, 2016, Intelsat Jackson currently has limited access to the undrawn capacity under the revolving credit facility, and has been relying for liquidity purposes, and intends to rely in the future, on a portion of the net proceeds of the March 2016 notes issuance. In January 2017, Intelsat Jackson permanently reduced the revolving credit commitments as defined in the Intelsat Jackson Secured Credit Agreement from \$450 million to \$35 million.

Intelsat Jackson's obligations under the Intelsat Jackson Secured Credit Agreement are guaranteed by ICF and certain of Intelsat Jackson's subsidiaries. Intelsat Jackson's obligations under the Intelsat Jackson Secured Credit Agreement are secured by a first priority security interest in substantially all of the assets of Intelsat Jackson and the guarantors, to the extent legally permissible and subject to certain agreed exceptions, and by a pledge of the equity interests of the subsidiary guarantors and the direct subsidiaries of each guarantor, subject to certain exceptions, including exceptions for equity interests in certain non-U.S. subsidiaries, existing contractual prohibitions and prohibitions under other legal requirements.

The Intelsat Jackson Secured Credit Agreement includes two financial covenants. Intelsat Jackson must maintain a consolidated secured debt to consolidated EBITDA ratio equal to or less than 3.50 to 1.00 at the end of each fiscal quarter, as well as a consolidated EBITDA to consolidated interest expense ratio equal to or greater than 1.75 to 1.00 at the end of each fiscal quarter, in each case as such financial measures are defined in the Intelsat Jackson Secured Credit Agreement. Intelsat Jackson was in compliance with these financial maintenance covenant ratios with a consolidated secured debt to consolidated EBITDA ratio of 2.65 to 1.00 and a consolidated EBITDA to consolidated interest expense ratio of 2.20 to 1.00 as of December 31, 2016.

January 2017 Intelsat Luxembourg Exchange Offer

In January 2017, Intelsat Luxembourg completed a debt exchange (the "Second 2018 Luxembourg Exchange"), whereby it exchanged \$403.3 million aggregate principal amount of its 6 ³/₄% Senior Notes due 2018 (the "2018 Luxembourg Notes") for an equal aggregate principal amount of newly issued unsecured 12 ¹/₂% Senior Notes due 2024 (the "2024 Luxembourg Notes"). The Second 2018 Luxembourg Exchange consisted of \$377.6 million aggregate principal amount of 2018 Luxembourg Notes held by ICF as a result of the First 2018 Luxembourg Exchange (as defined and described below), together with \$25 million aggregate principal amount of 2018 Luxembourg Notes repurchased by us in the fourth quarter of 2015. We consolidate ICF, the holder of the 2018 Luxembourg Notes exchanged in the Second 2018 Luxembourg Exchange. Accordingly, we do not expect the Second 2018 Luxembourg Exchange to have any material impact on our consolidated balance sheet or income statement.

2016 Debt Transactions

March 2016 Intelsat Jackson Senior Secured Notes Offering

On March 29, 2016, Intelsat Jackson completed an offering of \$1.25 billion aggregate principal amount of 8% Senior Secured Notes due 2024 (the "2024 Secured Jackson Notes"). The 2024 Secured Jackson Notes bear interest at 8% annually and mature in February 2024. These notes are guaranteed by ICF and certain of Intelsat Jackson's subsidiaries. The net proceeds from this offering have been and, are expected to be, used for general corporate purposes, which may include repayment and repurchase of indebtedness, capital expenditures and working capital and to pay fees and expenses related to the offering. A portion of the net proceeds was used to prepay in full all amounts outstanding under the Intercompany Loan described below under—2015 Debt Transactions—Significant Intercompany Transaction.

May 2016 Intelsat Jackson Notes Repurchases

In May 2016, we repurchased \$459.7 million in aggregate principal amount of Intelsat Jackson's outstanding 6 ⁵/₈% Senior Notes due 2022 (the "2022 Jackson Notes"). In connection with these repurchases, we recognized a net gain on early extinguishment of debt of \$131.4 million, consisting of the difference between the carrying value of the debt repurchased and the total cash amount paid (including related fees and expenses), together with a write-off of unamortized debt premium and unamortized debt issuance costs.

Subsidiary Guarantee of Intelsat Jackson's 6 ⁵/₈% Senior Notes due 2022

In May 2016, Intelsat Jackson and each of the subsidiaries of Intelsat Jackson that guarantees loans under Intelsat Jackson's Secured Credit Agreement executed a supplemental indenture to the indenture governing the 2022 Jackson Notes, following the execution of which such subsidiaries guarantee the 2022 Jackson Notes.

2016 Intelsat Jackson Tender Offers and June 2016 Senior Secured Notes Issuance

In May 2016, Intelsat Jackson commenced tender offers to purchase several tranches of outstanding debt (the “Tender Offers”). In June 2016, Intelsat Jackson completed an issuance of \$490 million aggregate principal amount of 9 ½% Senior Secured Notes due 2022 (the “2022 Jackson Secured Notes”), with an original issue discount of 2.0%. Under the terms of the issuance, in the event that all of the net proceeds of the 2022 Jackson Secured Notes were not applied to fund the Tender Offers, Intelsat Jackson would have been required to use the portion of the net proceeds not so applied to redeem the 2022 Jackson Secured Notes. Since the possible uses of the debt proceeds were restricted to repayment of long-term debt, the net proceeds were classified as restricted cash within long-term assets on the condensed consolidated balance sheet as of June 30, 2016. In July 2016, the net proceeds from the sale of the 2022 Jackson Secured Notes were used to repurchase \$673.5 million aggregate principal amount of the 2022 Jackson Notes pursuant to the terms of the previously commenced Tender Offers, and to pay related fees and expenses. Due to the classification of the net proceeds as restricted cash, both the June 2016 issuance and the July 2016 use of the net proceeds are disclosed supplementally as non-cash financing activities in the accompanying consolidated statement of cash flows. In connection with this repurchase, we recognized a gain on early extinguishment of debt of \$219.6 million, consisting of the difference between the carrying value of the debt repurchased and the total cash amount paid (including related fees and expenses), together with a write-off of unamortized debt premium and unamortized debt issuance costs.

September 2016 Intelsat Jackson Debt Exchange and Consent Solicitation

In September 2016, Intelsat Jackson completed a debt exchange receiving \$141.4 million aggregate principal amount of 2022 Jackson Notes in exchange for \$99.7 million aggregate principal amount of newly issued 2024 Secured Jackson Notes issued and \$17.0 million in cash. In connection with this exchange, Intelsat Jackson also received a consent from holders of \$141.5 million principal amount of 2022 Jackson Notes in exchange for \$9.2 million in cash to amend the indenture governing the 2022 Jackson Notes, among other things to: (i) eliminate substantially all of the restrictive covenants and certain events of default pertaining to the 2022 Jackson Notes, and (ii) waive any defaults or events of default potentially existing under the indenture governing the 2022 Jackson Notes as of September 12, 2016. We have determined the transaction will be accounted for as a modification and not as an extinguishment of debt under ASU 470, *Debt*. As a result, the fees paid to bondholders, including the consent payment, will be amortized over the remaining term of the debt instrument.

December 2016 Intelsat Connect Finance Exchange Offers

First 2018 Luxembourg Exchange—In December 2016, ICF completed an exchange, receiving \$377.6 million aggregate principal amount of 2018 Luxembourg Notes in exchange for \$132.1 million aggregate principal amount of its newly issued unsecured 12 ½% Senior Notes due 2022 (the “2022 ICF Notes”) and \$226.5 million in cash (the “First 2018 Luxembourg Exchange”). The 2022 ICF Notes are guaranteed by Intelsat Luxembourg. We accounted for the First 2018 Luxembourg Exchange as a modification of debt under ASU 470, *Debt*. As a result, remaining unamortized debt issuance costs on the exchanged 2018 Luxembourg Notes will be amortized over the remaining term of the newly issued 2022 ICF Notes. We expensed approximately \$3.3 million of fees related to the First 2018 Luxembourg Exchange.

2021 Luxembourg Exchange—In December 2016, ICF completed an exchange, receiving \$979.2 million aggregate principal amount of Intelsat Luxembourg’s 7 ¾% Senior Notes due 2021 (the “2021 Luxembourg Notes”) in exchange for \$538.4 million aggregate principal amount of its newly issued 2022 ICF Notes and \$29.4 million in cash (the “2021 Luxembourg Exchange”). We accounted for the 2021 Luxembourg Exchange as an extinguishment of debt under ASU 470, *Debt*. In connection with the 2021 Luxembourg Exchange, we recognized a net gain on early extinguishment of debt of \$609.8 million, consisting of the difference between the carrying value of the 2021 Luxembourg Notes exchanged and the fair value of the 2022 ICF Notes issued and the total cash paid (including related fees and expenses), together with a write-off of unamortized debt issuance costs.

2023 Luxembourg Exchange — In December 2016, ICF completed an exchange, receiving \$111.7 million aggregate principal amount of Intelsat Luxembourg’s 8 ⅛% Senior Notes due 2023 (the “2023 Luxembourg Notes”) in exchange for \$61.4 million aggregate principal amount of newly issued 2022 ICF Notes and \$3.3 million in cash (the “2023 Luxembourg Exchange”). We accounted for the 2023 Luxembourg Exchange as an extinguishment of debt under ASU 470, *Debt*. In connection with the 2023 Luxembourg Exchange, we recognized a net gain on early extinguishment of debt of \$69.4 million, consisting of the difference between the carrying value of the 2023 Luxembourg Notes exchanged and the fair value of the 2022 ICF Notes issued and the total cash paid (including related fees and expenses), together with a write-off of unamortized debt issuance costs.

2015 Debt Transactions

2015 Intelsat Luxembourg Notes Repurchases

During the fourth quarter of 2015, we repurchased \$25.0 million aggregate principal amount of the 2018 Luxembourg Notes. In connection with these repurchases, we recognized a gain on early extinguishment of debt of \$7.1 million in the fourth quarter of 2015, consisting of the difference between the carrying value of the debt purchased and the total cash amount paid, and a write-off of unamortized debt issuance costs.

Significant Intercompany Transaction

During the third quarter of 2015, Intelsat Jackson declared and paid a dividend of \$360 million in cash to its direct parent at the time, Intelsat Luxembourg, also one of our subsidiaries. Subsequent to the payment of the dividend, a subsidiary of Intelsat Luxembourg loaned an aggregate principal amount of \$360 million to Intelsat Jackson (the "Intercompany Loan") pursuant to a promissory note. During the first quarter of 2016, Intelsat Jackson prepaid in full all amounts outstanding under the Intercompany Loan, using a portion of the proceeds of the issuance of the 2024 Secured Jackson Notes described above.

2014 Debt Transactions

2014 Intelsat Jackson Notes Redemption

On November 1, 2014, Intelsat Jackson redeemed all of the outstanding \$500.0 million aggregate principal amount of its 8 1/2% Senior Notes due 2019. In connection with the redemption of these notes, we recognized a loss on early extinguishment of debt of \$40.4 million in the fourth quarter of 2014, consisting of the difference between the carrying value of the debt redeemed and the total cash amount paid (including related fees), and a write-off of unamortized debt discount and debt issuance costs.

Satellite Performance Incentives

Our cost of satellite construction includes an element of deferred consideration to satellite manufacturers referred to as satellite performance incentives. We are contractually obligated to make these payments over the lives of the satellites, provided the satellites continue to operate in accordance with contractual specifications. We capitalize the present value of these payments as part of the cost of the satellites and record a corresponding liability to the satellite manufacturers. This asset is amortized over the useful lives of the satellites and the liability is accreted as interest expense is recorded based on the passage of time and reduced as the payments are made. Our total satellite performance incentive payment liability as of December 31, 2015 and 2016 was \$181.6 million and \$234.2 million, respectively.

Capital Expenditures

Our capital expenditures depend on our business strategies and reflect our commercial responses to opportunities and trends in our industry. Our actual capital expenditures may differ from our expected capital expenditures if, among other things, we enter into any currently unplanned strategic transactions. Levels of capital spending from one year to the next are also influenced by the nature of the satellite life cycle and by the capital-intensive nature of the satellite industry. For example, we incur significant capital expenditures during the years in which satellites are under construction. We typically procure a new satellite within a timeframe that would allow the satellite to be deployed at least one year prior to the end of the service life of the satellite to be replaced. As a result, we frequently experience significant variances in our capital expenditures from year to year. The following table compares our satellite-related capital expenditures to total capital expenditures from 2012 through 2016 (in thousands).

Year	Satellite-Related Capital Expenditures	Total Capital Expenditures
2012	\$ 793,451	\$ 866,016
2013	542,942	600,792
2014	566,716	645,424
2015	657,656	724,362
2016	629,346	714,570
Total	\$ 3,190,111	\$ 3,551,164

Between 2017 and 2019, we have seven satellites which are in the manufacturing and design phase, or recently launched. Excluding the successful February 2017 launch of Intelsat 32e, a customized payload positioned on a third-party satellite, we plan to launch two satellites in 2017. By 2019, our total transmission capacity is expected to increase significantly from levels at 2016 year end.

Payments for satellites and other property and equipment for the year ended December 31, 2016, were \$732.9 million, which included \$714.6 million and \$18.3 million in cash flows from investing activities and cash flows from financing activities, respectively, in our consolidated statements of cash flows. We intend to fund our capital expenditure requirements through cash on hand and cash provided from operating activities.

Currency and Exchange Rates

Substantially all of our customer contracts, capital expenditure contracts and operating expense obligations are denominated in U.S. dollars. Consequently, we are not exposed to material foreign currency exchange risk. However, the service contracts with our Brazilian customers provide for payment in Brazilian *reais*. Accordingly, we are subject to the risk of a reduction in the value of the Brazilian *real* as compared to the U.S. dollar in connection with payments made by Brazilian customers, and our exposure to fluctuations in the exchange rate for Brazilian *reais* is ongoing. However, the rates payable under our service contracts with Brazilian customers are adjusted annually to account for inflation in Brazil, thereby mitigating the risk. For the years ended December 31, 2014, 2015 and 2016, our Brazilian customers represented approximately 4.9%, 4.2% and 3.7% of our revenue, respectively. Transactions in other currencies are converted into U.S. dollars using exchange rates in effect on the dates of the transactions.

We recorded foreign currency exchange losses of \$6.6 million and \$11.4 million, and gains of \$3.3 million for the years ended December 31, 2014, 2015 and 2016, respectively. The losses and gains for each year were primarily attributable to the conversion of our Brazilian *reais* receivables and cash balances held in Brazil, and was net of other working capital account balances translated into U.S. dollars at the exchange rates in effect on the last day of the applicable year or, with respect to exchange transactions effected during the year, at the time the exchange transactions occurred.

C. Research and Development, Patents and Licenses

During the year ended December 31, 2016, we incurred expenses of \$7.5 million for development activities. In addition, a few isolated patent initiatives have been conducted in furtherance of innovation efforts of the Company, resulting in \$0.3 million of expenses for the year ended December 31, 2016. Further, Intelsat personnel regularly engage in activities that are intended to result in new or improved functions, performance, or quality related to our network, teleports and satellites.

D. Trend Information

Other than as disclosed elsewhere in this Annual Report, we are not aware of any trends, uncertainties, demands, commitments or events that are reasonably likely to have a material adverse effect on our revenues, income, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future operating results or financial conditions. See Item 5—Operating and Financial Review and Prospects for further discussion.

E. Off-Balance Sheet Arrangements

We have a revenue sharing agreement with JSAT International, Inc. (“JSAT”) related to services sold on the Horizons Holdings satellites. We are responsible for billing and collection for such services and we remit 50% of the revenue, less applicable fees and commissions, to JSAT. Under an amended joint venture agreement between us and JSAT, we agreed to guarantee to JSAT certain minimum levels of annual gross revenues for a three-year period beginning in the first quarter of 2012 (the date that the Horizons-2 satellite was relocated to 85°E). (See Note 10(a)—Investments—Horizons Holdings). As of the first quarter of 2015, all amounts due under the guarantee had been paid, and no remaining exposure exists.

At December 31, 2016, we also had an off-balance sheet commitment of \$5.0 million, which we expect to pay through 2017.

F. Tabular Disclosure of Contractual Obligations

The following table sets forth our contractual obligations and capital and certain other commitments as of December 31, 2016, and the expected year of payments (in thousands):

Contractual Obligations ⁽¹⁾	Payments due by year							Other	Total
	2017	2018	2019	2020	2021	2022 and thereafter			
<i>Long-Term debt obligations</i>									
Intelsat S.A. and subsidiary notes and credit facilities—principal payment	\$ —	\$ 97,430	\$ 4,595,000	\$ 2,200,000	\$ 2,170,832	\$ 5,459,899	\$ —	\$ 14,523,161	
Intelsat S.A. and subsidiary notes and credit facilities—interest payment ⁽²⁾	985,118	982,764	865,780	753,052	510,869	671,690	—	\$ 4,769,273	
Operating lease obligations	14,304	13,795	13,597	13,128	12,954	106,357	—	\$ 174,135	
Sublease rental income	(410)	(407)	(355)	(263)	(48)	(184)	—	\$ (1,667)	
Horizons-3 Satellite LLC Capital Contributions ⁽³⁾	21,700	36,400	4,600	11,700	13,300	74,700	—	\$ 162,400	
Purchase obligations ⁽⁴⁾	601,219	281,565	163,083	49,605	31,551	47,813	—	\$ 1,174,836	
Other long-term liabilities (including interest) ⁽⁵⁾	44,878	34,147	32,224	32,150	31,354	187,459	—	\$ 362,212	
Income tax contingencies ⁽⁶⁾	—	—	—	—	—	—	36,167	\$ 36,167	
Total contractual obligations	\$ 1,666,809	\$ 1,445,694	\$ 5,673,929	\$ 3,059,372	\$ 2,770,812	\$ 6,547,734	\$ 36,167	\$ 21,200,517	

- Obligations related to our pension and postretirement medical benefit obligations are excluded from the table. We maintain a noncontributory defined benefit retirement plan covering substantially all of our employees hired prior to July 19, 2001. We expect that our future contributions to the defined benefit retirement plan will be based on the minimum funding requirements of the Internal Revenue Code and on the plan's funded status. The impact on the funded status is determined based upon market conditions in effect when we completed our annual valuation. In the first quarter of 2015, we amended the defined benefit retirement plan to cease the accrual of additional benefits for the remaining active participants effective March 31, 2015. We did not make any cash contributions to the defined benefit plan during the year ended December 31, 2016. We anticipate that our contributions to the defined benefit retirement plan in 2017 will be approximately \$2.9 million. We fund the postretirement medical benefits throughout the year based on benefits paid. We anticipate that our contributions to fund postretirement medical benefits in 2017 will be approximately \$4.1 million. See Note 7—Retirement Plans and Other Retiree Benefits to our consolidated financial statements included elsewhere in this Annual Report.
- Represents estimated interest payments to be made on our fixed and variable rate debt and fees owed in connection with our senior secured credit facilities and letters of credit. Interest payments for variable rate debt and incentive obligations have been estimated based on the current interest rates.
- See Note 10(b)—Investments—Horizons-3 Satellite LLC.
- Includes satellite construction and launch contracts, estimated payments to be made on performance incentive obligations related to certain satellites that are currently under construction, vendor contracts and customer commitments.
- Represents satellite performance incentive obligations related to satellites that are in service (and interest thereon).
- The timing of future cash flows from income tax contingencies cannot be reasonably estimated and therefore are reflected in the other column. See Note 14—Income Taxes to our consolidated financial statements included elsewhere in this Annual Report for further discussion of income tax contingencies.

Satellite Construction and Launch Obligations

As of December 31, 2016, we had approximately \$949.5 million of expenditures remaining under our existing satellite construction contracts and satellite launch contracts. Satellite launch and in-orbit insurance contracts related to future satellites to be launched are cancelable up to thirty days prior to the satellite's launch. As of December 31, 2016, we did not have any non-cancelable commitments related to existing launch insurance or in-orbit insurance contracts for satellites to be launched.

See Item 4B—Business Overview—Our Network—Satellite Systems—Planned Satellites for details relating to certain of our satellite construction and launch contracts.

Operating Leases

We have commitments for operating leases primarily relating to equipment and office facilities. These leases contain escalation provisions for increases. As of December 31, 2016, minimum annual rentals of all leases (net of sublease income on leased facilities), totaled approximately \$172.5 million, exclusive of potential increases in real estate taxes, operating assessments and future sublease income.

Customer and Vendor Contracts

We have contracts with certain of our customers which require us to provide equipment, services and other support during the term of the related contracts. We also have long-term contractual obligations with service providers primarily related to the operation of certain of our satellites. As of December 31, 2016, we had commitments under these customer and vendor contracts which totaled approximately \$225.4 million related to the provision of equipment, services and other support.

G. Safe Harbor

See the section entitled “Forward-Looking Statements” at the beginning of this Annual Report.

Item 6. Directors, Senior Management and Employees

A. Directors and Senior Management

Our current executive officers and directors are as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
David McGlade	56	Director and Executive Chairman, Intelsat S.A.
Stephen Spengler	57	Director and Chief Executive Officer, Intelsat S.A.
Jacques Kerrest	70	Executive Vice President & Chief Financial Officer, Intelsat S.A.
Michelle Bryan	60	Executive Vice President, General Counsel, Chief Administrative Officer and Secretary, Intelsat S.A.
Kurt Riegelman	53	Senior Vice President, Sales and Marketing, Intelsat Corporation
Michael J. DeMarco	46	Senior Vice President, Operations, Intelsat Corporation
Justin Bateman	43	Director, Intelsat S.A.
Robert Callahan	65	Director, Intelsat S.A.
John Dierksen	67	Director, Intelsat S.A.
Edward A. Kangas	72	Director, Intelsat S.A.
Raymond Svider	54	Director, Intelsat S.A.

The following is a brief biography of each of our executive officers and directors:

Mr. McGlade became the Executive Chairman of the board of directors of Intelsat S.A. in April 2015 and served as Chief Executive Officer and Deputy Chairman of the board of directors of Intelsat S.A. from July 2011 to April 2015. Mr. McGlade served as the Chief Executive Officer of Intelsat Investments S.A. from April 2005 to April 2015, and was Deputy Chairman of the board of directors of Intelsat Investments S.A. from August 2008 to May 2013. Prior to that, Mr. McGlade was the Chief Executive Officer of O2 UK, the largest subsidiary of O2 plc and a leading U.K. cellular telephone company, a position he took in October 2000. He was also an Executive Director of O2 plc. During his tenure at O2 UK and O2 plc, Mr. McGlade was a director of the GSM Association, a trade association for GSM mobile operators, and served as Chairman of its Finance Committee from February 2004 to February 2005. He was also a director of Tesco Mobile from September 2003 to March 2005 and a director of The Link, a distributor of mobile phones and other high technology consumer merchandise, from December 2000 to May 2004. Mr. McGlade is currently a director of Skyworks Solutions, Inc. as well as Omnispace LLC, a mobile satellite services provider. Mr. McGlade holds a Bachelor of Arts degree from Rutgers University. Mr. McGlade’s business address is 4, rue Albert Borschette, L-1246 Luxembourg.

Mr. Spengler became the Chief Executive Officer of Intelsat S.A. on April 1, 2015, and became a director of Intelsat S.A. in October 2015. From December 16, 2015 to January 31, 2016, he also served as Acting Chief Financial Officer of Intelsat S.A. Prior to April 2015, Mr. Spengler served as Deputy Chief Executive Officer of Intelsat S.A. from December 2014, and prior to that he served as President and Chief Commercial Officer of Intelsat Corporation from March 2013 to December 2014. Mr. Spengler also served as Executive Vice President, Sales, Marketing and Strategy of Intelsat Corporation from February 2008 to March 2013. From July 2006 to February 2008, he served as Intelsat Corporation’s Senior Vice President, Europe, Middle East, Africa and Asia Pacific Sales. From February 2006 to July 2006, Mr. Spengler served as Acting Senior Vice President Sales & Marketing of Intelsat Global Service Corporation, leading Intelsat S.A.’s global marketing and sales organizations immediately prior to the acquisition of PanAmSat Corporation. From July 2003 to February 2006, he served as Vice President, Sales, Network Services & Telecom of Intelsat Global Service Corporation. Before joining Intelsat, Mr. Spengler held various positions in the telecommunications industry, including Senior Vice President of Global Sales, Broadband Access Networks at Cirronet, Inc., Vice President of Sales and Marketing at ViaSat Satellite Networks, Regional Sales Director for Satellite Networks in Europe, the Middle East and Africa for Scientific-Atlanta Europe based in London, and sales and marketing positions at GTE Spacenet and GTE Corporation. Mr. Spengler received his Bachelor of Arts degree from Dickinson College in Carlisle, Pennsylvania, and his Master’s in Business Administration from Boston University in Massachusetts. Mr. Spengler’s business address is 4, rue Albert Borschette, L-1246 Luxembourg.

Mr. Kerrest became the Executive Vice President and Chief Financial Officer of Intelsat S.A. on February 1, 2016. Prior to this, Mr. Kerrest served as President of DPC Data Inc., a data products and specialized data services company, from July 2014 to February 2016, and has been serving as a director of that company since 2011. From 2008 to 2011, Mr. Kerrest served as Chief Financial Officer and Chief Operating Officer of ActivIdentity Corporation, an identity assurance provider. He also served as the Chief Financial Officer of Virgin Media plc, the second largest communications company in the United Kingdom, from 2004 to 2008. Prior to 2004, Mr. Kerrest held the role of Chief Financial Officer at companies including Equant Inc., Harte-Hanks, Inc., Chancellor Broadcasting Company and Positive Communications. Mr. Kerrest received his Masters of Science degree from Faculte Des Sciences Economiques in Paris, France, and a Masters of Business Administration from Institut D'Etudes Politiques De Paris in Paris, France as well as the Thunderbird School of Global Management in Glendale, Arizona. Mr. Kerrest's business address is 4, rue Albert Borschette, L-1246 Luxembourg.

Ms. Bryan became the Executive Vice President, General Counsel and Chief Administrative Officer and Secretary of Intelsat S.A. in March 2013. Prior to that, Ms. Bryan served as Senior Vice President, Human Resources and Corporate Services of Intelsat Corporation since January 2007. Prior to joining Intelsat, Ms. Bryan served as interim General Counsel and Corporate Secretary for Laidlaw International, and prior to that held a number of executive positions with US Airways Group, Inc. including Executive Vice President, Corporate Affairs and General Counsel and Corporate Secretary, as well as Senior Vice President of Human Resources. Ms. Bryan earned a Bachelor of Arts degree from the University of Rochester and a Juris Doctor from Georgetown University. Ms. Bryan's business address is 4, rue Albert Borschette, L-1246 Luxembourg.

Mr. Riegelman became the Senior Vice President, Sales and Marketing of Intelsat Corporation in April 2015. Prior to that, Mr. Riegelman served as Senior Vice President, Global Sales, with responsibility over Intelsat's global sales team, including oversight of Intelsat's largest customer relationships across the media, broadband and mobility sectors. From 2006 to 2008, he served as Vice President of Americas Sales, with responsibility for the integration of the combined sales team following Intelsat's merger with PanAmSat. From 1998 to 2006, he led the Americas and North America sales team of PanAmSat. Mr. Riegelman holds a Bachelor of Science degree from California State University and a Masters in Business Administration in International Marketing from Loyola Marymount University in California. Mr. Riegelman's business address is 7900 Tysons One Place, McLean, VA 22102, United States.

Mr. DeMarco became the Senior Vice President, Operations of Intelsat Corporation in April 2015. Prior to that, Mr. DeMarco served as Senior Vice President, Marketing and Solutions Development, with responsibility for product management, marketing, customer solutions engineering and asset management functions. From 2006 to 2009 he served as Intelsat Corporation's Vice President of Media Services, a role in which he was responsible for the re-launch of Intelsat's media product portfolio. He has held roles of increasing responsibility within the company, serving as Vice President of Core Video Services, Senior Director of Business Operations, and Director of Product Finance at PanAmSat prior to its 2006 merger with Intelsat. Mr. DeMarco earned a Bachelor of Science Degree in Finance and a Masters of Business Administration from Fairfield University in Connecticut. Mr. DeMarco's business address is 7900 Tysons One Place, McLean, VA 22102, United States.

Mr. Bateman became a director of Intelsat S.A. in July 2011. Mr. Bateman was a director of Intelsat Investments S.A. from August 2008 to May 2013. Mr. Bateman is a Managing Partner of BC Partners based in its New York office, the investment arm of which he co-established in early 2008. He initially joined BC Partners' London office in 2000 from PricewaterhouseCoopers, where he spent three years in Transaction Services working on due diligence projects for both financial investors and corporate clients. In 2002/2003 he left BC Partners to complete his MBA at INSEAD before rejoining its London office. Mr. Bateman serves on the board of Teneo Global LLC, and has previously served on the boards of Office Depot, Inc., MultiPlan, Inc. and Suddenlink Communications. He has a degree in economics from the University of Cambridge in the UK. Mr. Bateman's business address is 4, rue Albert Borschette, L-1246 Luxembourg.

Mr. Callahan became a director of Intelsat S.A. in April 2014. Mr. Callahan is the Chairman of Longueview Advisory, a media, internet and technology advisory firm. Prior to joining Longueview, he served as a special advisor with General Atlantic, Inc., a leading global growth equity firm, where he worked on internet, technology and resource investments, such as the Alibaba Group and Network Solutions, Inc., where he served as Chairman. He previously held the position of Chairman and Chief Executive Officer of Ziff Davis Media, Inc. Mr. Callahan also spent 20 years at the Walt Disney Company/ABC/Capital Cities, where he held numerous positions, including President of ABC Inc. Mr. Callahan holds a Bachelor of Science degree in Journalism from the University of Kansas. Mr. Callahan's business address is 4, rue Albert Borschette, L-1246 Luxembourg.

Mr. Diercksen became a director of Intelsat S.A. in September 2013. In December 2015, Mr. Diercksen became the Chief Executive Officer of Beachfront Wireless. Mr. Diercksen also serves as a Senior Advisor at LionTree Investment Advisors, addressing financial, operational and management services with client business development. Previously, Mr. Diercksen retired from Verizon Communications as an executive vice president in September 2013, with responsibility for key strategic initiatives related to the review and assessment of potential mergers, acquisitions and divestitures. At Verizon, he held the position of executive vice president, strategy, development and planning and was instrumental in forging Verizon's strategy of technology investment, including

repositioning its assets through the acquisition of spectrum. Earlier in his career, Mr. Diercksen held a number of senior financial and leadership positions at Verizon, Bell Atlantic, and NYNEX, among other companies. Mr. Diercksen also serves on the boards of Harman International Industries and Popular, Inc. Mr. Diercksen holds an MBA from Pace University and a Bachelor of Business Administration in finance from Iona College. Mr. Diercksen's business address is 4, rue Albert Borschette, L-1246 Luxembourg.

Mr. Kangas became a director of Intelsat S.A. in July 2012. Mr. Kangas serves as Lead Director of Tenet Healthcare Corporation. He also served as Non-Executive Chairman of Tenet Healthcare Corporation (and member of the Compensation Committee) from 2003 to 2015. Mr. Kangas also serves as the Non-Executive Chairman of United Technologies Corporation (and member of the Compensation and Audit Committees), and serves as a member of the board of directors of Hovnanian Enterprises, Inc. (and member of the Compensation, Audit and Governance and Nominating Committees) as well as EGS Global Systems. Mr. Kangas formerly served as Chairman of the board of directors of Oncology Therapeutics Network, and as a director of Intuit, Inc., Allscripts Healthcare Solutions, Inc., Eclipsys Corp. and Electronic Data Systems Corp. Mr. Kangas previously served as Global Chairman and Chief Executive Officer of Deloitte, Touche, Tohmatsu from 1989 to 2000. He also served as the managing partner of Deloitte & Touche (USA) from 1989 to 1994. Mr. Kangas holds a bachelor's degree in business and an MBA from the University of Kansas and is a Certified Public Accountant. Mr. Kangas also qualifies as an audit committee financial expert. Mr. Kangas' business address is 4, rue Albert Borschette, L-1246 Luxembourg.

Mr. Svider became a director of Intelsat S.A. in July 2011. Prior to April 2013, Mr. Svider also served as Chairman of the board of directors. Mr. Svider was a director of Intelsat Investments S.A. from February 2008 to May 2013 and became the Chairman of the board of directors of Intelsat S.A. in May 2008. Mr. Svider has been Co-Chairman of BC Partners since December 2008 and has been a Managing Partner of BC Partners since 2003. He joined BC Partners in 1992 in Paris before moving to London in 2000 to lead its investments in the technology and telecommunications industries. Over the years, Mr. Svider has participated in or led a variety of investments, including Tubesca, Nutreco, UTL, Neopost, Polyconcept, Neuf Telecom, Unity Media/Tele Columbus, Office Depot Inc., ATI Enterprises, MultiPlan, Inc., Suddenlink Communications, Accudyne Industries, Teneo Global LLC and PetSmart. He is currently on the board of Suddenlink Communications, Accudyne Industries, Teneo Global LLC and PetSmart. Prior to joining BC Partners, Mr. Svider worked in investment banking at Wasserstein Perella in New York and Paris, and at the Boston Consulting Group in Chicago. Mr. Svider holds a Master of Business Administration from the University of Chicago and a Master of Science in Engineering from both École Polytechnique and École Nationale Supérieure des Telecommunications in France. Mr. Svider's business address is 4, rue Albert Borschette, L-1246 Luxembourg.

B. Compensation of Executive Officers and Directors

This section sets forth (i) the compensation and benefits provided to our executive officers and directors for 2016, (ii) a brief description of the bonus program in which our executive officers participated in 2016, (iii) the total amounts set aside or accrued in 2016 for pension, retirement and similar benefits for our executive officers, and (iv) the number, exercise price and expiration date of share option grants made during 2016.

2016 Compensation

For 2016, our executive officers received total compensation, including base salary, bonus, non-equity incentive compensation, contributions to the executive officer's account under our 401(k) plans and other retirement plans and certain prerequisites, equal to \$10.0 million in the aggregate.

Annual Cash Bonuses

In April 2013, our board of directors adopted, and our shareholders approved, a Bonus Plan (the "Bonus Plan") which provides that certain of our and our subsidiaries' employees, including the executive officers, may be awarded cash bonuses based on the attainment of specific performance goals and business criteria established by our board of directors for participants in the Bonus Plan. The goals and criteria for the 2016 fiscal year included certain financial metrics, including revenue and adjusted EBITDA targets, as well as certain management objectives, all as defined by the compensation committee. The bonus target percentages for our executives are set forth in their respective employment agreements. Awards for the subject year are determined based upon completion of the audited consolidated financial statements for that year. The Bonus Plan is a discretionary plan and the compensation committee retains the right to award compensation absent the attainment of performance criteria.

The Bonus Plan enables the compensation committee to grant bonuses that are intended to qualify as performance-based compensation for purposes of Section 162(m) of the United States Internal Revenue Service Tax Code (the "Code") by conditioning the payout of the bonus on the satisfaction of certain performance goals (which are selected from the same list of performance goals applicable under our 2013 Equity Plan (see "—2013 Equity Incentive Plan" below)). In addition, the Bonus Plan also provides that, except to the extent otherwise provided in an award agreement, or any applicable employment, change in control, severance or other

agreement between a participant and the Company, in the event of a change in control (as defined in our 2013 Equity Plan), the compensation committee may provide that all or a portion of any such bonus award will become fully vested based on (i) actual performance through the date of the change in control, as determined by the compensation committee or (ii) if the compensation committee determines that measurements of actual performance cannot be reasonably assessed, the assumed achievement of target performance as determined by the compensation committee. All awards previously deferred will be settled in full upon, or as soon as practicable following, the change in control.

Pension, Retirement and Similar Benefits

Our executive officers participate in a tax-qualified 401(k) plan on the same terms as our other employees. Our executive officers also participate in the Intelsat Excess Benefit Plan, a nonqualified retirement plan under which our executive officers and certain key employees receive additional contributions to address limitations placed on contributions under the tax-qualified 401(k) plan. Under the terms of his employment agreement, Mr. McGlade is provided with certain retiree medical benefits that are not otherwise provided to participants under the terms of our medical plan. Additionally, until April 1, 2015, for U.S.-based employees hired prior to July 19, 2001, we maintained the Intelsat Staff Retirement Plan, which is a tax-qualified defined benefit pension plan. Mr. Guillemain, who left employment in 2016, was the only executive officer eligible to participate in this plan. The benefits under the plan are calculated based upon a set of formulae that take into account the participant's hire date, years of service and average compensation. Effective April 1, 2015, the pension plan was frozen and no additional benefits accrued to participants after March 31, 2015. The aggregate amount of the employer contributions to the 401(k) plans and the Intelsat Excess Benefit Plan for our executive officers during 2016 was \$287,018. The change in the actuarial present value of accumulated benefits under the Intelsat Staff Retirement Plan for Mr. Guillemain in 2016 was \$28,599 and the total present value of Mr. McGlade's post-retirement medical benefits was \$253,128.

Employment Agreements and Severance Protection

We have entered into employment agreements with each of our executive officers, including Mr. Kerrest, who was appointed as our Executive Vice President and Chief Financial Officer effective February 1, 2016, following the resignation of our former Chief Financial Officer, Mr. McDonnell, effective December 16, 2015. Among other things, the employment agreements provide for minimum base salary, bonus eligibility and severance protection in the event of involuntary terminations of employment. Specifically, under the employment agreements, if the executive officer's employment is terminated by us without cause or if the officer resigns for good reason (in either case, as defined in the executive officer's respective employment agreement), then, subject to the executive officer's execution of a release of claims and compliance with certain restrictive covenants, the executive officer will be paid a severance amount on the sixtieth day after such termination of employment equal to the product of (x) the sum of the executive officer's annual base salary and target annual bonus as in effect on the date of such termination of employment, multiplied by (y) a severance multiplier equal to 2.0 in the case of Mr. Spengler, 1.5 in the case of Mr. Kerrest and Ms. Bryan, and 1.0 in the case of Messrs. Riegelman and DeMarco. In the case of Mr. McGlade, his severance amount is fixed at a severance multiplier equal to 2.0 times the sum of his annual base salary and target bonus as in effect on April 1, 2015. In addition, the executive officer will be paid a prorated target bonus for the year of the officer's termination of employment based on actual results and the portion of the fiscal year the executive officer was employed. The employment agreement for Mr. McGlade further provides that, in the event a "golden parachute" excise tax under Section 4999 of the Code is imposed on any compensation or benefits received in connection with a change of control, and our shares are readily tradable on an established securities market or otherwise at such time, the executive officer will be entitled to an additional payment such that he will be placed in the same after-tax position that he would have been in had no excise tax been imposed.

Director Compensation

We provide non-executive independent members of the board with compensation (including equity based compensation) for their service on the board and any committees of the board. Our board has adopted a director compensation policy applicable to each director (an "outside director") who is neither our employee nor nominated by any entity that (i) receives a management or monitoring fee from the Company or any subsidiary or (ii) beneficially owns or is part of a group that beneficially owns at least fifty percent (50%) of voting shares of the Company. The director compensation policy provides that each outside director receives an annual board cash retainer of \$75,000 (the "basic cash retainer"). The chairperson of the Audit Committee receives an annual cash retainer of \$22,500 and each other member of the Audit Committee receives an annual cash retainer of \$15,000. The chairperson of the Compensation Committee receives an annual cash retainer of \$17,500 and each other member of the Compensation Committee receives an annual cash retainer of \$10,000. At such time as our board of directors has a Nominating and Corporate Governance Committee, the chairperson of the Nominating and Corporate Governance Committee shall receive an annual cash retainer of \$10,000 and each other member of the Nominating and Corporate Governance Committee shall receive an annual cash retainer of \$5,000. In addition, each outside director receives an annual restricted stock unit award (pursuant to the 2013 Equity Incentive Plan) with a grant date value of approximately \$125,000 that vests on the first anniversary of the date of grant, subject to continued service on the board of directors on such vesting date, and subject to such other terms and conditions as established by the board of directors from time to time.

Each outside director may elect to receive any of the foregoing cash retainers in the form of fully vested restricted share unit (“RSU”) awards with a grant date value equal to the amount of such cash retainer, subject to such terms and conditions as established by the board of directors from time to time. An outside director may elect to assign his or her interest in (or enter into a mutually acceptable arrangement with the Company with respect to the delivery of) the foregoing items to any entity shareholder that nominates such outside director for election to the board of directors and, in such case, the Company shall pay cash in lieu of equity awards in an amount equal to the grant date value of such awards.

Other than the severance protection provided under the employment agreements of Messrs. McGlade and Spengler described above, no directors are party to service contracts with the Company providing for benefits upon termination of employment or service.

Non-executive members of the board are entitled to reimbursements for travel and other out-of-pocket expenses related to their board service.

Pursuant to a governance agreement (the “Governance Agreement”) we entered into with the shareholder affiliated with BC Partners (the “BC Shareholder”), the shareholder affiliated with Silver Lake (the “Silver Lake Shareholder”) and David McGlade (collectively, with the BC Shareholder and the Silver Lake Shareholder, the “Governance Shareholders”), under the terms of which we have agreed to reimburse directors nominated by the Governance Shareholders for travel and other expenses related to their board service.

Equity Grants issued during 2016

In 2016, we granted a total of 1,374,000 RSUs to our executive officers as a group and 150,000 RSUs to our independent directors pursuant to the 2013 Equity Plan (—see Equity Compensation Plans below). These units included both time-vesting restricted stock units as well as performance-based restricted stock units which vest on the basis of achievement of certain financial metrics.

In January 2016, an award of options to purchase Company shares with respect to 700,000 shares held by Mr. McGlade was amended to change the exercise price from \$18.00 to \$4.16 per share. These options had already vested by their terms and there were no changes to the vesting, expiration or any other terms of the outstanding award.

In addition, in connection with his hiring in February 2016, Mr. Kerrest was awarded a grant of options to purchase 210,000 common shares, at an exercise price of \$3.29 per share, which vest in equal installments based on continued employment over three years and expire in February 2026.

Equity Compensation Plans

2008 Share Incentive Plan

On May 6, 2009, the board of directors of Intelsat Global S.A. adopted the amended and restated Intelsat Global, Ltd. 2008 Share Incentive Plan (the “2008 Equity Plan”). Intelsat S.A. adopted the 2008 Equity Plan by an amendment effective as of March 30, 2012. The 2008 Equity Plan provides for a variety of equity-based awards with respect to our common shares, including non-qualified share options, incentive share options (within the meaning of Section 422 of the Code), restricted share awards, restricted share unit awards, share appreciation rights, phantom share awards and performance-based awards.

In addition, in connection with the IPO, each of our executive officers agreed to cancel a portion of their unvested performance options in exchange for grants of new stock options and restricted share units granted in the aggregate to our executive officers under the 2013 Equity Incentive Plan.

Except for certain grants of restricted shares and stock options made immediately following the IPO, following the consummation of the IPO no new awards may be granted under the 2008 Equity Plan.

2013 Equity Incentive Plan

In connection with the IPO, we established the Intelsat S.A. 2013 Equity Incentive Plan (the “2013 Equity Plan”). Any of the employees, directors, officers, consultants or advisors (or prospective employees, directors, officers, consultants or advisors) of the Company or any of our subsidiaries or their respective affiliates, are eligible for awards under the 2013 Equity Plan. The compensation committee has the authority to determine who is granted an award under the 2013 Equity Plan, and it has delegated authority to the Chief Executive Officer of the Company to make awards to individuals below the executive officer level, subject to reporting such awards to the compensation committee at the next following committee meeting.

The 2013 Equity Incentive Plan was amended in June 2016 to increase the aggregate number of common shares available for awards to 20,000,000 from 10,000,000. No more than 20,000,000 of our common shares in the aggregate may be issued with respect to incentive stock options under the 2013 Equity Plan. No participant may be granted awards in any one calendar year with respect to more than 1,500,000 of our common shares in the aggregate (or the equivalent amount in cash, other securities or property).

Our common shares subject to awards are generally unavailable for future grant. If any shares are surrendered or tendered to pay the exercise price of an award or to satisfy withholding taxes owed, such shares will not be available for grant under the 2013 Equity Plan. If any award granted under the 2013 Equity Plan expires, terminates, is canceled or forfeited without being settled or exercised, our common shares subject to such award will again be made available for future grant.

The compensation committee may grant awards of non-qualified stock options, incentive (qualified) stock options, stock appreciation rights, restricted stock awards, restricted stock units, other stock-based awards, performance compensation awards (including cash bonus awards), or any combination of the foregoing. Awards may be granted under the 2013 Equity Plan and in assumption of, or in substitution for, outstanding awards previously granted.

C. Board Practices

Board Leadership Structure

Our board of directors consists of seven directors. Our articles of incorporation provide that our board of directors shall consist of not less than three directors and not more than twenty directors. Under Luxembourg law, directors are appointed by the general meeting of shareholders for a period not exceeding six years or until a successor has been elected. Our board is divided into three classes as described below. Pursuant to our articles of incorporation, our directors are appointed by the general meeting of shareholders for a period of up to three years (or, if longer, up to the annual meeting held following the third anniversary of the appointment), with each director serving until the third annual general meeting of shareholders following their election. Upon the expiration of the term of a class of directors, directors in that class will be elected for three-year terms at the annual general meeting of shareholders in the year in which their term expires. Messrs. Svider and Bateman are serving as Class I directors for a term expiring in 2017. Messrs. Spengler, McGlade and Callahan are serving as Class II directors for a term expiring in 2018. Messrs. Kangas and Diercksen are serving as Class III directors for a term expiring in 2019. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of our directors. Mr. McGlade serves as the Executive Chairman of our board of directors.

Audit Committee

Intelsat S.A. has an audit committee consisting of Messrs. Kangas, Diercksen and Callahan. All members of the audit committee are independent directors. Pursuant to its charter and the authority delegated to it by the board of directors, the audit committee has sole authority for the engagement, compensation and oversight of our independent registered public accounting firm. In addition, the audit committee reviews the results and scope of the audit and other services provided by our independent registered public accounting firm, and also reviews our accounting and control procedures and policies. The audit committee meets as often as it determines necessary but not less frequently than once every fiscal quarter. Our board of directors has determined that each of Messrs. Kangas and Diercksen is an audit committee financial expert.

Compensation Committee

Intelsat S.A. has a compensation committee consisting of Messrs. Svider, Diercksen and Kangas. Messrs. Diercksen and Kangas are independent, and Mr. Svider is not independent, since he is associated with the Sponsors. Pursuant to its charter and the authority delegated to it by the board of directors, the compensation committee has responsibility for the approval and evaluation of all of our compensation plans, policies and programs as they affect Intelsat S.A.'s chief executive officer and other executive officers. The compensation committee meets as often as it determines necessary.

D. Employees

As of December 31, 2016, we had 1,150 full-time regular employees. These employees consisted of:

- 616 employees in engineering, operations and related information systems;
- 193 employees in finance, legal and other administrative functions;
- 251 employees in sales, marketing and strategy; and
- 90 employees in support of government sales and marketing.

We believe that our relations with our employees are good. None of our employees is represented by a union or covered by a collective bargaining agreement.

E. Share Ownership

The following table and accompanying footnotes show information regarding the beneficial ownership of our common shares by:

- each person known by us to beneficially own 5% or more of our outstanding common shares;
- each of our directors;
- each executive officer, subject to permitted exceptions; and
- all directors and executive officers as a group.

The percentage of beneficial ownership set forth below is based on approximately 118,032,385 common shares issued and outstanding as of February 10, 2017. All common shares listed in the table below are entitled to one vote per share, unless otherwise indicated in the notes thereto. Unless otherwise indicated, the address of each person named in the table below is c/o Intelsat S.A., 4, rue Albert Borschette, L-1246 Luxembourg.

Name of Beneficial Owner:	Common Shares Beneficially Owned ⁽¹⁾	
	Number	Percentage
Serafina S.A. ⁽²⁾⁽¹²⁾	62,962,644	53.3%
Silver Lake Group, L.L.C. ⁽³⁾⁽¹²⁾	14,170,685	12.0%
SLP III Investment Holdings S.à r.l. ⁽³⁾⁽¹²⁾	13,892,905	11.8%
David McGlade ⁽⁵⁾⁽¹²⁾	3,957,496	3.4%
Stephen Spengler ⁽⁶⁾	624,493	*
Jacques Kerrest ⁽⁷⁾	222,000	*
Michelle Bryan ⁽⁸⁾	213,082	*
Kurt Riegelman ⁽⁹⁾	90,428	*
Michael DeMarco ⁽¹⁰⁾	64,219	*
Justin Bateman	—	*
Robert Callahan	14,986	*
John Diercksen	19,973	*
Edward Kangas	19,981	*
Raymond Svider	—	*
Directors and executive officers as a group ⁽¹¹⁾ (11 persons)	5,226,658	4.4%

* Represents beneficial ownership of less than one percent of shares outstanding.

- (1) The amounts and percentages of our common shares beneficially owned are reported on the basis of regulations of the U.S. Securities and Exchange Commission (the “SEC”) governing the determination of beneficial ownership of securities. Under the rules of the SEC, a person is deemed to be a “beneficial owner” of a security if that person has or shares “voting power,” which includes the power to vote or to direct the voting of such security, or “investment power,” which includes the power to dispose of or to direct the disposition of such security. A person is also deemed to be a beneficial owner of any securities of which that person has a right to acquire beneficial ownership within 60 days. Under these rules, more than one person may be deemed to be a beneficial owner of such securities as to which such person has an economic interest.
- (2) The common shares beneficially owned by Serafina S.A. are also beneficially owned by the limited partnerships comprising the fund commonly known as BC European Capital VIII, BC European Capital—Intelsat Co-Investment, BC European Capital—Intelsat Co-Investment 1 and BC European Capital—Intelsat Syndication L.P. CIE Management II Limited is the general partner of, and has investment control over the shares beneficially owned by, each of the limited partnerships comprising the BC European Capital VIII fund that are domiciled in the United Kingdom, BC European Capital—Intelsat Co-Investment, BC European Capital—Intelsat Co-Investment 1 and BC European Capital—Intelsat Syndication L.P. (collectively, the “CIE Funds”). CIE Management II Limited may, therefore, be deemed to have shared voting and investment power over the common shares beneficially owned by each of the CIE Funds. LMBO Europe SAS is the Gefant of, and has investment control over the shares beneficially owned by, each of limited partnerships comprising the BC European Capital VIII fund that are domiciled in France (collectively, the “LMBO Funds”). LMBO Europe SAS may, therefore, be deemed to have shared voting and investment power over the common shares beneficially owned by each of the LMBO Funds. Because each of CIE Management II Limited and LMBO Europe SAS is managed by a board of directors, no individuals have ultimate voting or investment control for

purposes of Section 13(d)(3) of the Securities Exchange Act of 1934, as amended (the “Act”), over the shares that may be deemed beneficially owned by CIE Management II Limited or LMBO Europe SAS. The address of Serafina S.A. is 29, avenue de la Porte Neuve, L-2227 Luxembourg. The address of CIE Management II Limited and the CIE Funds is Heritage Hall, Le Marchant Street, St. Peter Port, Guernsey, GY1 4HY, Channel Islands and the address of LMBO Europe SAS and the LMBO Funds is 58-60 Avenue Kleber, Paris, France 75116.

- (3) The common shares held of record by SLP III Investment Holding S.à r.l. are beneficially owned by its shareholders Silver Lake Partners III, L.P. (“SLP”) and Silver Lake Technology Investors III, L.P. (“SLTI”). Silver Lake Technology Associates III, L.P. (“SLTA”) serves as the general partner of each of SLP and SLTI and may be deemed to beneficially own the shares directly owned by SLP and SLTI. SLTA III (GP), L.L.C. (“SLTA GP”) serves as the general partner of SLTA and may be deemed to beneficially own the shares directly owned by SLP and SLTI. Silver Lake Group, L.L.C. (“SLG”) serves as the managing member of SLTA GP and may be deemed to beneficially own the shares directly owned by SLP and SLTI. The address for each of SLP, SLTI, SLTA, SLTA GP and SLG is 2775 Sand Hill Road, Suite 100, Menlo Park, CA 94025.
- (4) Intentionally omitted.
- (5) Includes common shares held by McGlade Investments II, LLC, the Article 4 Family Trust U/T David McGlade 2009 GRAT and the David P. McGlade Declaration of Trust. Mr. McGlade exercises voting power over a total of 1,858,884 common shares. Mr. McGlade also holds restricted share units and options entitling him to receive or purchase 2,098,612 common shares within sixty days of February 10, 2017. A portion of these shares, restricted share units and options is subject to vesting and other restrictions.
- (6) Mr. Spengler exercises voting power over 323,110 common shares and holds restricted share units and options entitling him to receive or purchase 301,383 common shares within sixty days of February 10, 2017. A portion of these shares, restricted share units and options is subject to vesting and other restrictions.
- (7) Mr. Kerrest exercises voting power over 100,000 shares and holds restricted share units and options entitling him to receive or purchase 122,000 common shares within sixty days of February 10, 2017. A portion of these restricted share units and options is subject to vesting and other restrictions.
- (8) Ms. Bryan exercises voting power over 95,246 common shares and holds restricted share units and options entitling her to receive or purchase 117,836 common shares within sixty days of February 10, 2017. A portion of these restricted share units and options is subject to vesting and other restrictions.
- (9) Mr. Riegelman exercises voting power over 19,710 shares and holds restricted share units and options entitles him to purchase 70,718 common shares within sixty days of February 10, 2017. A portion of these shares, restricted share units and options is subject to vesting and other restrictions.
- (10) Mr. DeMarco exercises voting power over 22,463 shares and holds restricted share units and options entitles him to purchase 41,756 common shares within sixty days of February 10, 2017. A portion of these shares, restricted share units and options is subject to vesting and other restrictions.
- (11) Directors and executive officers as a group exercise voting power over 2,474,353 common shares and hold restricted share units and options entitling them to receive or purchase 2,752,305 common shares within sixty days of February 10, 2017 under applicable vesting schedules.
- (12) Under the Governance Agreement, Serafina S.A. currently has the right to nominate four directors for election to our board of directors and SLP III Investment Holdings S.à r.l. currently has the right to nominate one director for election to our board of directors. The Governance Agreement also provides that a majority of the directors then in office (or, if the board has delegated such authority, the nomination or similar committee of the board) shall nominate the remaining directors for election to the board, one of whom shall be our executive chairman, who is currently Mr. McGlade. Under the terms of the Governance Agreement, each of Serafina S.A., SLP III Investment Holdings S.à r.l. and David McGlade has agreed to vote all common shares held by such person or entity in favor of the directors nominated under the terms of the Governance Agreement and in furtherance of the removal of any directors by Serafina S.A. or SLP III Investment Holdings S.à r.l. under the terms of the Governance Agreement. As a result, Serafina S.A. and certain related parties named in footnote (2) above, SLP III Investment Holdings S.à r.l. and certain related parties named in footnote (3) above and David McGlade may be deemed to constitute a “group” that beneficially owns approximately 68.7% of our common shares for purposes of Section 13(d)(3) of the Act. Each of Serafina S.A., SLP III Investment Holdings S.à r.l., their respective related parties and David McGlade disclaim beneficial ownership of any common shares held by the other parties to the Governance Agreement.

Item 7. Major Shareholders and Related Party Transactions

A. Major Shareholders

See Item 6E—Share Ownership.

B. Related Party Transactions

None.

C. Interests of experts and counsel

Not applicable.

Item 8. Financial Information

A. Consolidated Statements and Other Financial Information

Our consolidated financial statements are filed under this item, beginning on page F-1 of this Annual Report on Form 20-F. The financial statement schedules required under Regulation S-X are filed pursuant to Item 18 and Item 19 on Form 20-F.

Legal Proceedings

We are subject to litigation in the ordinary course of business, but management does not believe that the resolution of any pending proceedings would have a material adverse effect on our financial position or results of operations.

Dividend Policy

We do not expect to pay dividends or other distributions on our common shares in the foreseeable future. As set forth in our articles of incorporation, we currently intend to retain any future earnings for working capital and general corporate purposes, which could include the financing of operations or the repayment, redemption, retirement or repurchase in the open market of our indebtedness. Under Luxembourg law, the amount and payment of dividends or other distributions is determined by a simple majority vote at a general shareholders' meeting based on the recommendation of our board of directors, except in certain limited circumstances. Pursuant to our articles of incorporation, the board of directors has the power to pay interim dividends or make other distributions in accordance with applicable Luxembourg law. Distributions may be lawfully declared and paid if our net profits and/or distributable reserves are sufficient under Luxembourg law. All of our common shares rank *pari passu* with respect to the payment of dividends or other distributions unless the right to dividends or other distributions has been suspended in accordance with our articles of incorporation or applicable law.

On May 1, 2016, each of our 5.75% Series A mandatory convertible junior non-voting preferred shares automatically converted into 2.7778 common shares, based on the average of the closing prices per common share over the 40 trading day period ending on the third trading day prior to the mandatory conversion date. The automatic conversion for a total of 9.6 million new common shares was recorded on May 2, 2016.

Under Luxembourg law, up to 5% of our net profits per year must be allocated to the creation of a legal reserve until such reserve has reached an amount equal to 10% of our issued share capital. The allocation to the legal reserve becomes compulsory again when the legal reserve no longer represents 10% of our issued share capital. The legal reserve is not available for distribution.

We are a holding company and have no material assets other than our indirect ownership of shares in our operating subsidiaries. If we were to pay a dividend or other distribution on our common shares at some point in the future, we would cause the operating subsidiaries to make distributions to us in an amount sufficient to cover any such dividends. Our subsidiaries' ability to make distributions to us is restricted under certain of their debt and other agreements.

B. Significant Changes

No significant change has occurred since the date of the annual financial statements included in this Annual Report on Form 20-F.

Item 9. The Offer and Listing

A. Offering and Listing Details

Since our IPO on April 23, 2013, our common shares and Series A Preferred Shares have traded on the NYSE under the symbol "I" and "I PR A", respectively.

The following table sets forth the high and low trading prices on the NYSE for our common shares and Series A Preferred Shares for the periods indicated.

	<i>Trading Price (US\$)</i>			
	Price per Common Share		Price per Series A Preferred Share	
	High	Low	High	Low
Full Financial Year since listing				
Year ended December 31, 2014	22.77	15.31	59.00	42.89
Year ended December 31, 2015	18.00	3.66	47.90	11.12
Year ended December 31, 2016	4.50	1.44	N/A	N/A
Full Financial Quarters for 2015 and 2016				
First Quarter Ended March 31, 2015	18.00	10.97	47.90	32.30
Second Quarter Ended June 30, 2015	12.93	9.87	35.83	28.39
Third Quarter Ended September 30, 2015	12.00	6.32	33.28	18.70
Fourth Quarter Ended December 31, 2015	7.64	3.66	22.41	11.12
First Quarter Ended March 31, 2016	4.27	1.44	12.50	4.40
Second Quarter Ended June 30, 2016	4.14	2.12	11.34*	7.01*
Third Quarter Ended September 30, 2016	3.23	2.12	N/A	N/A
Fourth Quarter Ended December 31, 2016	4.50	2.38	N/A	N/A
Last six months				
August 2016	3.23	2.34	N/A	N/A
September 2016	3.02	2.48	N/A	N/A
October 2016	3.18	2.38	N/A	N/A
November 2016	4.50	2.46	N/A	N/A
December 2016	4.33	2.52	N/A	N/A
January 2017	3.64	2.71	N/A	N/A

* In May 2016, each of the outstanding 5.75% Series A mandatory convertible junior non-voting preferred shares automatically converted into 2.7778 common shares.

B. Plan of Distribution

Not applicable.

C. Markets

See item 9A—Offering and Listing Details.

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the Issue

Not applicable.

Item 10. Additional Information

A. Share Capital

Not applicable.

B. Memorandum and Articles of Association

A copy of our amended and restated consolidated articles of incorporation was filed as an exhibit to our Registration Statement on Form S-8, as amended (File No. 333-212417), filed with the SEC on July 6, 2016, and is incorporated herein by reference. The information called for by this Item 10B—“Additional Information—Memorandum and Articles of Association” has been reported previously in our Registration Statement on Form F-1, as amended (File No. 333- 181527), initially filed with the SEC on May 18, 2012, under the heading “Description of Share Capital,” and is incorporated by reference into this Annual Report, with the exception of the updated disclosures set forth below, which account for certain changes in Luxembourg company law which entered into force in August 2016. There are no limitations on the rights to own securities, including the rights of non-resident or foreign shareholders to hold or exercise voting rights on the securities imposed by the laws of Luxembourg or by our articles of incorporation.

Updated disclosures:

- **General Meeting of Shareholders.** When convening a general meeting of shareholders, we will publish a notice (which must be published at least fifteen (15) days before the meeting) in the *Recueil électronique des sociétés et associations*, in a Luxembourg newspaper, and in accordance with the requirements of any exchange on which our shares are listed.
- **Meetings of Shareholders – Luxembourg.** Pursuant to Luxembourg Corporate Law, at least one annual general meeting of shareholders must be held each year.

C. Material Contracts

The following is a summary of each material contract, other than material contracts entered into in the ordinary course of business, to which we are a party, for the two years immediately preceding the date of this Annual Report:

Employment Agreements and Other Arrangements

See summary of Employment Agreements provided under Item 6B above. From time to time, we also enter into other retention mechanisms with our executive officers.

Equity Compensation Agreements

Equity Grant Agreements under 2008 Equity Plan

Certain of our executive officers hold options granted under the 2008 Equity Plan that are subject to forfeiture and other restrictions as set forth in the executive officers’ respective award agreements.

Option and Restricted Share Unit Agreements under 2013 Equity Plan

Certain of our executive officers hold restricted share units (“RSUs”) and option agreements under our 2013 Equity Plan that vest as follows:

- RSUs which vest based on continued service over three years;
- RSUs which cliff vest after three years based on achievement of one or more long-term performance and financial metrics;
- options to purchase common shares at an exercise price equal to \$27.00 per share, which are fully vested and expire on the 10th anniversary of the date of grant;
- options to purchase common shares at an exercise price equal to \$3.77 per share, which vest based on continued service over two years and expire on the 10th anniversary of the date of grant;
- options to purchase common shares at an exercise price equal to \$3.29 per share, which vest based on continued service over three years and expire on the 10th anniversary of the date of the grant;
- RSUs which vest based on continued service over two years;
- RSUs which vest based on continued service over three years at a rate of 25%, 25% and 50% each successive year; and
- RSUs which vest based on continued service over three years at a rate of 10%, 25% and 65% each successive year.

Shareholders and Other Agreements Providing for Registration Rights

Intelsat is a party to three shareholders agreements: a management shareholders agreement (as amended, the “Management Shareholders Agreement”) with the Sponsors and certain members of management (the “Management Shareholders”), including Mr. McGlade; a shareholders agreement (as amended, the “Sponsors Shareholders Agreement”) with the Sponsors; and a shareholders agreement (as amended, the “Other Equity Investors Shareholders Agreement”) with the Sponsors and two additional shareholders (the “Other Equity Investors”).

Registration Rights

Under the Sponsors Shareholders Agreement, the Other Equity Investors Shareholders Agreement and letter agreements with certain executives and former executives, we have granted the Sponsors, the Other Equity Investors and Mr. McGlade and certain former executives certain registration rights. Subject to certain exceptions, including the Company’s right to defer a demand registration under certain circumstances, the Sponsors are entitled to unlimited demand registrations. Under the respective agreement, each Sponsor, each Other Equity Investor and Mr. McGlade and certain former executives are entitled to piggyback registration rights with respect to any registrations by the Company for its own account or for the account of other shareholders (or in the case of Mr. McGlade and former executives, solely the Sponsors), subject to certain exceptions. The registration rights are subject to customary limitations and exceptions, including the Company’s right to withdraw or defer the registration or a sale pursuant thereto in certain circumstances and certain cutbacks by the underwriters if marketing factors require a limitation on the number of shares to be underwritten in a proposed offering.

In connection with the registrations described above, the Company has agreed to indemnify the shareholders against certain liabilities. In addition, except for the Sponsors Shareholders Agreement, which provides that certain fees, costs and expenses will be paid *pro rata* by the Company and selling shareholders based on the number of securities to be sold in the offering, the Company will bear all fees, costs and expenses (excluding underwriting discounts and commissions and similar brokers’ fees, transfer taxes and certain costs of more than one counsel for the selling shareholders).

Governance Agreement

Prior to the consummation of the IPO, we entered into the Governance Agreement with the BC Shareholder, the Silver Lake Shareholder and Mr. McGlade (as amended from time to time, the “Governance Agreement”).

Board of Directors

The Governance Agreement provided for the composition of our board of directors at the completion of our IPO, and thereafter, including:

- Our Executive Chairman and former Chief Executive Officer, Mr. McGlade;
- Four directors nominated by the BC Shareholder (our current Chief Executive Officer, Mr. Spengler, is currently serving in this capacity);
- One director nominated by the Silver Lake Shareholder; and
- Three independent directors (Messrs. Kangas, Diercksen and Callahan are currently serving in these roles).

The Governance Agreement also provides that we will appoint additional independent directors to our board as necessary to comply with SEC rules or NYSE rules, in which case each of the BC Shareholder and the Silver Lake Shareholder will be entitled to a proportionate increase in the number of directors it is entitled to nominate.

In addition, the Governance Agreement provides that the BC Shareholder has the right to nominate four directors for election to the board as long as the BC Shareholder owns at least 35% of our outstanding common shares on a fully diluted basis, after giving effect to convertible and exchange securities held by the BC Shareholder. However, the BC Shareholder’s nomination rights will decrease if the BC Shareholder’s ownership is less than 35% as follows:

Percentage Ownership of BC Shareholder	Number of Directors to be Nominated by the BC Shareholder
25% or greater but less than 35%	3
15% or greater but less than 25%	2
5% or greater but less than 15%	1

The Silver Lake Shareholder has the right to nominate one director for election to the board as long as the Silver Lake Shareholder owns at least the lesser of (x) 50% of the common shares held by it on the date of the Governance Agreement, April 23, 2013, and (y) shares representing at least 5% of our outstanding common shares. If either the BC Shareholder or the Silver Lake Shareholder is not entitled to nominate a director for election to the board but remains a shareholder, it will be entitled to certain information rights.

In the event that the BC Shareholder's or Silver Lake Shareholder's nomination rights are decreased as described above, each shareholder will agree to cause their respective director or directors to resign from the board as appropriate to reflect the decrease, and, subject to the rights described above, the majority of the remaining directors on the board may fill such vacancy with any person other than a person affiliated with the BC Shareholder or the Silver Lake Shareholder.

We have agreed to include the director nominees proposed by the BC Shareholder and Silver Lake Shareholder on each slate of nominees for election to the board, to recommend the election of those nominees to our shareholders and to use commercially reasonable efforts to have them elected to the board.

Voting Agreements

Under the Governance Agreement, each of the BC Shareholder, the Silver Lake Shareholder and Mr. McGlade has agreed to vote all shares held by it or him in favor of the directors nominated as described above and in furtherance of the removal of any directors by the BC Shareholder or the Silver Lake Shareholder under the terms of the Governance Agreement.

Other Provisions

Under the Governance Agreement, the Silver Lake Shareholder has certain tag-along rights on transfers by the BC Shareholder, and the BC Shareholder has drag-along rights with respect to the Silver Lake Shareholder under certain circumstances. The Governance Agreement also contains customary confidentiality provisions.

Termination

The Governance Agreement will terminate upon the earlier of (i) the tenth anniversary of the date of the agreement and (ii) the day on which the BC Shareholder and the Silver Lake Shareholder no longer are entitled to nominate directors under the Governance Agreement.

Indemnification Agreements

We have entered into agreements with our executive officers and directors to provide contractual indemnification in addition to the indemnification provided for in our articles of incorporation.

Debt Agreements

For a summary of the terms of our material debt agreements, see Note 12 to our consolidated financial statements included elsewhere in this Annual Report. In addition, with regard to all the notes issued by Intelsat Luxembourg, ICF and Intelsat Jackson, the following covenants and events of default apply:

Covenants that limit the issuers, and in some cases some of the issuers' subsidiaries', ability to:

- incur additional debt or issue disqualified or preferred stock;
- pay dividends or repurchase shares of Intelsat Jackson or any of its parent companies;
- make certain investments;
- enter into transactions with affiliates;
- merge, consolidate and sell assets; and
- incur liens on any of their assets securing other indebtedness, unless the applicable notes are equally and ratably secured.

Events of Default

- default in payments of interest after a 30-day grace period or a default in the payment of principal when due;
- default in the performance of any covenant in the indenture that continues for more than 60 days after notice of default has been provided to the issuer;
- failure to make any payment when due, including applicable grace periods, under any indebtedness for money borrowed by Intelsat Luxembourg, ICF, Intelsat Jackson or a significant subsidiary thereof having a principal amount in excess of \$75 million;
- the acceleration of the maturity of any indebtedness for money borrowed by Intelsat Luxembourg, ICF, Intelsat Jackson or a significant subsidiary thereof having a principal amount in excess of \$75 million;
- insolvency or bankruptcy of Intelsat Luxembourg, ICF, Intelsat Jackson or a significant subsidiary thereof; and
- failure by Intelsat Luxembourg, ICF, Intelsat Jackson or a significant subsidiary thereof to pay final judgments aggregating in excess of \$75 million, which are not discharged, waived or stayed for 60 days after the entry thereof.

If any event of default occurs and is continuing with respect to the notes, the trustee or the holders of at least 25% in principal amount of the notes may declare the entire principal amount of the notes to be immediately due and payable. If any event of default with respect to the notes occurs because of events of bankruptcy, insolvency or reorganization, the entire principal amount of the notes will be automatically accelerated, without any action by the trustee or any holder.

D. Exchange Controls

We are not aware of any governmental laws, decrees, regulations or other legislation in Luxembourg that restrict the export or import of capital, including the availability of cash and cash equivalents for use by our affiliated companies, or that affect the remittance of dividends, interest or other payments to non-resident holders of our securities.

E. Taxation

The following sets forth material Luxembourg income tax consequences of an investment in our common shares. It is based upon laws and relevant interpretations thereof in effect as of the date of this Annual Report, all of which are subject to change. This discussion does not deal with all possible tax consequences relating to an investment in our common shares, such as the tax consequences under U.S. federal, state, local and other tax laws.

Material Luxembourg Tax Considerations for Holders of Shares

The following is a summary discussion of certain Luxembourg tax considerations of the acquisition, ownership and disposition of your common shares that may be applicable to you if you acquire our common shares. This does not purport to be a comprehensive description of all of the tax considerations that may be relevant to any of our common shares or the Holders thereof, and does not purport to include tax considerations that arise from rules of general application or that are generally assumed to be known to Holders. This discussion is not a complete analysis or listing of all of the possible tax consequences of such transactions and does not address all tax considerations that might be relevant to particular Holders in light of their personal circumstances or to persons that are subject to special tax rules.

It is not intended to be, nor should it be construed to be, legal or tax advice. This discussion is based on Luxembourg laws and regulations as they stand on the date of this Annual Report and is subject to any change in law or regulations or changes in interpretation or application thereof (and which may possibly have a retroactive effect). Prospective investors should therefore consult their own professional advisers as to the effects of state, local or foreign laws and regulations, including Luxembourg tax law and regulations, to which they may be subject.

As used herein, a “Luxembourg individual” means an individual resident in Luxembourg who is subject to personal income tax (*impôt sur le revenu*) on his or her worldwide income from Luxembourg or foreign sources, and a “Luxembourg corporate Holder” means a company (that is, a fully taxable entity within the meaning of Article 159 of the Luxembourg Income Tax Law) resident in Luxembourg subject to corporate income tax (*impôt sur le revenu des collectivités*) and municipal business tax (*impôt commercial communal*) on its worldwide income from Luxembourg or foreign sources. For purposes of this summary, Luxembourg individuals and Luxembourg corporate Holders are collectively referred to as “Luxembourg Holders.” A “non-Luxembourg Holder” means any investor in our common shares other than a Luxembourg Holder.

Tax Regime Applicable to Realized Capital Gains

Luxembourg Holders

Luxembourg resident individual Holders

Capital gains realized by Luxembourg resident individuals who do not hold their shares as part of a commercial or industrial or independent business and who hold no more than 10% of the share capital of the Company will only be taxable if they are realized on a sale of common shares that takes place before their acquisition or within the first six months following their acquisition. If such is the case, capital gains will be taxed at ordinary rates according to the progressive income tax schedule plus surcharges.

For Luxembourg resident individuals holding (alone or together with his/her spouse or civil partner and underage children), directly or indirectly, more than 10% of the capital of the Company at any time during the five years prior to the sale, capital gains will be taxable, regardless of the holding period. In case of a sale after six months from acquisition, the capital gain is subject to tax as extraordinary income subject to the half-global rate method.

If such shares are held as part of a commercial or industrial business, capital gains would be taxable in the same manner as income from such business.

Luxembourg resident corporate Holders

Capital gains realized upon the disposal of common shares by a fully taxable Luxembourg resident corporate Holder will in principle be subject to corporate income tax and municipal business tax. The combined applicable rate (including an unemployment fund contribution) is 29.22% for the fiscal year ending 2016 for a Luxembourg resident corporate Holder established in Luxembourg-City. An exemption from such taxes may be available to the Luxembourg resident corporate Holder pursuant to Article 166 of the Luxembourg Income Tax law subject to the fulfillment of the conditions set forth therein. The scope of the capital gains exemption can be limited in the cases provided by the Grand Ducal Decree of December 21, 2001, as amended.

Non-Luxembourg Holders

An individual who is a non-Luxembourg Holder of shares (and who does not have a permanent establishment, a permanent representative or a fixed place of business in Luxembourg) will only be subject to Luxembourg taxation on capital gains arising upon disposal of such shares if such non-Luxembourg Holder has (alone or together with his or her spouse or civil partner and underage children), directly or indirectly held, more than 10% of the capital of the Company at any time during the past five years, and either (i) such non-Luxembourg Holder has been a resident of Luxembourg for tax purposes for at least 15 years and has become a non-resident within the last five years preceding the realization of the gain, subject to any applicable tax treaty, or (ii) the disposal of shares occurs within six months from their acquisition (or prior to their actual acquisition), subject to any applicable tax treaty.

A corporate non-Luxembourg Holder which has a permanent establishment, a permanent representative or a fixed place of business in Luxembourg to which shares are attributable, will bear corporate income tax and municipal business tax on a gain realized on a disposal of such shares as set forth above for a Luxembourg corporate Holder. However, gains realized on the sale of the shares may benefit from the full exemption provided for by Article 166 of the Luxembourg Income Tax Law and by the Grand Ducal Decree of December 21, 2001, as amended, subject in each case to fulfillment of the conditions set out therein.

A corporate non-Luxembourg Holder, which has no permanent establishment in Luxembourg to which the shares are attributable, will bear corporate income tax and municipal business tax on a gain realized on a disposal of such shares under the same conditions applicable to an individual non-Luxembourg Holder, as set out above under (ii).

Tax Regime Applicable to Distributions

Withholding tax

Distributions imputed for tax purposes on current or accumulated profits are subject to a withholding tax of 15%. Distributions sourced from a reduction of capital as defined in Article 97 (3) of the Luxembourg Income Tax Law, including, among others, share premium, should not be subject to withholding tax, provided no newly accumulated fiscal profits are recognized. For the foreseeable future, we do not expect to recognize newly accumulated fiscal profits in the relevant annual standalone accounts of the Company prepared under Luxembourg GAAP, and so, on that basis, distributions should not be subject to Luxembourg withholding tax.

To the extent, however, that the Company would recognize, against our expectation, newly accumulated fiscal profits in its annual standalone accounts prepared under Luxembourg GAAP, there will be a 15% withholding tax, unless one of the below exemptions or reductions is available for the dividend recipient.

The rate of the withholding tax may be reduced pursuant to any applicable double taxation treaty existing between Luxembourg and the country of residence of the relevant Holder, subject to the fulfillment of the conditions set forth therein.

No withholding tax applies if the distribution is made to (i) a Luxembourg resident corporate Holder (that is, a fully taxable entity within the meaning of Article 159 of the Luxembourg Income Tax Law), (ii) an undertaking of collective character which is resident of a Member State of the European Union and is referred to by article 2 of the Council Directive 2011/96/EU of 30 November 2011, as amended, and concerning the common fiscal regime applicable to parent and subsidiary companies of different member states (subject to the general anti-abuse rule provided for by Council Directive 2015/121/EU as implemented into Luxembourg laws), (iii) a corporation or a cooperative company resident in Norway, Iceland or Liechtenstein and subject to a tax comparable to corporate income tax as provided by the Luxembourg Income Tax Law, (iv) an undertaking with a collective character subject to a tax comparable to corporate income tax as provided by the Luxembourg Income Tax Law which is resident in a country that has concluded a tax treaty with Luxembourg, (v) a corporation company resident in Switzerland which is subject to corporate income tax in Switzerland without benefiting from an exemption and (vi) a Luxembourg permanent establishment of one of the aforementioned categories under (i) to (iv), provided that at the date of payment, the Holder holds or commits to hold directly or through a tax transparent vehicle, during an uninterrupted period of at least twelve months, shares representing at least 10% of the share capital of the Company or acquired for an acquisition price of at least EUR 1.2 million.

Income Tax

Luxembourg individual Holders

Luxembourg individual Holders must include the distributions paid on the shares in their taxable income. However, 50% of the amount of such dividends may be exempted from tax under the Luxembourg Income Tax Law. The applicable withholding tax can, under certain conditions, entitle the relevant Luxembourg Holder to a tax credit.

Luxembourg resident corporate Holders

Luxembourg resident corporate Holders can benefit from an exemption of 100% of the amount of a dividend received provided that, at the date when the income is made available, they hold or commit to hold a participation of minimum 10% of the share capital of the Company or which has an acquisition price equivalent to minimum EUR 1.2 million for an uninterrupted period of at least 12 months.

Net Wealth Tax

Luxembourg Holders

Luxembourg net wealth tax will not be levied on a Luxembourg Holder with respect to the shares held unless (i) the Luxembourg Holder is a legal entity subject to net wealth tax in Luxembourg; or (ii) the shares are attributable to an enterprise (other than of an individual Holder) or part thereof which is carried on through a permanent establishment, a fixed place of business or a permanent representative in Luxembourg.

Net wealth tax is levied annually at a digressive rate depending on the amount of the net wealth of the above, as determined for net wealth tax purposes (i.e., 0.5% on amounts up to EUR 500 million and 0.05% on the amount of taxable net wealth exceeding EUR 500 million).

The shares of the Company may be exempt from net wealth tax subject to the conditions set forth by Paragraph 60 of the Law of October 16, 1934 on the valuation of assets (*Bewertungsgesetz*), as amended.

Non-Luxembourg Holders

Luxembourg net wealth tax will not be levied on a non-Luxembourg Holder with respect to the shares held unless the shares are attributable to an enterprise of a non-Luxembourg corporate Holder or part thereof which is carried on through a permanent establishment or a permanent representative in Luxembourg.

Stamp and Registration Taxes

No registration tax or stamp duty will be payable by a Holder of shares in Luxembourg solely upon the disposal of shares by sale or exchange.

Estate and Gift Taxes

No estate or inheritance tax is levied on the transfer of shares upon the death of a Holder of shares in cases where the deceased was not a resident of Luxembourg for inheritance tax purposes, and no gift tax is levied upon a gift of shares if the gift is not passed before a Luxembourg notary or recorded in a deed registered in Luxembourg. Where a Holder of shares is a resident of Luxembourg for tax purposes at the time of his or her death, the shares are included in his or her taxable estate for inheritance tax or estate tax purposes.

F. Dividends and Paying Agents

Not applicable.

G. Statements by Experts

Not applicable.

H. Documents on Display

Documents concerning us that are referred to herein may be inspected at our principal executive offices at 4, rue Albert Borschette, L-1246 Luxembourg. Those documents, which include our registration statements, periodic reports and other documents which were filed with or furnished to the SEC, may be obtained electronically from the Investors section of our website at www.intelsat.com or from the SEC's website at www.sec.gov or from the SEC public reference room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Further information on the operation of the public reference rooms may be obtained by calling the SEC at 1-202-551-8909. Copies of documents can also be requested from the SEC public reference rooms for a copying fee at prescribed rates.

I. Subsidiary Information

Not applicable.

Item 11. Quantitative and Qualitative Disclosures About Market Risk

We are primarily exposed to the market risk associated with unfavorable movements in interest rates and foreign currencies. The risk inherent in our market risk sensitive instruments and positions is the potential loss arising from adverse changes in those factors. We do not purchase or hold any derivative financial instruments for speculative purposes.

Interest Rate Risk

We are subject to interest rate risk primarily associated with our borrowings. Interest rate risk is the risk that changes in interest rates could adversely affect earnings and cash flows. Specific interest rate risks include: the risk of increasing interest rates on short-term debt; the risk of increasing interest rates for planned new fixed-rate long-term financings; and the risk of increasing interest rates for planned refinancings using long-term fixed-rate debt.

At December 31, 2016 and December 31, 2015, approximately 79%, or \$11.4 billion principal amount, and 79%, or \$11.6 billion principal amount, respectively, was fixed-rate debt. We perform interest rate sensitivity analyses on our variable-rate debt. Based on the level of fixed-rate debt outstanding at December 31, 2016, a 100 basis point decrease in market rates would result in an increase in fair value of this fixed-rate debt of approximately \$315 million. These analyses indicate that a 100 basis point increase in interest rates would have an annual impact of approximately \$31.0 million on our consolidated statements of operations and cash flows as of December 31, 2016. While our variable-rate debt may impact earnings and cash flows as interest rates change, it is not subject to changes in fair values.

Foreign Currency Risk

We do not currently use material foreign currency derivatives to hedge our foreign currency exposures. Substantially all of our customer contracts, capital expenditure contracts and operating expense obligations are denominated in U.S. dollars. Consequently, we are not exposed to material foreign currency exchange risk. However, the service contracts with our Brazilian customers provide for payment in Brazilian *reais*. Accordingly, we are subject to the risk of a reduction in the value of Brazilian *reais* as compared to U.S. dollars in connection with payments made by Brazilian customers, and our exposure to fluctuations in the exchange rate for Brazilian *reais* is ongoing. However, the rates payable under our service contracts with Brazilian customers are adjusted annually to account for inflation in Brazil, thereby partially mitigating the risk. For the years ended December 31, 2014, 2015 and 2016, our Brazilian customers represented approximately 4.9%, 4.2% and 3.7% of our revenue, respectively. Transactions in other currencies are converted into U.S. dollars using exchange rates in effect on the dates of the transactions.

Item 12. Description of Securities Other than Equity Securities

Not applicable.

PART II

Item 13. Defaults, Dividend Arrearages and Delinquencies

Not applicable.

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

Not applicable.

Item 15. Controls and Procedures

(a) Disclosure Controls and Procedures

Disclosure controls and procedures are controls and procedures that are designed to ensure that information required to be disclosed by us in reports that we file or furnish 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. We periodically review the design and effectiveness of our disclosure controls and procedures worldwide, including compliance with various laws and regulations that apply to our operations. We make modifications to improve the design and effectiveness of our disclosure controls and procedures, and may take other corrective action, if our reviews identify a need for such modifications or actions. In designing and evaluating the disclosure controls and procedures, we recognize that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives.

We have carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and our principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act), as of the year ended December 31, 2016. Based upon that evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2016.

(b) Management’s Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework set forth in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on our evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2016.

(c) Attestation Reports of the Registered Public Accounting Firm

See the reports of KPMG LLP, an independent registered public accounting firm, included under “Item 18. Financial Statements” on pages F-2 and F-3 of this Annual Report.

(d) Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the year ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 16. [Reserved]

Item 16A. Audit Committee Financial Expert

The board of directors has determined that each of Messrs. Kangas and Diercksen qualifies as an audit committee financial expert, as defined in Item 16A of Form 20-F, and that Messrs. Kangas and Diercksen are also “independent,” as defined in Rule 10A-3 under the Exchange Act and applicable NYSE standards. For more information about Messrs. Kangas and Diercksen, see Item 6A—Directors, Senior Management and Employees—Directors and Senior Management.

Item 16B. Code of Ethics

We have adopted a Code of Ethics for Senior Financial Officers, including our chief executive officer, chief financial officer, principal accounting officer, controller and any other person performing similar functions. The Code of Ethics is posted on our website at www.intelsat.com. We intend to disclose on our website any amendments to or waivers of this Code of Ethics.

Item 16C. Principal Accountant Fees and Services***Audit Fees***

Our audit fees were \$2.7 million and \$2.3 million for the years ended 2015 and 2016, respectively.

Audit-Related Fees

Our audit-related fees were \$0.5 million and \$0.2 million for the years ended 2015 and 2016, respectively.

Tax Fees

Our tax fees paid to our principal accountants were \$17,000 and \$20,000 for the years ended 2015 and 2016, respectively. The fees were primarily associated with U.S. state taxation.

All Other Fees

All other fees paid to our principal accountants for 2015 and 2016 were \$126,000 and \$150,000, respectively. Our other fees for 2015 and 2016 included fees associated with attestation of IT security controls.

Audit Committee Pre-Approval Policies and Procedures

Consistent with SEC requirements regarding auditor independence, the audit committee has adopted a policy to pre-approve services to be provided by our independent registered public accounting firm prior to commencement of the specified service. The requests for pre-approval are submitted to the audit committee, or a designated member of the audit committee, by our Chief Financial Officer or Controller, and the audit committee chairman executes engagement letters with our independent registered public accounting firm following approval by audit committee members, or the designated member of the audit committee. All services performed by KPMG LLP during 2016 were pre-approved by the audit committee.

Item 16D. Exemptions from the Listing Standards for Audit Committees

Not applicable.

Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Not applicable.

Item 16F. Change in Registrants' Certifying Accountant

Not applicable.

Item 16G. Corporate Governance

Our common shares are listed on the NYSE. For purposes of NYSE rules, so long as we are a foreign private issuer, we are eligible to take advantage of certain exemptions from NYSE corporate governance requirements provided in the NYSE rules. We are required to disclose the significant ways in which our corporate governance practices differ from those that apply to U.S. companies under NYSE listing standards. Set forth below is a summary of these differences:

Director Independence—The NYSE rules require domestic companies to have a majority of independent directors, but as a foreign private issuer we are exempt from this requirement. Our board of directors consists of seven members and we believe that three of our board members satisfy the “independence” requirements of the NYSE rules.

Board Committees—The NYSE rules require domestic companies to have a compensation committee and a nominating and corporate governance committee composed entirely of independent directors, but as a foreign private issuer we are exempt from these requirements. We have a compensation committee comprised of three members, and we believe that two of the committee members satisfy the “independence” requirements of the NYSE rules. We do not have a nominating and corporate governance committee.

Item 16H. Mine Safety Disclosure

Not applicable.

PART III

Item 17. Financial Statements

Not applicable.

Item 18. Financial Statements

(a)(1) The following financial statements are included in this Annual Report on Form 20-F:

	<u>Page</u>
Reports of Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets as of December 31, 2015 and 2016	F-4
Consolidated Statements of Operations for the Years Ended December 31, 2014, 2015 and 2016	F-5
Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2014, 2015 and 2016	F-6
Consolidated Statements of Changes in Shareholders' Deficit for the Years Ended December 31, 2014, 2015 and 2016	F-7
Consolidated Statements of Cash Flows for the Years Ended December 31, 2014, 2015 and 2016	F-8
Notes to Consolidated Financial Statements	F-9

(a)(2) The following Financial Statement schedule is included in this Annual Report on Form 20-F:

Schedule II—Valuation and Qualifying Accounts for the Years Ended December 31, 2014, 2015 and 2016	F-57
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Item 19. Exhibits

The following exhibits are filed as part of this Annual Report:

EXHIBIT INDEX

Exhibit No.	Document Description
1.1	Consolidated Articles of Incorporation of Intelsat S.A., as amended on June 16, 2016 (incorporated by reference to Exhibit 3.1 of Intelsat S.A.'s Registration Statement on Form S-8, File No. 333-212417, filed on July 6, 2016).
2.1	Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of September 30, 2010, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat S.A. and Intelsat (Luxembourg) S.A., as Parent Guarantors, the subsidiary guarantors named therein and Wells Fargo Bank, National Association, as Trustee (including the forms of the 2020 Jackson Notes) (incorporated by reference to Exhibit 4.1 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on October 4, 2010).
2.2	First Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of January 12, 2011, by and among Intelsat Jackson Holdings S.A., certain subsidiaries of Intelsat Jackson Holdings S.A. named therein and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.6 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on January 19, 2011).
2.3	Second Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of April 12, 2011, by and among Intelsat (Poland) Sp. z o.o., Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.3 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended September 30, 2011, File No. 000-50262, filed on November 8, 2011).
2.4	Third Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of December 16, 2011, by and among Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on December 16, 2011).
2.5	Fourth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of April 25, 2012, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Subsidiary (Gibraltar) Limited, Intelsat New Dawn (Gibraltar) Limited and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, File No. 000-50262, filed on May 8, 2012).
2.6	Fifth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of July 31, 2012, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Luxembourg Investment S.à r.l. and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.4 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, File No. 000-50262, filed on August 1, 2012).
2.7	Sixth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of January 31, 2013, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Align S.à r.l., Intelsat Finance Nevada LLC and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.18 of Intelsat Investments S.A.'s Annual Report on Form 10-K, File No. 000-50262, filed on February 28, 2013).
2.8	Seventh Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of May 20, 2013, by and among Intelsat S.A., Intelsat Investment Holdings S.à r.l., Intelsat Holdings S.A., each as a Guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 2.8 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
2.9	Eighth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of June 28, 2013, by and among Intelsat Finance Bermuda Ltd., as guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 2.19 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
2.10	Ninth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of November 25, 2015, by and among Intelsat Ireland Operations Limited, as guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 2.10 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on March 8, 2016).
2.11	Tenth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2020, dated as of December 22, 2016, by and among Intelsat Connect Finance S.A., as New Guarantor, Intelsat Jackson Holdings S.A., as Issuer, and U.S. Bank National Association, as Trustee.*

Exhibit No.	Document Description
2.12	Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2019 and 7 ½% Senior Notes due 2021, dated as of April 5, 2011, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat S.A. and Intelsat (Luxembourg) S.A., as Parent Guarantors, the subsidiary guarantors named therein and Wells Fargo Bank, National Association, as Trustee (including the forms of the New Jackson Notes) (incorporated by reference to Exhibit 4.1 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on April 5, 2011).
2.13	First Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2019 and 7 ½% Senior Notes due 2021, dated as of April 12, 2011, by and among Intelsat (Poland) Sp. z o.o., Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.4 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended September 30, 2011, File No. 000-50262, filed on November 8, 2011).
2.14	Second Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2019 and 7 ½% Senior Notes due 2021, dated as of July 31, 2012, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Luxembourg Investment S.à r.l. and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.3 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, File No. 000-50262, filed on August 1, 2012).
2.15	Third Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2019 and 7 ½% Senior Notes due 2021, dated as of January 31, 2013, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Align S.à r.l., Intelsat Finance Nevada LLC and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.22 of Intelsat Investments S.A.'s Annual Report on Form 10-K, File No. 000-50262, filed on February 28, 2013).
2.16	Fourth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2019 and 7 ½% Senior Notes due 2021, dated as of May 20, 2013, by and among Intelsat S.A., Intelsat Investment Holdings S.à r.l., Intelsat Holdings S.A., each as a Guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 2.24 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
2.17	Fifth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2019 and 7 ½% Senior Notes due 2021, dated as of June 28, 2013, by and among Intelsat Finance Bermuda Ltd., as guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 2.25 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
2.18	Sixth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2019 and 7 ½% Senior Notes due 2021, dated as of November 25, 2015, by and among Intelsat Ireland Operations Limited, as guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 2.17 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on March 8, 2016).
2.19	Seventh Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 7 ¼% Senior Notes due 2019 and 7 ½% Senior Notes due 2021, dated as of December 22, 2016, by and among Intelsat Connect Finance S.A., as New Guarantor, Intelsat Jackson Holdings S.A., as Issuer, and U.S. Bank National Association, as Trustee.*
2.20	Indenture for Intelsat (Luxembourg) S.A.'s 6 ¾% Senior Notes due 2018, 7 ¾% Senior Notes due 2021 and 8 ⅛% Senior Notes due 2023, dated as of April 5, 2013, by and among Intelsat (Luxembourg) S.A., as Issuer, Intelsat S.A., as Parent Guarantor, and Wells Fargo Bank, National Association, as Trustee for (incorporated by reference to Exhibit 4.1 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on April 5, 2013).
2.21	First Supplemental Indenture for Intelsat (Luxembourg) S.A.'s 6 ¾% Senior Notes due 2018, 7 ¾% Senior Notes due 2021 and 8 ⅛% Senior Notes due 2023, dated as of May 20, 2013, by and among Intelsat S.A., Intelsat Investment Holdings S.à r.l., Intelsat Holdings S.A., each as a Guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 2.32 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
2.22	Indenture for Intelsat Jackson Holdings S.A.'s 5 ½% Senior Notes due 2023, dated as of June 5, 2013, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat S.A., Intelsat Investment Holdings S.à r.l., Intelsat Holdings S.A., Intelsat Investments S.A., Intelsat (Luxembourg) S.A., each as a Parent Guarantors, the subsidiary guarantors named therein and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 99.1 of Intelsat S.A.'s Current Report on Form 6-K, File No. 001-35878, filed on June 5, 2013).
2.23	First Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5 ½% Senior Notes due 2023, dated as of June 28, 2013, by and among Intelsat Finance Bermuda Ltd., as guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 2.35 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).

Exhibit No.	Document Description
2.24	Second Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5 ½% Senior Notes due 2023, dated as of November 25, 2015, by and among Intelsat Ireland Operations Limited, as guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 2.25 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on March 8, 2016).
2.25	Third Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5 ½% Senior Notes due 2023, dated as of December 22, 2016, by and among Intelsat Connect Finance S.A., as New Guarantor, Intelsat Jackson Holdings S.A., as Issuer, and U.S. Bank National Association, as Trustee.*
2.26	Indenture for Intelsat Jackson Holdings S.A.'s 8% Senior Secured Notes due 2024, dated as of March 29, 2016, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat (Luxembourg) S.A. as Parent Guarantor, the subsidiary guarantors named therein and Wilmington Trust, National Association, as Trustee (including the form of the 8% Notes) (incorporated by reference to Exhibit 99.1 of Intelsat S.A.'s Current Report on Form 6-K, File No. 001-35878, filed on March 29, 2016).
2.27	First Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 8% Senior Secured Notes due 2024, dated as of December 22, 2016, by and among Intelsat (Luxembourg) S.A., as Released Guarantor, Intelsat Connect Finance S.A., as New Guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wilmington Trust, National Association, as Trustee.*
2.28	Indenture for Intelsat Jackson Holdings S.A.'s 9½% Senior Secured Notes due 2022, dated as of June 30, 2016, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat (Luxembourg) S.A. as Parent Guarantor, the subsidiary guarantors named therein and Wilmington Trust, National Association, as Trustee (including the form of the 9½% Notes) (incorporated by reference to Exhibit 99.1 of Intelsat S.A.'s Current Report on Form 6-K, File No. 001-35878, filed on July 1, 2016).
2.29	First Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9 ½% Senior Secured Notes due 2022, dated as of December 22, 2016, by and among Intelsat (Luxembourg) S.A., as Released Guarantor, Intelsat Connect Finance S.A., as New Guarantor, Intelsat Jackson Holdings S.A., as Issuer, and Wilmington Trust, National Association, as Trustee.*
2.30	Indenture for Intelsat Connect Finance S.A.'s 12 ½% Senior Notes due 2022, dated as of December 22, 2016, by and among Intelsat Connect Finance S.A., as Issuer, Intelsat (Luxembourg) S.A., as Parent Guarantor and U.S. Bank, National Association, as Trustee (including the form of the 12 ½% Notes) (incorporated by reference to Exhibit 99.1 of Intelsat S.A.'s Current Report on Form 6-K, File No. 001-35878, filed on December 23, 2016).
2.31	Indenture for Intelsat (Luxembourg) S.A.'s 12 ½% Senior Notes due 2024, dated as of January 6, 2017, by and between Intelsat (Luxembourg) S.A., as Issuer and U.S. Bank, National Association, as Trustee (including the form of the 12 ½% Notes) (incorporated by reference to Exhibit 99.1 of Intelsat S.A.'s Current Report on Form 6-K, File No. 001-35878, filed on January 6, 2017).
3.1	Governance Agreement, dated as of April 23, 2013, by and among Intelsat S.A. and the shareholders of Intelsat S.A. party thereto (incorporated by reference to Exhibit 3.1 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
3.2	Amendment No. 1, dated as of February 20, 2015, to the Governance Agreement, dated as of April 23, 2013, by and among Intelsat S.A. and the shareholders of Intelsat S.A. party thereto (incorporated by reference to Exhibit 3.2 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on March 8, 2016).
4.1	Credit Agreement, dated as of January 12, 2011, by and among Intelsat Jackson, as the Borrower, Intelsat (Luxembourg) S.A., the several lenders from time to time parties thereto, Bank of America, N.A., as Administrative Agent, Credit Suisse Securities (USA) LLC ("Credit Suisse") and J.P. Morgan Securities LLC ("J.P. Morgan"), as Co-Syndication Agents, Barclays Bank Plc and Morgan Stanley Senior Funding, Inc., as Co-Documentation Agents, Merrill Lynch, Pierce, Fenner & Smith Incorporated ("Merrill Lynch"), Credit Suisse and J.P. Morgan, as Joint Lead Arrangers, Merrill Lynch, Credit Suisse, J.P. Morgan, Barclays Capital, Deutsche Bank Securities Inc., Morgan Stanley & Co. Incorporated and UBS Securities LLC, as Joint Bookrunners, and HSBC Bank USA, N.A., Goldman Sachs Partners LLC and RBC Capital Markets, as Co-Managers (incorporated by reference to Exhibit 10.1 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on January 19, 2011).
4.2	Guarantee, dated as of January 12, 2011, made among each of the subsidiaries of Intelsat Jackson Holdings S.A. listed on Annex A thereto and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.2 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on January 19, 2011).
4.3	Luxembourg Shares and Beneficiary Certificates Pledge Agreement, dated as of January 12, 2011, by and among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., Intelsat Intermediate Holding Company S.A., Intelsat Phoenix Holdings S.A., Intelsat Subsidiary Holding Company S.A., Intelsat (Gibraltar) Limited, as Pledgors, and Wilmington Trust FSB, as Pledgee (incorporated by reference to Exhibit 10.3 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on January 19, 2011).

Exhibit No.	Document Description
4.4	Security and Pledge Agreement, dated as of January 12, 2011, by and among Intelsat Jackson Holdings S.A., each of the subsidiaries of Intelsat Jackson Holdings S.A. listed on Annex A thereto, Bank of America, N.A., as Administrative Agent, and Wilmington Trust FSB, as Collateral Trustee (incorporated by reference to Exhibit 10.4 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on January 19, 2011).
4.5	Collateral Agency and Intercreditor Agreement, dated as of January 12, 2011 by and among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., the other grantors from time to time party thereto, Bank of America, N.A., as Administrative Agent under the Existing Credit Agreement, each additional First Lien Representative from time to time a party thereto, each Second Lien Representative from time to time a party thereto and Wilmington Trust FSB, as Collateral Trustee (incorporated by reference to Exhibit 10.5 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on January 19, 2011).
4.6	Amendment and Joinder Agreement, dated as of October 3, 2012, by and among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., the Subsidiary Guarantors party thereto, Bank of America, N.A., as Administrative Agent for the Lenders and collateral agent for the Secured Parties, the Lenders party thereto and the Tranche B-1 Term Loan Lenders party thereto, to the Credit Agreement, dated as of January 12, 2011 (incorporated by reference to Exhibit 10.1 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on October 3, 2012).
4.7	Amendment No. 2 and Joinder Agreement, dated as of November 27, 2013, by and among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., the Subsidiary Guarantors party hereto, Bank of America, N.A., as Administrative Agent for the lenders and collateral agent for the secured parties thereto, the lenders party thereto and the Tranche B-2 Term Loan Lenders (as defined therein) party thereto, to the Credit Agreement, dated as of January 12, 2011 (as amended by the Amendment and Joinder Agreement, dated as of October 3, 2012) (incorporated by reference to Exhibit 4.7 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
4.8	Employment Agreement, dated as of December 29, 2008 and effective as of February 4, 2008, by and among Intelsat Global, Ltd., Intelsat, Ltd. and David McGlade (incorporated by reference to Exhibit 10.1 of Intelsat, Ltd.'s Current Report on Form 8-K, File No. 000-50262, filed on January 5, 2009).
4.9	Amendment and Acknowledgement, dated as of May 6, 2009, by and among Intelsat, Ltd., Intelsat Global, Ltd. and David McGlade (incorporated by reference to Exhibit 10.24 of Intelsat, Ltd.'s Current Report on Form 8-K, File No. 000-50262, filed on May 12, 2009).
4.10	Assignment and Modification Agreement, effective as of December 21, 2009, to Employment Agreement dated as of December 29, 2008, by and among David McGlade, Intelsat Global, Ltd., Intelsat, Ltd. and Intelsat Management LLC (incorporated by reference to Exhibit 10.65 of Intelsat Investments S.A.'s Annual Report on Form 10-K for the year ended December 31, 2009, File No. 000-50262, filed on March 10, 2010).
4.11	Severance Agreement, dated as of May 8, 2009, by and between Intelsat Global, Ltd. and Stephen Spengler (incorporated by reference to Exhibit 10.27 of Intelsat, Ltd.'s Current Report on Form 8-K, File No. 000-50262, filed on May 12, 2009).
4.12	Intelsat S.A.'s Amended and Restated 2008 Share Incentive Plan (incorporated by reference to Exhibit 4.15 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
4.13	Management Shareholders Agreement of Intelsat Global, Ltd. (incorporated by reference to Exhibit 10.11 of Intelsat, Ltd.'s Current Report on Form 8-K, File No. 000-50262, filed on May 12, 2009).
4.14	Letter Agreement, dated as of May 6, 2009, by and between Intelsat Global, Ltd. and David McGlade regarding the Management Shareholders Agreement (incorporated by reference to Exhibit 10.12 of Intelsat, Ltd.'s Current Report on Form 8-K, File No. 000-50262, filed on May 12, 2009).
4.15	Amendment to Management Shareholders Agreement of Intelsat Global, Ltd., dated as of December 7, 2009 and effective as of December 15, 2009 (incorporated by reference to Exhibit 10.76 of Intelsat Investments S.A.'s Annual Report on Form 10-K for the year ended December 31, 2009, File No. 000-50262, filed on March 10, 2010).
4.16	Acknowledgment Agreement, dated as of December 7, 2009, by and among certain shareholders of Intelsat Global, Ltd., regarding the Amendment to Management Shareholders Agreement of Intelsat Global, Ltd. (incorporated by reference to Exhibit 10.77 of Intelsat Investments S.A.'s Annual Report on Form 10-K for the year ended December 31, 2009, File No. 000-50262, filed on March 10, 2010).
4.17	Letter Amendment, dated as of December 7, 2009, by and between Intelsat Global, Ltd. and David McGlade regarding the Management Shareholder's Agreement (incorporated by reference to Exhibit 10.73 of Intelsat Investments S.A.'s Annual Report on Form 10-K for the year ended December 31, 2009, File No. 000-50262, filed on March 10, 2010).
4.18	Second Amendment to Employment Agreement, dated as of February 28, 2012, by and among David McGlade, Intelsat Global S.A., Intelsat S.A. and Intelsat Management LLC (incorporated by reference to Exhibit 10.1 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, File No. 000-50262, filed on May 8, 2012).

Exhibit No.	Document Description
4.19	Amendment No. 2 to the Management Shareholders Agreement, dated as of March 30, 2012, by and among Intelsat Global S.A., Intelsat Global Holdings S.A. and the other parties thereto (incorporated by reference to Exhibit 10.1 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on April 5, 2012).
4.20	Letter Agreement, dated as of March 30, 2012, by and among Intelsat Global S.A., Intelsat Global Holdings S.A., David McGlade and the other parties thereto regarding the Management Shareholders Agreement (incorporated by reference to Exhibit 10.2 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on April 5, 2012).
4.21	Modification Agreement, dated as of March 30, 2012, to the Employment Agreement, dated as of December 29, 2008, by and among David McGlade, Intelsat Global S.A. and Intelsat S.A. (together with the Assignment and Modification Agreement, dated as of December 21, 2009, by and among Intelsat Management LLC, Intelsat Global S.A. and Intelsat S.A.) (incorporated by reference to Exhibit 10.7 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on April 5, 2012).
4.22	Amendment, dated as of March 30, 2012, to the employment letter agreement, dated as of May 8, 2009, by and between Intelsat Global and Stephen Spengler (incorporated by reference to Exhibit 10.10 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on April 5, 2012).
4.23	Amendment, dated as of March 30, 2012, to the employment letter agreement, dated as of May 8, 2009, by and between Intelsat Global S.A. and Thierry Guillemin (incorporated by reference to Exhibit 10.11 of Intelsat Investments S.A.'s Current Report on Form 8-K, File No. 000-50262, filed on April 5, 2012).
4.24	Shareholders Agreement, dated as of February 4, 2008, by and among Serafina Holdings Limited and the shareholders party thereto (incorporated by reference as Exhibit 10.78 to Amendment No. 1 to Intelsat Global Holdings S.A.'s Registration Statement on Form F-1, File No. 333-181527, filed on June 26, 2012).
4.25	Amendment No. 1 to Shareholders Agreement, dated as of December 7, 2009, by and among Intelsat Global, Ltd. and the shareholders party thereto (incorporated by reference as Exhibit 10.79 to Amendment No. 1 to Intelsat Global Holdings S.A.'s Registration Statement on Form F-1, File No. 333-181527, filed on June 26, 2012).
4.26	Amendment No. 2 to Shareholders Agreement, dated as of March 30, 2012, by and among Intelsat Global S.A., Intelsat Global Holdings S.A. and the shareholders party thereto (incorporated by reference as Exhibit 10.80 to Amendment No. 1 to Intelsat Global Holdings S.A.'s Registration Statement on Form F-1, File No. 333-181527, filed on June 26, 2012).
4.27	Intelsat S.A.'s 2013 Equity Incentive Plan (incorporated by reference to Exhibit 4.39 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
4.28	Intelsat S.A.'s Bonus Plan (incorporated by reference to Exhibit 4.40 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
4.29	Supplement No. 2 to Guarantee, dated as of July 31, 2012, by and between Intelsat Luxembourg Investment S.à r.l. and Bank of America, N.A. (incorporated by reference to Exhibit 10.2 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, File No. 000-50262, filed on August 1, 2012).
4.30	Agreement for the Adherence by Intelsat Luxembourg Investment S.à r.l. and Intelsat Corporation to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement, dated as of January 12, 2011, and for the Amendment of the Pledge Agreement, dated as of July 31, 2012, by and among the Pledgors listed therein and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee (incorporated by reference to Exhibit 10.3 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, File No. 000-50262, filed on August 1, 2012).
4.31	Supplement No. 2 to Security and Pledge Agreement, dated as of July 31, 2012, by and among Intelsat Luxembourg Investment S.à r.l., as New Guarantor, Bank of America, N.A., as Administrative Agent and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee (incorporated by reference to Exhibit 10.4 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, File No. 000-50262, filed on August 1, 2012).
4.32	Collateral Agency and Intercreditor Joinder, dated as of July 31, 2012, by and between Intelsat Luxembourg Investment S.à r.l. and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee (incorporated by reference to Exhibit 10.5 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, File No. 000-50262, filed on August 1, 2012).
4.33	Form of Indemnification Agreement between Intelsat S.A. and its directors and officers (previously filed as Exhibit 10.64 to Amendment No. 2 to Intelsat Global Holdings S.A.'s Registration Statement on Form F-1, File No. 333-181527, filed on August 8, 2012).

Exhibit No.	Document Description
4.34	Amendment No. 3 to the Management Shareholders Agreement, dated as of April 23, 2013, by and among Intelsat S.A., Serafina S.A., SLP III Investment Holding S.à r.l. and the Management Shareholders party thereto (incorporated by reference to Exhibit 4.49 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2014).
4.35	Supplement No. 3 to Guarantee, dated as of January 31, 2013, to the Guarantee dated as of January 12, 2011, by and among Intelsat Align S.à r.l. and Intelsat Finance Nevada LLC, as New Guarantors, and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.84 of Intelsat Investments S.A.'s Annual Report on Form 10-K, File No. 000-50262, filed on February 28, 2013).
4.36	Agreement for the Adherence by Intelsat Align S.à r.l. to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement, dated as of January 12, 2011, and for the Amendment of the Pledge Agreement, dated as of January 31, 2013, by and among the Pledgors listed therein and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee (incorporated by reference to Exhibit 10.85 of Intelsat Investments S.A.'s Annual Report on Form 10-K, File No. 000-50262, filed on February 28, 2013).
4.37	Supplement No. 3 to Security and Pledge Agreement, dated as of January 31, 2013, to the Security and Pledge Agreement dated as of January 12, 2011, by and among Intelsat Align S.à r.l. and Intelsat Nevada LLC, as New Guarantors, Bank of America, N.A., as Administrative Agent and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee (incorporated by reference to Exhibit 10.86 of Intelsat Investments S.A.'s Annual Report on Form 10-K, File No. 000-50262, filed on February 28, 2013).
4.38	Collateral Agency and Intercreditor Joinder, dated as of January 31, 2013, by and among Intelsat Align S.à r.l. and Intelsat Nevada LLC, as new Grantors, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee (incorporated by reference to Exhibit 10.87 of Intelsat Investments S.A.'s Annual Report on Form 10-K, File No. 000-50262, filed on February 28, 2013).
4.39	Collateral Agency and Intercreditor Joinder, dated as of November 25, 2015, by and among Intelsat Ireland Operations Limited, as new Grantor, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee (incorporated by reference to Exhibit 4.46 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on March 8, 2016).
4.40	Guarantee, dated as of January 31, 2013, made among Intelsat Align S.à r.l. and Intelsat Finance Nevada LLC, as New Guarantors, and Credit Suisse AG, Cayman Islands Branch (f/k/a Credit Suisse, Cayman Island Branch), as Administrative Agent (incorporated by reference to Exhibit 10.88 of Intelsat Investments S.A.'s Annual Report on Form 10-K, File No. 000-50262, filed on February 28, 2013).
4.41	Guarantee, dated as of January 31, 2013, made among Intelsat Align S.à r.l. and Intelsat Finance Nevada LLC, as New Guarantors, and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.89 of Intelsat Investments S.A.'s Annual Report on Form 10-K, File No. 000-50262, filed on February 28, 2013).
4.42	Supplement No. 5 to Guarantee, dated as of November 25, 2015, to the Guarantee dated as of January 12, 2011, by and between Intelsat Ireland Operations Limited, as New Guarantor, and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 4.49 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on March 8, 2016).
4.43	Third Amendment, dated as of March 18, 2013, to Employment Agreement, dated as of December 29, 2008, by and among David McGlade, Intelsat Global Holdings S.A., Intelsat S.A. and Intelsat Management LLC (incorporated by reference as Exhibit 10.73 to Amendment No. 7 to Intelsat Global Holdings S.A.'s Registration Statement on Form F-1, File No. 333-181527, filed on March 20, 2013).
4.44	Employment Agreement, dated as of March 18, 2013, by and between Intelsat Corporation and Stephen Spengler (incorporated by reference to Exhibit 10.77 to Amendment No. 7 to Intelsat Global Holdings S.A.'s Registration Statement on Form F-1, File No. 333-181527, filed on March 20, 2013).
4.45	Employment Agreement, dated as of March 18, 2013, by and among Intelsat Global Holdings S.A., Intelsat S.A. and Michelle Bryan (incorporated by reference to Exhibit 10.78 to Amendment No. 7 to Intelsat Global Holdings S.A.'s Registration Statement on Form F-1, File No. 333-181527, filed on March 20, 2013).
4.46	Governance Agreement, dated as of April 23, 2013, by and among Intelsat S.A. and the shareholders of Intelsat S.A. party thereto (see Exhibit 3.1).
4.47	Fifth Amendment, dated as of December 11, 2014, to Employment Agreement, dated as of December 29, 2008, by and among David McGlade, Intelsat S.A., Intelsat Investments S.A. and Intelsat Management LLC (incorporated by reference to Exhibit 4.62 to Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 18, 2015).

Exhibit No.	Document Description
4.48	Second Amendment, dated as of December 11, 2014, to Employment Agreement, dated as of March 18, 2013, by and between Stephen Spengler and Intelsat Corporation (incorporated by reference to Exhibit 4.63 to Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 18, 2015).
4.49	Amendment to Intelsat S.A.'s 2013 Equity Incentive Plan, effective as of October 23, 2014 (incorporated by reference to Exhibit 4.64 to Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 8, 2015).
4.50	Second Amendment to Intelsat S.A.'s 2013 Equity Incentive Plan, effective as of June 16, 2016 (incorporated by reference to Exhibit 10.3 of Intelsat S.A.'s Registration Statement on Form S-8, File No. 333-212417, filed on July 6, 2016).
4.51	Collateral Agency and Intercreditor Joinder, dated as of July 31, 2012, between Intelsat Luxembourg Investment S.a r.l. and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee (incorporated by reference to Exhibit 10.5 of Intelsat Investments S.A.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, File No. 000-50262, filed on August 1, 2012).
4.52	Collateral Agency and Intercreditor Joinder, dated as of March 29, 2016, by and among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., the other grantors from time to time party thereto, Bank of America, N.A., as Administrative Agent under the Existing Credit Agreement, each additional First Lien Representative from time to time a party thereto, each Second Lien Representative from time to time a party thereto and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee.*
4.53	Collateral Agency and Intercreditor Joinder, dated as of June 30, 2016, by and among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., the other grantors from time to time party thereto, Bank of America, N.A., as Administrative Agent under the Existing Credit Agreement, each additional First Lien Representative from time to time a party thereto, each Second Lien Representative from time to time a party thereto and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee.*
4.54	Amendment Agreement to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement, dated as of March 23, 2016, by and among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., Intelsat Operations S.A., and Intelsat Corporation, as Pledgors, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee or Pledgee.*
4.55	Confirmation and Amendment Agreement to the Luxembourg Claims Pledge Agreement, dated as of October 24, 2016, by and among Intelsat Jackson Holdings S.A., Intelsat Operations S.A. and Intelsat Align S.à r.l., as Pledgors, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee or Pledgee.*
4.56	Confirmation and Amendment Agreement to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement, dated as of October 24, 2016, by and among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., Intelsat Operations S.A., and Intelsat Corporation, as Pledgors, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee or Pledgee.*
4.57	Collateral Agency and Intercreditor Joinder, dated as of December 22, 2016, by and among Intelsat Connect Finance S.A., Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., the other grantors from time to time party thereto, Bank of America, N.A., as Administrative Agent under the Existing Credit Agreement, each additional First Lien Representative from time to time a party thereto, each Second Lien Representative from time to time a party thereto and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee.*
4.58	Joinder No. 1 to Credit Agreement, dated as of December 22, 2016, by and between Intelsat Connect Finance S.A. and Bank of America, N.A., as Administrative Agent.*
4.59	Release of Intelsat (Luxembourg) S.A. from Credit Agreement, dated as of December 22, 2016, by Bank of America, N.A., as Administrative Agent.*
4.60	Confirmation and Amendment Agreement to the Luxembourg Claims Pledge Agreement, dated as of December 22, 2016, by and among Intelsat Jackson Holdings S.A., Intelsat Operations S.A., Intelsat Align S.à r.l. and Intelsat Connect Finance S.A. as Pledgors, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee or Pledgee.*
4.61	Amendment Agreement to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement, dated as of December 22, 2016, by and among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., Intelsat Operations S.A., Intelsat Connect Finance S.A. and Intelsat Corporation, as Pledgors, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee or Pledgee.*
8.1	List of significant subsidiaries of Intelsat S.A.*
12.1	Rule 13a-14(a)/15d-14(a) Certification of Principal Executive Officer.*

Exhibit No.	Document Description
12.2	Rule 13a-14(a)/15d-14(a) Certification of Principal Financial Officer.*
13.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
13.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
15.1	Consent of KPMG LLP*
101.	Interactive Data Files
101.INS	XBRL Instance Document. **
101.SCH	XBRL Taxonomy Extension Schema Document. **
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document. **
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document. **
101.LAB	XBRL Taxonomy Extension Label Linkbase Document. **
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document. **

* Filed herewith.

** Attached as Exhibit 101 to this Annual Report on Form 20-F are the following formatted in Extensible Business Reporting Language (“XBRL”): (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Comprehensive Loss, (iv) Consolidated Statements of Changes in Shareholders’ Deficit, (v) Consolidated Statements of Cash Flows and (vi) Notes to Consolidated Financial Statements.

SIGNATURE

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on its behalf.

INTELSAT S.A.

Date: February 28, 2017

By _____
/s/ STEPHEN SPENGLER
Stephen Spengler
Chief Executive Officer

Date: February 28, 2017

By _____
/s/ JACQUES KERREST
Jacques Kerrest
Executive Vice President and Chief Financial Officer

Intelsat S.A.
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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Intelsat S.A.:

We have audited the accompanying consolidated balance sheets of Intelsat S.A. and subsidiaries as listed in the accompanying index. These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedules based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Intelsat S.A. and subsidiaries as of December 31, 2015 and 2016, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, present fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated February 28, 2017 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

McLean, Virginia
February 28, 2017

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Intelsat S.A.:

We have audited Intelsat S.A.'s internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Intelsat S.A.'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 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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.

In our opinion, Intelsat S.A. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Intelsat S.A. and subsidiaries as of December 31, 2015 and 2016, and the related consolidated statements of operations, comprehensive income (loss), shareholders' deficit, and cash flows for each of the years in the three-year period ended December 31, 2016 and our report dated February 28, 2017 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

McLean, Virginia
February 28, 2017

INTELSAT S.A.

CONSOLIDATED BALANCE SHEETS
(in thousands, except per share amounts)

	<u>As of December 31, 2015</u>	<u>As of December 31, 2016</u>
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 171,541	\$ 666,024
Receivables, net of allowance of \$37,178 in 2015 and \$54,744 in 2016	232,775	203,036
Prepaid expenses and other current assets	35,784	55,908
Total current assets	440,100	924,968
Satellites and other property and equipment, net	5,988,317	6,185,842
Goodwill	2,620,627	2,620,627
Non-amortizable intangible assets	2,452,900	2,452,900
Amortizable intangible assets, net	440,330	391,838
Other assets	311,316	365,834
Total assets	\$ 12,253,590	\$ 12,942,009
LIABILITIES AND SHAREHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 164,381	\$ 215,987
Taxes payable	11,742	16,733
Employee related liabilities	35,361	50,178
Accrued interest payable	161,493	204,840
Deferred satellite performance incentives	19,411	23,455
Deferred revenue	108,779	157,684
Other current liabilities	63,275	64,786
Total current liabilities	564,442	733,663
Long-term debt, net of current portion	14,611,379	14,198,084
Deferred satellite performance incentives, net of current portion	162,177	210,706
Deferred revenue, net of current portion	1,010,242	906,744
Deferred income taxes	160,802	168,445
Accrued retirement benefits	195,385	186,284
Other long-term liabilities	169,516	148,081
Commitments and contingencies (Notes 15 and 16)		
Shareholders' deficit:		
Common shares; nominal value \$0.01 per share	1,076	1,180
5.75% Series A mandatory convertible junior non-voting preferred shares; nominal value \$0.01 per share; aggregate liquidation preference of \$172,500 (\$50 per share)	35	—
Paid-in capital	2,133,891	2,156,911
Accumulated deficit	(6,706,128)	(5,715,931)
Accumulated other comprehensive loss	(78,439)	(76,305)
Total Intelsat S.A. shareholders' deficit	(4,649,565)	(3,634,145)
Noncontrolling interest	29,212	24,147
Total liabilities and shareholders' deficit	\$ 12,253,590	\$ 12,942,009

See accompanying notes to consolidated financial statements.

INTELSAT S.A.

CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	<u>Year Ended December 31, 2014</u>	<u>Year Ended December 31, 2015</u>	<u>Year Ended December 31, 2016</u>
Revenue	\$ 2,472,386	\$ 2,352,521	\$ 2,188,047
Operating expenses:			
Direct costs of revenue (excluding depreciation and amortization)	348,348	328,501	341,147
Selling, general and administrative	197,407	199,412	231,397
Impairment of goodwill and other intangibles	—	4,165,400	—
Depreciation and amortization	679,351	687,729	694,891
Total operating expenses	<u>1,225,106</u>	<u>5,381,042</u>	<u>1,267,435</u>
Income (loss) from operations	1,247,280	(3,028,521)	920,612
Interest expense, net	944,787	890,279	938,501
Gain (loss) on early extinguishment of debt	(40,423)	7,061	1,030,092
Other expense, net	(2,593)	(6,201)	(2,105)
Income (loss) before income taxes	259,477	(3,917,940)	1,010,098
Provision for income taxes	22,971	1,513	15,986
Net income (loss)	236,506	(3,919,453)	994,112
Net income attributable to noncontrolling interest	(3,974)	(3,934)	(3,915)
Net income (loss) attributable to Intelsat S.A.	<u>\$ 232,532</u>	<u>\$ (3,923,387)</u>	<u>\$ 990,197</u>
Cumulative preferred dividends	(9,917)	(9,919)	—
Net income (loss) attributable to common shareholders	<u>\$ 222,615</u>	<u>\$ (3,933,306)</u>	<u>\$ 990,197</u>
Net income (loss) per common share attributable to Intelsat S.A.:			
Basic	\$ 2.09	\$ (36.68)	\$ 8.65
Diluted	\$ 1.99	\$ (36.68)	\$ 8.36

See accompanying notes to consolidated financial statements.

INTELSAT S.A.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)

	<u>Year Ended December 31, 2014</u>	<u>Year Ended December 31, 2015</u>	<u>Year Ended December 31, 2016</u>
Net income (loss)	\$ 236,506	\$ (3,919,453)	\$ 994,112
Other comprehensive income (loss), net of tax:			
Defined benefit retirement plans:			
Reclassification adjustment for amortization of unrecognized prior service credits included in net periodic pension costs and other, net of tax	(109)	(248)	(5)
Reclassification adjustment for amortization of unrecognized actuarial loss included in net periodic pension costs, net of tax	6,510	5,244	2,223
Actuarial gain (loss) arising during the year, net of tax	(58,403)	22,943	(177)
Curtailed gain, net of tax of \$3.8 million	—	6,510	—
Marketable securities:			
Unrealized gains (losses) on investments, net of tax	258	(21)	285
Reclassification adjustment for realized gain on investments, net of tax	(390)	(340)	(192)
Other comprehensive income (loss)	<u>(52,134)</u>	<u>34,088</u>	<u>2,134</u>
Comprehensive income (loss)	184,372	(3,885,365)	996,246
Comprehensive income attributable to noncontrolling interest	(3,974)	(3,934)	(3,915)
Comprehensive income (loss) attributable to Intelsat S.A.	<u>\$ 180,398</u>	<u>\$ (3,889,299)</u>	<u>\$ 992,331</u>

See accompanying notes to consolidated financial statements.

INTELSAT S.A.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' DEFICIT
(in thousands)

	Preferred		Common		Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Intelsat S.A. Shareholders' Deficit	Noncontrolling Interest
	Shares (in millions)	Amount	Shares (in millions)	Amount					
Balance, December 31, 2013	3.5	\$ 35	106.0	\$ 1,060	\$ 2,099,218	\$ (3,015,273)	\$ (60,393)	\$ (975,353)	\$ 40,686
Net income	—	—	—	—	—	232,532	—	232,532	3,974
Dividends paid to noncontrolling interests	—	—	—	—	—	—	—	—	(8,744)
Share-based compensation	—	—	0.7	7	26,382	—	—	26,389	—
Declaration of preferred stock dividend	—	—	—	—	(9,917)	—	—	(9,917)	—
Acquisition of non-controlling interests	—	—	—	—	2,215	—	—	2,215	(2,215)
Postretirement/pension liability adjustment, net of tax of (\$30.3) million	—	—	—	—	—	—	(52,002)	(52,002)	—
Other comprehensive loss, net of tax of \$0.1 million	—	—	—	—	—	—	(132)	(132)	—
Balance at December 31, 2014	3.5	\$ 35	106.7	\$ 1,067	\$ 2,117,898	\$ (2,782,741)	\$ (112,527)	\$ (776,268)	\$ 33,701
Net loss	—	—	—	—	—	(3,923,387)	—	(3,923,387)	3,934
Dividends paid to noncontrolling interests	—	—	—	—	—	—	—	—	(8,423)
Share-based compensation	—	—	0.9	9	25,912	—	—	25,921	—
Declaration of preferred stock dividend	—	—	—	—	(9,919)	—	—	(9,919)	—
Postretirement/pension liability adjustment, net of tax of \$16.5 million	—	—	—	—	—	—	27,939	27,939	—
Curtailment gain, net of tax of \$3.8 million	—	—	—	—	—	—	6,510	6,510	—
Other comprehensive loss, net of tax of (\$0.2) million	—	—	—	—	—	—	(361)	(361)	—
Balance at December 31, 2015	3.5	\$ 35	107.6	\$ 1,076	\$ 2,133,891	\$ (6,706,128)	\$ (78,439)	\$ (4,649,565)	\$ 29,212
Net income	—	—	—	—	—	990,197	—	990,197	3,915
Dividends paid to noncontrolling interests	—	—	—	—	—	—	—	—	(8,980)
Share-based compensation	—	—	0.8	8	23,081	—	—	23,089	—
Preferred shares conversion	(3.5)	(35)	9.6	96.0	(61)	—	—	—	—
Postretirement/pension liability adjustment, net of tax of \$1.0 million	—	—	—	—	—	—	2,041	2,041	—
Other comprehensive income, net of tax of \$0.2 million	—	—	—	—	—	—	93	93	—
Balance at December 31, 2016	—	\$ —	118.0	\$ 1,180	\$ 2,156,911	\$ (5,715,931)	\$ (76,305)	\$ (3,634,145)	\$ 24,147

See accompanying notes to consolidated financial statements.

INTELSAT S.A.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Cash flows from operating activities:			
Net income (loss)	\$ 236,506	\$ (3,919,453)	\$ 994,112
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Impairment of goodwill and other intangibles	—	4,165,400	—
Depreciation and amortization	679,351	687,729	694,891
Provision for doubtful accounts	2,306	7,432	24,591
Foreign currency transaction (gain) loss	6,560	11,374	(3,300)
Loss on disposal of assets	927	16	20
Share-based compensation	22,494	25,768	23,222
Deferred income taxes	(12,646)	(9,348)	(9,737)
Amortization of discount, premium, issuance costs and related costs	22,256	20,119	24,622
(Gain) loss on early extinguishment of debt	40,423	(7,061)	(1,030,092)
Unrealized gains on derivative financial instruments	(22,790)	(24,024)	(764)
Amortization of actuarial loss and prior service credits for retirement benefits	10,147	7,899	3,361
Other non-cash items	166	75	1,186
Changes in operating assets and liabilities:			
Receivables	1,382	(34,642)	6,478
Prepaid expenses and other assets	(22,331)	(25,780)	(51,321)
Accounts payable and accrued liabilities	7,598	1,542	35,850
Accrued interest payable	(24,997)	(2)	47,065
Deferred revenue	108,545	51,805	(58,796)
Accrued retirement benefits	(26,019)	(20,707)	(9,385)
Other long-term liabilities	16,292	(28,111)	(8,497)
Net cash provided by operating activities	<u>1,046,170</u>	<u>910,031</u>	<u>683,506</u>
Cash flows from investing activities:			
Payments for satellites and other property and equipment (including capitalized interest)	(645,424)	(724,362)	(714,570)
Purchase of cost method investments	—	(25,000)	(4,000)
Capital contribution to unconsolidated affiliates	—	—	(10,340)
Other investing activities	174	8	(1,679)
Net cash used in investing activities	<u>(645,250)</u>	<u>(749,354)</u>	<u>(730,589)</u>
Cash flows from financing activities:			
Proceeds from issuance of long-term debt	135,000	430,000	1,250,000
Repayments of long-term debt	(610,418)	(496,829)	(328,944)
Debt issuance costs	—	—	(38,393)
Payment of premium on early extinguishment of debt	(21,250)	—	(32)
Payments on tender, debt exchange and consent	—	—	(293,276)
Dividends paid to preferred shareholders	(9,919)	(9,919)	(4,959)
Other payments for satellites	—	—	(18,333)
Principal payments on deferred satellite performance incentives	(19,774)	(19,568)	(17,429)
Capital contribution from noncontrolling interest	12,209	—	—
Dividends paid to noncontrolling interest	(8,744)	(8,423)	(8,980)
Other financing activities	3,893	1,753	1,942
Net cash provided by (used in) financing activities	<u>(519,003)</u>	<u>(102,986)</u>	<u>541,596</u>
Effect of exchange rate changes on cash and cash equivalents	<u>(6,560)</u>	<u>(9,297)</u>	<u>(30)</u>
Net change in cash and cash equivalents	(124,643)	48,394	494,483
Cash and cash equivalents, beginning of period	247,790	123,147	171,541
Cash and cash equivalents, end of period	<u>\$ 123,147</u>	<u>\$ 171,541</u>	<u>\$ 666,024</u>
Supplemental cash flow information:			
Interest paid, net of amounts capitalized	\$ 970,345	\$ 894,465	\$ 870,370
Income taxes paid, net of refunds	37,805	26,324	22,687
Supplemental disclosure of non-cash investing activities:			
Accrued capital expenditures	\$ 80,621	\$ 82,208	\$ 127,008
Capitalization of deferred satellite performance incentives	27,681	16,800	69,909
Supplemental disclosure of non-cash financing activities:			
Debt financing and restricted cash received	\$ —	\$ —	\$ 480,200
Restricted cash used	—	—	(480,200)
Repayments of long-term debt	—	—	1,468,401
Issuance of long-term debt	—	—	(731,884)
Discount on long-term debt	—	—	212,660
Write-off of debt issuance costs	—	—	(9,253)

See accompanying notes to consolidated financial statements.

INTELSAT S.A.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Note 1 Background of Company

Intelsat S.A. (the “Company”, “we”, “us” or “our”) provides satellite communications services worldwide through a global communications network of approximately 50 satellites and ground facilities related to the satellite operations and control, and teleport services.

Recent Developments

On February 28, 2017, Intelsat entered into a combination agreement with WorldVu Satellites Limited (“OneWeb”) (the “Combination Agreement”) pursuant to which, and subject to the terms and conditions thereof, OneWeb will merge with and into Intelsat, with Intelsat being the surviving entity (the “Merger”). OneWeb is the builder of a new Low Earth Orbit (“LEO”) global communications system.

Also on February 28, 2017, the Company entered into a share purchase agreement with SoftBank Group Corp. (“SoftBank”) (the “Share Purchase Agreement”) pursuant to which, and subject to the terms and conditions thereof, SoftBank will acquire common shares and nonvoting redeemable convertible preferred shares of the Company for aggregate cash consideration of \$1.7 billion (the “SoftBank Investment” and, together with the Merger, the “Transactions”).

Under the terms of the Combination Agreement, at the effective time of the Merger, each common share of OneWeb issued and outstanding immediately prior to the effective time will be converted into the right to receive common shares of Intelsat. Intelsat’s shareholders will retain the common shares of Intelsat that they currently hold. Based on the terms of the transactions announced on February 28, 2017, current Intelsat shareholders are expected to hold approximately 19% of the common shares of Intelsat following completion of the Transaction.

Consummation of the Merger pursuant to the Combination Agreement, and of the SoftBank Investment pursuant to the Share Purchase Agreement, are cross-conditioned on one another. Consummation of the Merger and the SoftBank Investment also are subject to Intelsat’s subsidiaries completing certain debt exchange offers, as well as certain regulatory approvals and other customary closing conditions. The proceeds of the SoftBank Investment will be used in part to fund the cash payments to be made at closing of the Transactions to bondholders that participate in the exchange offers. The Combination Agreement and the Share Purchase Agreement (together, the “Transaction Agreements”), each provide that any party thereto may terminate such agreement if sufficient tenders are not received in the exchange offers within 90 days of the date of the agreements. Shareholders of the Company and shareholders of OneWeb have agreed to vote sufficient shares in favor of the Transactions in order to obtain the required shareholder approvals. The Company expects to complete the Transactions late in the third quarter of 2017.

There can be no assurance that the Transactions will be completed, or whether the terms will be amended from those described above.

Note 2 Significant Accounting Policies

(a) Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Intelsat S.A., its wholly-owned subsidiaries, and variable interest entities (“VIE”) of which we are the primary beneficiary. We are the primary beneficiary of one VIE, as more fully described in Note 10—Investments, and accordingly, we include in our consolidated financial statements the assets and liabilities and results of operations of the entity, even though we may not own a majority voting interest. We use the equity method to account for our investments in entities where we exercise significant influence over operating and financial policies but do not retain control under either the voting interest model (generally 20% to 50% ownership interest) or the variable interest model. In 2015, we entered into a joint venture agreement as further described in Note 10—Investments, and the investment is accounted for using the equity method. We have eliminated all significant intercompany accounts and transactions.

(b) Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the financial statements, the reported amounts of revenues and expenses during the reporting periods, and the disclosures of contingent liabilities. Accordingly, ultimate results could differ from those estimates.

(c) Revenue Recognition

We earn revenue from providing satellite services and managed services to customers. We enter into contracts with customers to provide satellite transponders and transponder capacity and, in certain cases, earth stations and teleport facilities, for periods typically ranging from one year to the life of the satellite. Our revenue recognition policies are as follows:

Satellite Utilization Charges. We generally recognize revenues on a straight-line basis over the term of the related customer contract unless collectability is not reasonably assured. Revenues from occasional use services are recognized as the services are performed. We have certain obligations, including providing spare or substitute capacity if available, in the event of satellite service failure under certain long-term agreements. We generally are not obligated to refund satellite utilization payments previously made.

Satellite Related Consulting and Technical Services. We recognize revenue from the provision of consulting services as those services are performed. We recognize revenue for consulting services with specific deliverables, such as Transfer Orbit Support Services or training programs, upon the completion of those services.

Tracking, Telemetry and Commanding (“TT&C”). We earn TT&C services revenue from providing operational services to other satellite owners and from certain customers on our satellites. TT&C agreements entered into in connection with our satellite utilization contracts are typically for the period of the related service agreement. We recognize this revenue ratably over the term of the service agreement.

In-Orbit Backup Services. We provide back-up transponder capacity that is held on reserve for certain customers on agreed-upon terms. We recognize revenues for in-orbit protection services ratably over the term of the related agreement.

Revenue Share Arrangements. We recognize revenues under revenue share agreements for satellite-related services either on a gross or net basis in accordance with the principal versus agent considerations topic of the Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”), which provides guidance and specifies when an entity should report revenue gross as a principal versus net as an agent, depending on the nature of the specific contractual relationship.

We may sell these products or services individually or in some combination to our customers. When these products and services are sold together, we account for the multiple elements under FASB ASC Topic 605-25, *Revenue Recognition-Multiple Element Arrangements* (“FASB ASC 605-25”). FASB ASC 605-25 provides guidance on accounting for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. We allocate revenue for transactions or collaborations that include multiple elements to each unit of accounting based on each element’s relative selling price, and recognize revenue for each unit of accounting when the applicable revenue recognition criteria have been met.

(d) Fair Value Measurements

We estimate the fair value of our financial instruments using available market information and valuation methodologies. The carrying amounts of cash and cash equivalents, receivables, accounts payable and accrued liabilities approximate their fair values because of the short maturity of these financial instruments.

FASB ASC Topic 820, *Fair Value Measurements and Disclosure* (“FASB ASC 820”) defines fair value as the price that would be received in the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. FASB ASC 820 requires disclosure of the extent to which fair value is used to measure financial assets and liabilities, the inputs utilized in calculating valuation measurements, and the effect of the measurement of significant unobservable inputs on earnings, or changes in net assets, as of the measurement date. FASB ASC 820 establishes a three-level valuation hierarchy based upon the transparency of inputs utilized in the measurement and valuation of financial assets or liabilities as of the measurement date. We apply fair value accounting for all financial assets and liabilities and non-financial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis.

The fair value hierarchy prioritizes the inputs used in valuation techniques into three levels as follows:

- Level 1—unadjusted quoted prices for identical assets or liabilities in active markets;
- Level 2—quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs other than quoted market prices that are observable or that can be corroborated by observable market data by correlation; and

- Level 3—unobservable inputs based upon the reporting entity’s internally developed assumptions which market participants would use in pricing the asset or liability.

(e) Cash and Cash Equivalents

Cash and cash equivalents consist of cash on hand and highly liquid investments with original maturities of three months or less, which are generally time deposits with banks and money market funds. The carrying amount of these investments approximates market value.

(f) Receivables and Allowances for Doubtful Accounts

We provide satellite services and extend credit to numerous customers in the satellite communication, telecommunications and video markets. We monitor our exposure to credit losses and maintain allowances for doubtful accounts and anticipated losses. We believe we have adequate customer collateral and reserves to cover our exposure. If we determine that the collection of payments is not reasonably assured at the time the respective service is provided, we defer recognition of the revenue until we believe collection is reasonably assured or the payment is received.

(g) Satellites and Other Property and Equipment

Satellites and other property and equipment are stated at historical cost, or in the case of certain satellites acquired, the fair value at the date of acquisition. Capitalized costs consist primarily of the costs of satellite construction and launch, including launch insurance and insurance during the period of in-orbit testing, the net present value of performance incentives expected to be payable to the satellite manufacturers (dependent on the continued satisfactory performance of the satellites), costs directly associated with the monitoring and support of satellite construction, and interest costs incurred during the period of satellite construction.

We depreciate satellites and other property and equipment on a straight-line basis over the following estimated useful lives:

	<u>Years</u>
Buildings and improvements	10 - 40
Satellites and related costs	11 - 17
Ground segment equipment and software	4 - 15
Furniture and fixtures and computer hardware	4 - 12
Leasehold improvements ⁽¹⁾	2 - 12

- (1) Leasehold improvements are depreciated over the shorter of the useful life of the improvement or the remaining lease term.

(h) Other Assets

Other assets consist of investments in certain equity securities, long-term deposits, long-term receivables and other miscellaneous deferred charges and long-term assets.

(i) Goodwill and Other Intangible Assets

We account for goodwill and other intangible assets in accordance with FASB ASC Topic 350, *Intangibles—Goodwill and Other* (“FASB ASC 350”). Goodwill represents the excess of the consideration transferred plus the fair value of any noncontrolling interest in the acquiree at the acquisition date over the fair values of identifiable net assets of businesses acquired. Goodwill and certain other intangible assets deemed to have indefinite lives are not amortized but are tested on an annual basis for impairment during the fourth quarter, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. See Note 11—Goodwill and Other Intangible Assets.

Intangible assets arising from business combinations are initially recorded at fair value. We record other intangible assets at cost. We amortize intangible assets with determinable lives (consisting of backlog and customer relationships) based on the expected pattern of consumption. We review these intangible assets for impairment whenever facts and circumstances indicate that the carrying amounts may not be recoverable. See Note 11—Goodwill and Other Intangible Assets.

(j) Impairment of Long-Lived Assets

We review long-lived assets, including property and equipment and acquired intangible assets with estimable useful lives, for impairment whenever events or changes in circumstances indicate that the carrying amount of such an asset may not be recoverable. These indicators of impairment can include, but are not limited to, the following:

- satellite anomalies, such as a partial or full loss of power;
- under-performance of an asset compared to expectations; and
- shortened useful lives due to changes in the way an asset is used or expected to be used.

The recoverability of an asset to be held and used is determined by comparing the carrying amount to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the asset exceeds its estimated undiscounted future cash flows, we record an impairment charge in the amount by which the carrying amount of the asset exceeds its fair value, which we determine by either a quoted market price, if any, or a value determined by utilizing discounted cash flow techniques.

(k) Income Taxes

We account for income taxes in accordance with FASB ASC Topic 740—*Income Taxes*. We are subject to income taxes in the United States as well as a number of other foreign jurisdictions. Significant judgment is required in the calculation of our tax provision and the resultant tax liabilities and in the recoverability of our deferred tax assets that arise from temporary differences between the tax and financial statement recognition of revenue and expense and net operating loss and credit carryforwards.

We regularly assess the likelihood that our deferred tax assets can be recovered. A valuation allowance is required when it is more likely than not that all or a portion of the deferred tax asset will not be realized. We evaluate the recoverability of our deferred tax assets based in part on the existence of deferred tax liabilities that can be used to realize the deferred tax assets.

During the ordinary course of business, there are transactions and calculations for which the ultimate tax determination is uncertain. We evaluate our tax positions to determine if it is more likely than not that a tax position is sustainable, based solely on its technical merits and presuming the taxing authorities have full knowledge of the position and access to all relevant facts and information. When a tax position does not meet the more likely than not standard, we record a liability or contra asset for the entire amount of the unrecognized tax benefit. Additionally, for those tax positions that are determined more likely than not to be sustainable, we measure the tax position at the largest amount of benefit more likely than not (determined by cumulative probability) to be realized upon settlement with the taxing authority.

(l) Foreign Currency Translation

Our functional currency is the U.S. dollar, since substantially all customer contracts, capital expenditure contracts and operating expense obligations are denominated in U.S. dollars. Transactions not denominated in U.S. dollars have been translated using the spot rates of exchange at the dates of the transactions. We recognize differences on exchange arising on the settlement of the transactions denominated in currencies other than the U.S. dollar in the consolidated statement of operations.

(m) Comprehensive Income

Comprehensive income consists of net income or loss and other gains and losses affecting shareholders' equity that, under U.S. GAAP, are excluded from net income or loss. Such items consist primarily of the change in the market value of available-for-sale securities and pension liability adjustments.

(n) Share-Based Compensation

Compensation cost is recognized based on the requirements of FASB ASC Topic 718, *Compensation—Stock Compensation* ("FASB ASC 718"), for all share-based awards granted.

Awards are measured at the grant date based on the fair value as calculated using the Black-Scholes option pricing model for share options, a Monte Carlo simulation model for awards with market conditions, or the closing market price at the grant date for awards of shares or restricted shares units. The expense is recognized over the requisite service period, based on attainment of certain vesting requirements.

The determination of the value of certain awards requires considerable judgment, including estimating expected volatility, expected term and risk-free rate. The Company's expected volatility is based on the average volatility rates of similar actively-traded companies over the range of each award's estimated expected term, which is based on the midpoint between the expected vesting time and the remaining contractual life. The risk-free rate is derived from the applicable Constant Maturity Treasury rate.

(o) Deferred Satellite Performance Incentives

The cost of satellite construction may include an element of deferred consideration that we are obligated to pay to satellite manufacturers over the lives of the satellites, provided the satellites continue to operate in accordance with contractual specifications. Historically, the satellite manufacturers have earned substantially all of these payments. Therefore, we account for these payments as deferred financing. We capitalize the present value of these payments as part of the cost of the satellites and record a corresponding liability to the satellite manufacturers. Interest expense is recognized on the deferred financing and the liability is reduced as the payments are made.

(p) Derivative Instruments

We previously held undesignated interest rate swaps which matured in January 2016. The swaps were marked-to-market quarterly, with any change in fair value recorded as interest expense, net.

In December 2016, we accounted for a contingent put option embedded within Intelsat Connect Finance S.A.'s ("ICF's") 12 1/2% Senior Notes due April 2022 (the "2022 ICF Notes") under FASB ASC Topic 815, *Derivatives and Hedging* ("FASB ASC 815"). We bifurcated the put option from the debt host instrument and recorded it as a derivative instrument in other long term liabilities in the accompanying consolidated balance sheet. We estimated the fair value of the embedded derivative on the issuance date, and we subsequently revalue the derivative at the end of each reporting period with any change in fair value recognized in interest expense, net.

(q) New Accounting Pronouncements

In May 2014, the FASB issued Accounting Standard Update ("ASU") 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which will supersede the revenue recognition requirements in FASB ASC Topic 605—*Revenue Recognition*. The guidance in ASU 2014-09 clarifies the principles for recognizing revenue and improves financial reporting by creating a common revenue standard for U.S. GAAP and International Financial Reporting Standards.

- In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, to defer the effective date of ASU 2014-09 by one year. Public entities can now elect to defer implementation of ASU 2014-09 to interim and annual periods beginning after December 15, 2017. Additionally, ASU 2015-14 permits early adoption of the standard but not before the original effective date, i.e. annual periods beginning after December 15, 2016. The standard permits the use of either the retrospective or cumulative effect transition method.
- In February 2016, the FASB issued ASU 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*. The standard amends the principal versus agent guidance in ASU 2014-09 and clarifies that the analysis must focus on whether the entity has control of the goods or services before they are transferred to the customer.
- In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*. The standard amends the guidance in ASU 2014-09 about identifying performance obligations and accounting for licenses of intellectual property.
- In May 2016, the FASB issued ASU 2016-12, *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients*. The standard makes narrow-scope amendments to ASU 2014-09 and provides practical expedients to simplify the transition to the new standard and to clarify certain aspects of the standard.
- In December 2016, the FASB issued ASU 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*. The standard affects certain narrow aspects of the guidance issued in ASU 2014-09.

We are still in the process of evaluating the impact that these standards will have on our consolidated financial statements and associated disclosures, and have not yet selected a transition method. Based on our initial assessment, we believe that the main changes from the new revenue standard will include: adjustments to the promised amount of consideration for effects of the time value of money for prepayment contracts with a significant financing component; capitalization of incremental costs for obtaining a contract; allocation of transaction price to all performance obligations in arrangements, irrespective of whether goods or services are provided before consideration is paid; changes to the accounting for contract modifications; and additional disclosures.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* to increase transparency and comparability by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. ASU 2016-02 is effective for interim and annual periods beginning after December 15, 2018, on a modified retrospective basis with early adoption allowed. We are in the process of evaluating the impact that ASU 2016-02 will have on our consolidated financial statements and associated disclosures.

In March 2016, the FASB issued ASU 2016-09, *Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, which is intended to improve accounting for share-based payment transactions as part of the FASB's simplification initiative. ASU 2016-09 changes several aspects of accounting for share-based payment award transactions, including changes to accounting for income taxes and forfeitures. The ASU is effective for fiscal years beginning after December 15, 2016, and interim periods within those years for public business entities. We will adopt ASU 2016-09 in the first quarter of 2017 and do not expect the adoption of ASU 2016-09 to have a material impact on our consolidated financial statements and associated disclosures.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which changes how companies measure and recognize credit impairment for any financial assets. The standard will require companies to immediately recognize an estimate of credit losses expected to occur over the remaining life of the financial assets that are within the scope of the standard. ASU 2016-13 is effective for interim and annual periods beginning after December 15, 2019 for public business entities that are SEC filers, on a modified retrospective basis. Early adoption is permitted for interim and annual periods beginning after December 15, 2018. We are in the process of evaluating the impact that ASU 2016-13 will have on our consolidated financial statements and associated disclosures.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*, which addresses specific issues relating to diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. Additionally, in November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash (a consensus of the FASB Emerging Issues Task Force)*, which requires that amounts described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-15 and ASU 2016-18 are effective for interim and annual periods beginning after December 15, 2017 for public business entities, on a retrospective basis. Early adoption is permitted for both standards in any interim or annual period, for ASU 2016-15 with a condition that the entire ASU is adopted in the same period. We do not expect the adoption of ASU 2016-05 to have a material impact on our consolidated financial statements and associated disclosures. The amendments in ASU 2016-18 will change the presentation of cash flows from restricted cash from supplemental disclosure of non-cash financing activities to cash flows from financing activities in our consolidated statement of cash flows. For the year ended December 31, 2016, the amendments in ASU 2016-18 would have resulted in a reclassification of \$480.2 million, currently presented as debt financing and restricted cash received and restricted cash used under supplemental disclosure of non-cash financing activities, to proceeds from issuance of long-term debt and repayments of long-term debt under cash flows from financing activities.

In October 2016, the FASB issued ASU 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory*, which is intended to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. The amendments in ASU 2016-16 eliminate the current requirement to defer the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. ASU 2016-16 is effective for interim and annual periods beginning after December 15, 2017 for public business entities, on a modified retrospective basis. Early adoption is permitted as of the beginning of an annual reporting period for which interim or annual financial statements have not been issued. We plan to adopt the amendments in the first quarter of 2018 and expect the effect of ASU 2016-16 to be a cumulative benefit to retained earnings on January 1, 2018. Based on our existing intercompany structure, we expect the benefit to retained earnings to be between \$4 million and \$10 million. The benefit relates to certain deferred intercompany gains/losses, mostly in connection with a series of intercompany transactions in 2011 and related steps that reorganized the ownership of our assets among our subsidiaries.

In January 2017, the FASB issued ASU 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*, which is intended to simplify the subsequent measurement of goodwill. The amendments in ASU 2017-04 modify the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. An entity will no longer determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities, as if that reporting unit had been acquired in a business combination. ASU 2017-04 will be effective for interim and annual goodwill impairment tests in fiscal years beginning after December 15, 2019 for public business entities, on a prospective basis. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. When adopted, we expect the amendments in ASU 2017-04 to simplify the process of testing for goodwill impairment, if required.

Note 3 Share Capital

Under our Articles of Incorporation, we have an authorized share capital of \$10.0 million, represented by 1.0 billion shares of any class with a nominal value of \$0.01 per share. At December 31, 2016, there were 118.0 million common shares issued and outstanding.

On May 1, 2016, each of our Series A Preferred Shares automatically converted into 2.7778 common shares, based on the average of the closing prices per common share over the 40 trading day period ending on the third trading day prior to the mandatory conversion date. The automatic conversion for a total of 9.6 million new common shares was recorded on May 2, 2016.

Note 4 Net Income (Loss) per Share

Basic earnings per share (“EPS”) is computed by dividing net income (loss) attributable to Intelsat S.A.’s common shareholders by the weighted average number of common shares outstanding during the periods.

In 2014 and 2015, the shareholders of Intelsat S.A. declared a \$9.9 million dividend for each respective year to be paid to holders of our Series A Preferred Shares in four equal installments. The final installment of \$0.71875 per share was paid on May 2, 2016 to the holders of record as of April 15, 2016.

The following table sets forth the computation of basic and diluted net loss per share attributable to Intelsat S.A.:

	(in thousands, except per share data or where otherwise noted)		
	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Numerator:			
Net income (loss)	\$ 236,506	\$ (3,919,453)	\$ 994,112
Net income attributable to noncontrolling interest	(3,974)	(3,934)	(3,915)
Net income (loss) attributable to Intelsat S.A.	232,532	(3,923,387)	990,197
Less: Preferred Shares dividends declared	(9,917)	(9,919)	—
Net income (loss) attributable to common shareholders	\$ 222,615	\$ (3,933,306)	\$ 990,197
Numerator for Basic EPS—income/(loss) available to common shareholders	\$ 222,615	\$ (3,933,306)	\$ 990,197
Dilutive effect of Preferred shares	9,917	—	—
Numerator for Diluted EPS	\$ 232,532	\$ (3,933,306)	\$ 990,197
Denominator:			
Basic weighted average shares outstanding (in millions)	106.5	107.2	114.5
Weighted average dilutive shares outstanding (in millions):			
Preferred shares (in millions)	9.6	—	3.2
Employee compensation related shares including options and restricted stock units (in millions)	0.6	—	0.8
Diluted weighted average shares outstanding (in millions)	116.7	107.2	118.5
Basic net income (loss) per common share attributable to Intelsat S.A.	<u>\$ 2.09</u>	<u>\$ (36.68)</u>	<u>\$ 8.65</u>
Diluted net income (loss) per common share attributable to Intelsat S.A.	<u>\$ 1.99</u>	<u>\$ (36.68)</u>	<u>\$ 8.36</u>

Due to a net loss in the year ended December 31, 2015, there were no dilutive securities, and therefore, basic and diluted EPS were the same. The weighted average number of shares that could potentially dilute basic EPS in the future was 1.4 million, 5.1 million and 6.2 million (consisting of restricted share units and options to purchase common shares) for the years ended December 31, 2014, 2015 and 2016, respectively. Further, there were 9.6 million weighted average common shares resulting from the potential conversion of Series A Preferred Shares for the year ended December 31, 2015, that could have diluted basic EPS in future periods.

Note 5 Share-Based and Other Compensation Plans

In April 2013, our board of directors adopted the amended and restated Intelsat Global, Ltd. 2008 Share Incentive Plan (as amended, the “2008 Equity Plan”). Also in April 2013, our board of directors adopted the Intelsat S.A. 2013 Equity Incentive Plan (the “2013 Equity Plan”). No new awards may be granted under the 2008 Equity Plan.

The 2013 Equity Plan provides for a variety of equity based awards, including incentive stock options (within the meaning of Section 422 of the United States Internal Revenue Service Tax Code), restricted shares, restricted share units (“RSUs”), other share-based awards and performance compensation awards. Effective June 16, 2016, we increased the aggregate number of common shares authorized for issuance under the 2013 Equity Plan to 20.0 million common shares. The total aggregate number of shares available for future issuance under the 2013 Equity Plan was 10.6 million as of December 31, 2016.

For all share-based awards, we recognize the compensation costs over the vesting period during which the employee provides service in exchange for the award. During the years ended December 31, 2014, 2015 and 2016, we recorded compensation expense of \$22.5 million, \$25.8 million, and \$23.2 million, respectively.

Stock Options

Stock options generally expire 10 years from the date of grant. In some cases, options have been granted which expire 15 years from the date of grant. The options vest monthly over service periods ranging from two to five years.

Stock Option activity during 2016 was as follows:

	Number of Stock Options (in thousands)	Weighted Average Exercise price	Weighted Average remaining contractual term (in years)	Aggregate intrinsic value (in millions)
Outstanding at January 1, 2016	1,163	\$ 20.42		
Granted	1,500	3.70		
Modified—amended options ⁽¹⁾	923	3.77		
Modified—original options ⁽¹⁾	(923)	22.80		
Forfeited	(80)	3.77		
Expired	(292)	9.22		
Outstanding at December 31, 2016	<u>2,291</u>	<u>\$ 3.82</u>	<u>7.6</u>	<u>\$ —</u>
Exercisable at December 31, 2016	<u>1,473</u>	<u>\$ 3.91</u>	<u>6.8</u>	<u>\$ —</u>

- (1) During the year ended December 31, 2016, 0.5 million stock options under the 2008 Equity Plan and 0.4 million stock options under the 2013 Equity Plan were amended in order to modify the exercise price to \$3.77 per option.

We measure the fair value of stock options at the date of grant using a Black-Scholes option pricing model. We granted 1.5 million stock options during the year ended December 31, 2016. These options vest over a service period of two or three years. The fair value was measured using the Black-Scholes option pricing model and the following assumptions were used: risk-free interest rates of 1.6% to 1.9%; dividend yield of 0.0%; expected volatility of 60%; and expected life of six to seven years. The weighted average grant date fair value of options granted during the year ended December 31, 2016 was \$2.25 per option.

The total intrinsic value of stock options exercised during the years ended December 31, 2014 and 2015 was \$2.6 million and \$0.3 million, respectively. No stock options were exercised during the year ended December 31, 2016. As of December 31, 2016, there was \$1.6 million of total unrecognized compensation cost related to unvested options, which is expected to be recognized over a weighted average period of 1.2 years.

During the years ended December 31, 2014, 2015 and 2016, we recorded compensation expense of \$3.0 million, \$0.8 million and \$2.6 million, respectively, including compensation expense from option modifications in 2014 and 2016, further described below. During the years ended December 31, 2014 and 2015, we received cash of \$1.0 million and \$0.2 million, respectively, from the exercise of stock options. No stock options were exercised during the year ended December 31, 2016.

Anti-Dilution Options

In connection with the our initial public offering of common shares in April 2013 (the “IPO”) and upon consummation of the IPO, options were granted to certain individuals in accordance with the existing terms of their side letters to a management shareholders agreement to which we are a party, which, when taken together with the common shares received in connection with the reclassification of our outstanding former Class B Shares at the time of our IPO, preserved their ownership interests represented by their outstanding former Class B Shares immediately prior to the reclassification.

These options generally expire 10 years from the date of the grant.

Anti-Dilution Option activity during 2016 was as follows:

	Number of Stock Options (in thousands)	Weighted Average Exercise price	Weighted Average remaining contractual term (in years)	Aggregate intrinsic value (in millions)
Outstanding at January 1, 2016	2,016	\$ 18.00		
Modified—amended options ⁽¹⁾	700	4.16		
Modified—original options ⁽¹⁾	(700)	18.00		
Expired	(406)	18.00		
Outstanding at December 31, 2016	<u>1,610</u>	<u>\$ 11.98</u>	<u>6.1</u>	<u>\$ —</u>
Exercisable at December 31, 2016	<u>1,610</u>	<u>\$ 11.98</u>	<u>6.1</u>	<u>\$ —</u>

- (1) During the year ended December 31, 2016, 0.7 million anti-dilution stock options under the 2008 Equity Plan were amended in order to modify the exercise price to \$4.16 per option.

We measure the fair value of anti-dilution option grants at the date of grant using a Black-Scholes option pricing model. There were no anti-dilution options granted during the years ended December 31, 2014, 2015 and 2016.

The total intrinsic value of anti-dilution options exercised during the year ended December 31, 2014 was \$0.6 million. During the year ended December 31, 2014, we recorded compensation expense associated with anti-dilution option awards of \$4.1 million related to 2014 option modifications further described below. No compensation expense was recorded for these awards during the year ended December 31, 2015. During the year ended December 31, 2016, we recorded compensation expense associated with anti-dilution option awards of \$1.0 million related to 2016 option modifications further described below.

During the year ended December 31, 2014, we received cash of \$3.2 million from the exercise of anti-dilution options. There were no anti-dilution options exercised in 2015 or 2016.

2014 Option modifications

During the year ended December 31, 2014, 1.9 million stock options, including 1.6 million anti-dilution options, were amended to (a) extend the expiration date by five years; and (b) extend the duration of exercisability from one year to three years after ceasing to be an employee of the company. We estimated an additional expense of \$2.52 per option resulting from the amendment, being the difference between the fair value of the amended option and the fair value of the original award before amendment. The fair value was measured using the Black-Scholes option pricing model and the following assumptions were used:

For the fair value of the amended options: risk-free interest rates of 1.3%; dividend yields of 0.0%; expected volatility of 45%; and expected life of 4.1 years.

For the fair value of the original award before amendment: risk-free interest rates of 0.3%; dividend yields of 0.0%; expected volatility of 45%; and expected life of 1.6 years.

All such options were fully vested and we recognized an additional compensation expense associated with such options of \$4.7 million during the year ended December 31, 2014, which has been included in the respective sections above.

2016 Option modifications

During the year ended December 31, 2016, we amended 1.2 million stock options under the 2008 Equity Plan (including 0.7 million of anti-dilution options), and 0.4 million stock options under the 2013 Equity Plan in order to modify the exercise prices to \$4.16 for the anti-dilution options and to \$3.77 for the remainder. As a result of the change, we estimated the difference between fair value of the amended options and the fair value of the original awards before settlement. The fair value was measured using the Black-Scholes option pricing model and the following assumptions were used for the amended options and the original awards before amendment: risk-free interest rates of 0.8% to 1.5%; dividend yields of 0.0%; expected volatility of 50-60%; and expected life of one to four years.

All such options were fully vested and we recognized additional compensation expense associated with the modifications of \$2.0 million for the year ended December 31, 2016, which has been included in the respective sections above.

Time-based RSUs

Time-based RSUs vest over periods ranging from one to three years from the date of grant.

Time-based RSUs activity during 2016 was as follows:

	Number of RSUs (in thousands)	Weighted Average grant date fair value	Weighted Average remaining contractual term (in years)	Aggregate intrinsic value (in millions)
Outstanding at January 1, 2016	2,880	\$ 16.13		
Granted	1,701	1.67		
Vested	(814)	15.70		
Forfeited	(173)	14.42		
Outstanding at December 31, 2016	<u>3,594</u>	<u>\$ 9.52</u>	<u>1.4</u>	<u>\$ 9.6</u>

The fair value of time-based RSUs is deemed to be the market price of common shares on the date of grant. The weighted average grant date fair value of time-based RSUs granted during the years ended December 31, 2014, 2015, and 2016 was \$17.45, \$11.64, and \$1.67, respectively. The total intrinsic value of time-based RSUs vested during the years ended December 31, 2014, 2015 and 2016 was \$8.6 million, \$8.0 million, and \$1.7 million, respectively. As of December 31, 2016, there was \$14.0 million of total unrecognized compensation cost related to unvested time-based RSUs, which is expected to be recognized over a weighted average period of 1.4 years.

During the years ended December 31, 2014, 2015, and 2016, we recorded compensation expense associated with these time-based RSUs of \$13.0 million, \$22.8 million, and \$17.9 million, respectively.

Performance-based RSUs

Performance-based RSUs vest after three years from the date of grant upon achievement of certain performance conditions. These grants are subject to vesting upon achievement of an adjusted EBITDA target and achievement of a relative shareholder return (“RSR”), which is based on the Company’s relative shareholder return percentile ranking versus the S&P 900 Index target as defined in the grant agreement.

Performance-based RSUs activity during 2016 was as follows:

	Number of RSUs (in thousands)	Weighted Average grant date fair value	Weighted Average remaining contractual term (in years)	Aggregate intrinsic value (in millions)
Outstanding at January 1, 2016	1,195	\$ 17.48		
Granted	1,186	0.94		
Cancelled	(461)	21.96		
Forfeited	(91)	5.62		
Outstanding at December 31, 2016	1,829	\$ 6.22	1.6	\$ 4.9

We measure the fair value of performance-based RSUs at the date of grant using the market price of our common shares (to measure the award based on an adjusted EBITDA target) and a Monte Carlo simulation model (to measure the award based on an RSR target).

The weighted average grant date fair value of performance-based RSUs granted during the years ended December 31, 2014, 2015, and 2016 was \$21.48, \$8.97, and \$0.94, respectively. As of December 31, 2016, there was \$1.4 million of total unrecognized compensation cost related to unvested performance-based RSUs, which is expected to be recognized over a weighted average period of 1.6 years.

Achievement of the adjusted EBITDA target for awards granted in 2014 and 2015 is not currently considered probable, therefore, no compensation cost associated with these awards (based on the adjusted EBITDA condition) was recognized during the years ended December 31, 2014 and 2015. We recorded compensation expense associated with the RSR portion of performance-based RSUs of \$2.4 million and \$2.2 million, during the years ended December 31, 2014 and 2015, respectively. Achievement of the adjusted EBITDA target for awards granted in 2016 is currently considered probable, and we recorded compensation expense associated with these awards (based on the adjusted EBITDA condition and the RSR portion of performance-based RSUs) of \$1.7 million during the year ended December 31, 2016.

Note 6 Fair Value Measurements

We have identified investments in marketable securities and interest rate financial derivative instruments as those items that meet the criteria of the disclosure requirements and fair value framework of FASB ASC 820.

The following tables present assets and liabilities measured and recorded at fair value in our consolidated balance sheets on a recurring basis and their level within the fair value hierarchy (in thousands), excluding long-term debt (see Note 12—Long-Term Debt). We did not have any transfers between Level 1 and Level 2 fair value measurements during the year ended December 31, 2016.

Description	Fair Value Measurements at December 31, 2015		
	As of December 31, 2015	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
Assets			
Marketable securities ⁽¹⁾	\$ 5,486	\$ 5,486	\$ —
Total assets	\$ 5,486	\$ 5,486	\$ —
Liabilities			
Undesignated interest rate swaps ⁽²⁾	\$ 2,013	\$ —	\$ 2,013
Total liabilities	\$ 2,013	\$ —	\$ 2,013

Description	Fair Value Measurements at December 31, 2016			
	As of December 31, 2016	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Marketable securities ⁽¹⁾	\$ 5,381	\$ 5,381	\$ —	\$ —
Total assets	\$ 5,381	\$ 5,381	\$ —	\$ —
Liabilities				
Put option embedded derivative ⁽³⁾	\$ 1,496	\$ —	\$ —	\$ 1,496
Total liabilities	\$ 1,496	\$ —	\$ —	\$ 1,496

- (1) The valuation measurement inputs of these marketable securities represent unadjusted quoted prices in active markets and, accordingly, we have classified such investments within Level 1 of the fair value hierarchy. The cost basis of our available-for-sale marketable securities was \$5.3 million at December 31, 2015 and \$5.0 million at December 31, 2016. We sold marketable securities with a cost basis of \$1.8 million during the year ended December 31, 2016 and recorded a gain on the sale of \$0.1 million, which was included within other expense, net in our consolidated statement of operations.
- (2) The fair value of our interest rate financial derivative instruments reflects the estimated amounts that we would pay or receive to terminate the agreement at the reporting date, taking into account current interest rates, the market expectation for future interest rates and current creditworthiness of both the counterparties and ourselves. Observable inputs utilized in the income approach valuation technique incorporate identical contractual notional amounts, fixed coupon rates, periodic terms for interest payments and contract maturity. Although we have determined that the majority of the inputs used to value our derivatives fall within Level 2 of the fair value hierarchy, the credit valuation adjustments, if any, associated with our derivatives utilize Level 3 inputs, such as the estimates of the current credit spread, to evaluate the likelihood of default by us or our counterparties. We have assessed the significance of the inputs of the credit valuation adjustments to the overall valuation of our derivative positions and have determined that the credit valuation adjustments are not significant to the valuation of our derivatives. As a result, we have determined that our derivative valuations in their entirety are classified within Level 2 of the fair value hierarchy.
- (3) We valued the contingent put option embedded within the 2022 ICF Notes using a valuation technique which reflects the estimated date and probability of a change of control, the fair value of the 2022 ICF Notes, and a credit valuation adjustment reflecting our credit spreads. We identified the inputs used to calculate the fair value as Level 3 inputs and concluded that the valuation in its entirety was classified as Level 3 within the fair value hierarchy.

Note 7 Retirement Plans and Other Retiree Benefits

(a) Pension and Other Postretirement Benefits

We maintain a noncontributory defined benefit retirement plan covering substantially all of our employees hired prior to July 19, 2001. The cost of providing benefits to eligible participants under the defined benefit retirement plan is calculated using the plan's benefit formulas, which take into account the participants' remuneration, dates of hire, years of eligible service, and certain actuarial assumptions. In addition, as part of the overall medical plan, we provide postretirement medical benefits to certain current retirees who meet the criteria under the medical plan for postretirement benefit eligibility.

In the first quarter of 2015, we amended the defined benefit retirement plan to cease the accrual of additional benefits for the remaining active participants effective March 31, 2015, resulting in a curtailment of \$10.3 million that decreased both the pension liability and the actuarial loss recorded in accumulated other comprehensive loss. As a result of the curtailment, all of the plan's participants are now considered inactive. Accordingly, all amounts recorded in accumulated other comprehensive loss are being recognized as an increase to net periodic benefit cost over the average remaining life expectancy of plan participants, which is approximately 20 years, beginning in the second quarter of 2015.

Also, as a result of the plan amendment, we recognized in our consolidated statements of operations \$0.6 million of prior service credits that were previously recorded in accumulated other comprehensive loss.

The defined benefit retirement plan is subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended. We expect that our future contributions to the defined benefit retirement plan will be based on the minimum funding requirements of the Internal Revenue Code and on the plan's funded status. Any significant decline in the fair value of our defined benefit retirement plan assets or other adverse changes to the significant assumptions used to determine the plan's funded status would

negatively impact its funded status and could result in increased funding in future periods. The impact on the funded status is determined based upon market conditions in effect when we completed our annual valuation. We anticipate that our contributions to the defined benefit retirement plan in 2017 will be approximately \$2.9 million. We fund the postretirement medical benefits throughout the year based on benefits paid. We anticipate that our contributions to fund postretirement medical benefits in 2017 will be approximately \$4.1 million.

Prior service credits and actuarial losses are reclassified from accumulated other comprehensive loss to net periodic pension benefit costs, which are included in both direct costs of revenue and selling, general and administrative on our consolidated statements of operations for the year ended December 31, 2016. The following table presents these reclassifications, net of tax, as well as the reclassification of the realized gain on investments, and the statement of operations line items that are impacted (in thousands):

	<u>Year Ended December 31, 2014</u>	<u>Year Ended December 31, 2015</u>	<u>Year Ended December 31, 2016</u>
Amortization of prior service credits reclassified from other comprehensive loss to net periodic pension benefit costs included in:			
Direct costs of revenue (excluding depreciation and amortization)	\$ (68)	\$ (141)	\$ (3)
Selling, general and administrative	(41)	(107)	(2)
Total	<u>\$ (109)</u>	<u>\$ (248)</u>	<u>\$ (5)</u>
Amortization of actuarial loss reclassified from other comprehensive loss to net periodic pension benefit costs included in:			
Direct costs of revenue (excluding depreciation and amortization)	\$ 4,070	\$ 3,196	\$ 1,372
Selling, general and administrative	2,440	2,048	851
Total	<u>\$ 6,510</u>	<u>\$ 5,244</u>	<u>\$ 2,223</u>
Realized (gain) loss on investments included in:			
Other expense, net	\$ (390)	\$ (340)	\$ (192)
Total	<u>\$ (390)</u>	<u>\$ (340)</u>	<u>\$ (192)</u>

Reconciliation of Funded Status and Accumulated Benefit Obligation. Expenses for our defined benefit retirement plan and for postretirement medical benefits that are provided under our medical plan are developed from actuarial valuations. The following summarizes the projected benefit obligations, plan assets and funded status of the defined benefit retirement plan, as well as the projected benefit obligations of the postretirement medical benefits provided under our medical plan (in thousands, except percentages):

	Year Ended December 31, 2015		Year Ended December 31, 2016	
	Pension Benefits	Other Post- retirement Benefits	Pension Benefits	Other Post- retirement Benefits
Change in benefit obligation				
Benefit obligation at beginning of period	\$ 491,118	\$ 116,086	\$ 435,462	\$ 90,583
Service cost	780	70	—	—
Interest cost	18,734	4,592	16,183	3,363
Employee contributions	—	403	—	422
Plan amendments	—	(202)	—	—
Plan curtailments	(10,314)	—	—	—
Benefits paid	(30,204)	(3,401)	(30,454)	(3,310)
Actuarial (gain) loss	(34,652)	(26,965)	3,738	(8,161)
Benefit obligation at end of period	<u>\$ 435,462</u>	<u>\$ 90,583</u>	<u>\$ 424,929</u>	<u>\$ 82,897</u>
Change in plan assets				
Plan assets at beginning of period	\$ 339,619	\$ —	\$ 326,458	\$ —
Employer contributions	16,435	2,998	606	2,888
Employee contributions	—	403	—	422
Actual return on plan assets	607	—	20,829	—
Benefits paid	(30,203)	(3,401)	(30,454)	(3,310)
Plan assets at fair value at end of period	<u>\$ 326,458</u>	<u>\$ —</u>	<u>\$ 317,439</u>	<u>\$ —</u>
Accrued benefit costs and funded status of the plans	<u>\$ (109,004)</u>	<u>\$ (90,583)</u>	<u>\$ (107,490)</u>	<u>\$ (82,897)</u>
Accumulated benefit obligation	<u>\$ 435,462</u>		<u>\$ 424,929</u>	
Weighted average assumptions used to determine accumulated benefit obligation and accrued benefit costs				
Discount rate	4.53%	4.50%	3.82%	4.19%
Weighted average assumptions used to determine net periodic benefit costs				
Discount rate	4.01%	4.04%	4.53%	4.50%
Expected rate of return on plan assets	7.80%	—	7.80%	—
Rate of compensation increase	3.25%	—	—	—
Amounts in accumulated other comprehensive loss recognized in net periodic benefit cost				
Actuarial loss, net of tax	\$ 4,883	\$ 361	\$ 2,228	\$ (5)
Prior service credits, net of tax	(383)	135	(8)	3
Total	<u>\$ 4,500</u>	<u>\$ 496</u>	<u>\$ 2,220</u>	<u>\$ (2)</u>
Amounts in accumulated other comprehensive loss not yet recognized in net periodic benefit cost				
Actuarial loss, net of tax	\$ 84,866	\$ (4,320)	\$ 87,981	\$ (9,468)
Prior service credits, net of tax	(348)	—	(343)	—
Total	<u>\$ 84,518</u>	<u>\$ (4,320)</u>	<u>\$ 87,638</u>	<u>\$ (9,468)</u>
Amounts in accumulated other comprehensive loss expected to be recognized in net periodic benefit cost in the subsequent year				
Actuarial loss	\$ (3,370)	\$ —	\$ (3,751)	\$ —
Prior service credits	—	8	—	8
Total	<u>\$ (3,370)</u>	<u>\$ 8</u>	<u>\$ (3,751)</u>	<u>\$ 8</u>

Our benefit obligations are discounted along a yield curve that is derived from the monthly bid-price data of bonds that are rated high grade by either Moody’s Investor Service or Standard and Poor’s Rating Services. The bond types included are noncallable bonds, private placement bonds that are traded among qualified institutional buyers and are at least two years from date of issuance, bonds with a make-whole provision, and bonds issued by foreign corporations that are denominated in U.S. dollars. Excluded are bonds that are callable, sinkable and puttable as well as those for which the quoted yield-to-maturity is zero. Using the bonds from this universe that have a yield higher than the regression mean yield curve, regression analysis is used to determine the best-fitting curve, which gives a good fit to the data at both long and short maturities. The resulting regressed coupon yield curve is smoothly continuous along its entire length and represents an unbiased average of the observed market data.

In the first quarter of 2016, we changed the method we use to estimate the interest cost component of net periodic benefit cost for our defined benefit pension and other postretirement benefit plans. Historically, we estimated the interest cost component using a single weighted-average discount rate derived from the yield curve used to measure the benefit obligation at the beginning of the period. We have elected to use a full yield curve approach in the estimation of this component of benefit cost by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the relevant projected cash flows. We have made this change to improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and to provide a more precise measurement of interest costs. This change does not affect the measurement of our total benefit obligations, as the change in the interest cost is completely offset in the actuarial (gain) loss reported. We have accounted for this change as a change in estimate and, accordingly, have accounted for it prospectively starting in the first quarter of 2016. The discount rate that we used to measure interest cost as of December 31, 2016 was approximately 3.8%. The discount rate that we measured at December 31, 2016 and would have used for interest cost under our prior estimation technique was approximately 4.5%. The reduction in interest cost as of December 31, 2016, associated with this change in estimate was approximately \$3.6 million.

Interest rates used in these valuations are key assumptions, including discount rates used in determining the present value of future benefit payments and expected return on plan assets, which are reviewed and updated on an annual basis. The discount rates reflect market rates for high-quality corporate bonds. We consider current market conditions, including changes in interest rates, in making assumptions. The Society of Actuaries (“SOA”) issued new mortality and mortality improvement tables in 2014, and modified those tables in 2015 and 2016. Our December 31, 2016 valuation used mortality and improvement tables based on the SOA tables, adjusted to reflect (1) an ultimate rate of mortality improvement consistent with both historical experience and U.S. Social Security long-term projections, and (2) a shorter transition period to reach the ultimate rate, which is consistent with historical patterns. In establishing the expected return on assets assumption, we review the asset allocations considering plan maturity and develop return assumptions based on different asset classes. The return assumptions are established after reviewing historical returns of broader market indexes, as well as historical performance of the investments in the plan. Our pension plan assets are managed in accordance with an investment policy adopted by the pension committee, as discussed below.

Plan Assets. The investment policy of the Plan includes target allocation percentages of approximately 49% for investments in equity securities (33% U.S. equities and 16% non-U.S. equities), 36% for investments in fixed income securities and 15% for investments in other securities, which is broken down further into 5% for investments in hedge fund of funds and 10% for investments in real estate fund of funds. Plan assets include investments in both U.S. and non-U.S. equity funds. Fixed income investments include a U.S. government securities fund, two short duration bond funds, a high yield bond fund and an emerging markets debt fund. The funds in which the plan’s assets are invested are institutionally managed and have diversified exposures into multiple asset classes implemented with over 65 investment managers. The guidelines and objectives of the funds are congruent with the Intelsat investment policy statement.

The target and actual asset allocation of our pension plan assets were as follows:

	As of December 31, 2015		As of December 31, 2016	
	Target Allocation	Actual Allocation	Target Allocation	Actual Allocation
Equity securities	49%	49%	49%	47%
Debt securities	36%	34%	36%	34%
Other securities	15%	17%	15%	19%
Total	100%	100%	100%	100%

The fair values of our pension plan assets by asset category are as follows (in thousands):

Asset Category	Fair Value Measurements at December 31, 2015	Fair Value Measurements at December 31, 2016
Equity Securities		
U.S. Large-Cap ⁽¹⁾	\$ 87,383	\$ 80,698
U.S. Small/Mid-Cap ⁽²⁾	22,121	22,184
World Equity Ex-US ⁽³⁾	51,720	46,999
Fixed Income Securities		
Short Duration Bonds ⁽⁴⁾	91,897	90,099
High Yield Bonds ⁽⁵⁾	13,638	14,125
Emerging Market Fixed income (Non-US) ⁽⁶⁾	4,463	4,100
Other Securities		
Hedge Funds ⁽⁷⁾	15,913	15,880
Core Property Fund ⁽⁸⁾	39,176	43,266
Income earned but not yet received	147	159
Total	\$ 326,458	\$ 317,510

- (1) US large cap equity fund invests primarily in a portfolio of common stocks included in the S&P 500 Index, as well as other equity securities and derivative instruments whose value is derived from the performance of the S&P 500.
- (2) US small/mid cap equity fund invests primarily in a portfolio of common stocks included in the Russell 2500 Index.
- (3) World equity ex-US fund invests primarily in common stocks and other equity securities whose issuers comprise a broad range of capitalizations and are located outside of the U.S. The fund invests primarily in developed countries but may also invest in emerging markets.
- (4) Short duration bond fund includes the Opportunistic Income fund and the Limited Duration Bond Fund. The Opportunistic Income fund invests primarily in a diversified portfolio of investment grade and non-investment grade fixed-income securities. There are no restrictions on the maturity of any individual securities or on the fund's average portfolio maturity, although the average portfolio duration will typically vary between zero and two years. Under normal circumstances, the Limited Duration Bond Fund will invest at least 80% of its net assets in investment-grade, U.S. dollar-denominated debt instruments. The Fund is expected to maintain a portfolio duration of three years or less.
- (5) High yield bond fund seeks to maximize return by investing primarily in a diversified portfolio of higher yielding, lower rated fixed income securities. The fund will invest primarily in securities rated below investment grade, including corporate bonds, convertible and preferred securities and zero coupon obligations.
- (6) Emerging markets debt fund seeks to maximize return investing in fixed income securities of emerging markets issuers. The fund will invest primarily in U.S. dollar denominated debt securities of government, government-related and corporate issuers in emerging market countries, as well as entities organized to restructure the outstanding debt of such issuers.
- (7) Hedge fund seeks to provide returns that are different from (less correlated with) investments in more traditional asset classes. The fund will pursue its investment objective by investing substantially all of its assets in various hedge funds.
- (8) Core property fund is a fund of funds that invests in direct commercial property funds primarily in the U.S. The fund is meant to provide current income-oriented returns, diversification, and modest inflation protection to an overall investment portfolio. Total returns are expected to be somewhere between stocks and bonds, with moderate volatility and low correlation to public markets.

Our plan assets are measured at fair value. FASB ASC 820 prioritizes the inputs used in valuation techniques including Level 1, Level 2 and Level 3 (see Note 2 (d)—Significant Accounting Policies—Fair Value Measurements).

The majority of our plan assets are valued using measurement inputs which include unadjusted prices in active markets and we have therefore classified these assets within Level 1 of the fair value hierarchy. Our other securities include Hedge Funds and Core Property Funds, which are measured at fair value using the net asset value per share practical expedient, and are not classified in the fair value hierarchy.

Net periodic pension benefit costs included the following components (in thousands):

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Service cost	\$ 2,854	\$ 780	\$ —
Interest cost	19,904	18,734	16,183
Expected return on plan assets	(24,130)	(25,926)	(25,535)
Amortization of unrecognized prior service credits	(172)	(43)	—
Amortization of unrecognized net loss	10,319	7,911	3,370
Curtailed (gain) loss	—	(564)	—
Special termination benefit recognized	48	—	—
Total benefit	<u>\$ 8,823</u>	<u>\$ 892</u>	<u>\$ (5,982)</u>

We had accrued benefit costs at December 31, 2015 and 2016 of \$109.0 million and \$107.5 million, respectively, related to the pension benefits, of which \$0.6 million and \$0.6 million was recorded within other current liabilities, respectively, and \$108.4 million and \$106.9 million was recorded in other long-term liabilities, respectively.

Net periodic other postretirement benefit costs included the following components (in thousands):

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Service cost	\$ 128	\$ 70	\$ —
Interest cost	4,562	4,592	3,363
Amortization of unrecognized net loss	—	596	(8)
Total costs	<u>\$ 4,690</u>	<u>\$ 5,258</u>	<u>\$ 3,355</u>

We had accrued benefit costs at December 31, 2015 and 2016 related to the other postretirement benefits of \$90.6 million and \$82.9 million, respectively, of which \$4.3 million and \$4.1 million were recorded in other current liabilities, respectively, and \$86.3 million and \$78.8 million were recorded in other long-term liabilities, respectively.

Depending upon our actual future health care claims, our actual costs may vary significantly from those projected above. As of December 31, 2015 and December 31, 2016, the assumed health care cost trend rate was 7.5%. This rate is assumed to decrease gradually to 4.5% by the year 2038 and to remain at that level of annual increase thereafter. Increasing the assumed health care cost trend rate by 1% each year would increase the other postretirement benefits obligation as of December 31, 2016 by \$8.3 million. Decreasing this trend rate by 1% each year would reduce the other postretirement benefits obligation as of December 31, 2016 by \$7.1 million. A 1% increase in the assumed health care cost trend rate would have increased the net periodic other postretirement benefits cost by \$0.4 million and a 1% decrease would have decreased the cost by \$0.3 million for 2016.

The benefits expected to be paid in each of the next five years and in the aggregate for the five years thereafter are as follows (in thousands):

	Pension Benefits	Other Post- retirement Benefits
2017	\$ 35,308	\$ 4,111
2018	28,540	4,399
2019	28,076	4,673
2020	27,360	4,913
2021	27,319	5,133
2022 to 2026	133,822	27,483
Total	<u>\$ 280,425</u>	<u>\$ 50,712</u>

(b) Other Retirement Plans

In connection with the amendment of the defined benefit retirement plan amendment in the first quarter of 2015, the two defined contribution retirement plans we previously maintained for the benefit of our employees in the United States, were merged into a single plan, which is qualified under the provisions of Section 401(k) of the Internal Revenue Code, for our employees in the United States. We recognized compensation expense for these plans of \$9.2 million, \$6.8 million and \$10.3 million for the years ended December 31, 2014, 2015 and 2016, respectively. We also maintain other defined contribution retirement plans in several non-U.S. jurisdictions, but such plans are not material to our financial position or results of operations.

Note 8 Receivables

Receivables were comprised of the following (in thousands):

	<u>As of December 31, 2015</u>	<u>As of December 31, 2016</u>
Service charges:		
Billed	\$ 258,034	\$ 246,833
Unbilled	9,658	8,872
Other	2,261	2,075
Allowance for doubtful accounts	(37,178)	(54,744)
Total	<u>\$ 232,775</u>	<u>\$ 203,036</u>

Unbilled service charges represent amounts earned and accrued as receivables from customers for services rendered prior to the end of the reporting period. Unbilled service charges are expected to be billed and collected within twelve months of the respective balance sheet date.

Note 9 Satellites and Other Property and Equipment

(a) Satellites and Other Property and Equipment, net

Satellites and other property and equipment, net were comprised of the following (in thousands):

	<u>As of December 31, 2015</u>	<u>As of December 31, 2016</u>
Satellites and launch vehicles	\$ 9,810,941	\$ 10,363,771
Information systems and ground segment	641,741	727,929
Buildings and other	241,273	250,369
Total cost	10,693,955	11,342,069
Less: accumulated depreciation	(4,705,638)	(5,156,227)
Total	<u>\$ 5,988,317</u>	<u>\$ 6,185,842</u>

Satellites and other property and equipment, net as of December 31, 2015 and 2016 included construction-in-progress of \$1.5 billion and \$1.1 billion, respectively. These amounts relate primarily to satellites under construction and related launch services. Interest costs of \$86.3 million and \$98.3 million were capitalized during the years ended December 31, 2015 and 2016, respectively. Additionally, we recorded depreciation expense of \$611.1 million, \$627.5 million and \$646.4 million during the years ended December 31, 2014, 2015 and 2016, respectively.

We have entered into launch contracts for the launch of both specified and unspecified future satellites. Each of these launch contracts provides that such contract may be terminated at our option, subject to payment of a termination fee that increases as the applicable launch date approaches. In addition, in the event of a failure of any launch, we may exercise our right to obtain a replacement launch within a specified period following our request for re-launch.

(b) Recent Satellite Launches

Intelsat 32e, a customized payload positioned on a third-party satellite, was successfully launched on February 14, 2017. Intelsat 32e is the third of seven in our planned Intelsat Epic^{NG} fleet, featuring high performance spot beams. Intelsat 32e increases our service capabilities over the in-demand North Atlantic and Caribbean regions, supplying services for applications such as in-flight connectivity for commercial flights and passenger and commercial broadband for cruise lines and shipping vessels.

On August 24, 2016, we successfully launched our Intelsat 36 and Intelsat 33e satellites into orbit. Intelsat 36 is co-located with our Intelsat 20 satellite at the 68.5°E orbital location and entered into service in late September 2016. Intelsat 36 provides capacity for direct-to-home (“DTH”) television services via its Ku-band payload, as well as media distribution services via its C-band payload to customers in the Africa and Indian Ocean regions.

Intelsat 33e is the second of seven high-throughput satellites (“HTS”) within our Intelsat Epic^{NG} platform, featuring high performance spot beams and an advanced digital payload. Due to a malfunction in the primary thruster for orbit raising, Intelsat 33e arrived at its 60°E orbital location in December 2016. In-orbit testing was completed, and the satellite entered into service in late January 2017. The Intelsat 33e antennas and reflectors have been deployed, and currently, there is no evidence of any impact to the communications payload. A Failure Review Board was established to determine the cause of the anomaly. As of December 31, 2016, a final conclusion had not been reached as to the likely cause of the anomaly. We continue to participate in the on-going investigation. Intelsat 33e delivers commercial-grade services for enterprise, fixed and mobile network operators, aeronautical and maritime mobility service providers, and for government customers in the Africa, Europe, Middle East and Asia regions.

On June 9, 2016, we successfully launched our Intelsat 31 satellite to the 95°W orbital location, co-located with our Intelsat 30 satellite. This satellite will provide in-orbit resilience for DTH television services in Latin America via its Ku-band payload. Intelsat 31 also includes a C-band payload that enhances our Latin American network infrastructure. This satellite has completed in-orbit testing and entered into service in late July 2016.

On January 27, 2016, we successfully launched our Intelsat 29e satellite into orbit. Intelsat 29e is the first HTS within our Intelsat Epic^{NG} platform, featuring high performance spot beams and an advanced digital payload. The satellite, which is located at the 310°E orbital location, supports broadband services for enterprise, fixed and mobile network operators, aeronautical and maritime mobility service providers, and for government customers operating throughout the Americas and the North Atlantic region via C- and Ku- band payloads. Intelsat 29e entered into service in March 2016.

On August 20, 2015, we successfully launched our Intelsat 34 satellite into orbit. Intelsat 34 is a C- and Ku-band satellite that establishes long-term capacity at the 304.5°E orbital location, and entered into service in October 2015. Intelsat 34 includes a C-band payload which delivers media distribution services to Latin American customers. The satellite also hosts a DTH platform in Ku-band as well as a specialized Ku-band payload serving the North Atlantic region, designed to support broadband services for the aeronautical and maritime mobility sectors.

On October 16, 2014, we successfully launched our Intelsat 30 satellite into orbit. This satellite establishes long-term capacity at the 95°W orbital location and is co-located with our Galaxy 3C satellite. Intelsat 30 entered into service in the fourth quarter of 2014. It provides capacity for DTH television service in Latin America via Ku-band platforms, as well as additional capacity for media, government and network services customers via C-band platforms.

(c) Satellite Health

Our satellite fleet is diversified by manufacturer and satellite type, and as a result, our fleet is generally healthy. We have experienced some technical problems with our current fleet but have been able to minimize the impact of these problems on our customers, our operations and our business in recent years. Many of these problems have been component failures and anomalies that have had little long-term impact to date on the overall transponder availability in our satellite fleet. All of our satellites have been designed to accommodate an anticipated rate of equipment failures with adequate redundancy to meet or exceed their orbital design lives, and to date, this redundancy design scheme has proven effective. After each anomaly we have generally restored services for our customers on the affected satellite, provided alternative capacity on other satellites in our fleet, or provided capacity that we purchased from other satellite operators.

Significant Anomalies

On January 14, 2005, our Intelsat 804 satellite experienced a sudden and unexpected electrical power system anomaly that resulted in the total loss of the satellite. Intelsat 804 was a Lockheed Martin 7000 series (the “LM 7000 series”) satellite, and as of December 31, 2016 we operated one other satellite in the LM 7000 series, Intelsat 805. Based on the report of the Failure Review Board that we established with Lockheed Martin Corporation, we believe that the Intelsat 804 failure was not likely to have been caused by an Intelsat 804 specific workmanship or hardware element, but was most likely caused by a high current event in the battery circuitry triggered by an electrostatic discharge that propagated to cause the sudden failure of the high voltage power system. We therefore believe that although this risk exists for our other LM 7000 series satellite, the risk of any individual satellite having a similar anomaly is low.

On April 5, 2010, our Galaxy 15 satellite experienced an anomaly resulting in our inability to command the satellite. Galaxy 15 is a Star-2 satellite manufactured by Orbital Sciences Corporation. On December 23, 2010, we recovered command of the spacecraft and we have since uploaded flight software code to protect against future anomalies of this type. As of December 31, 2016, Galaxy 15 continues to provide normal service.

On April 22, 2011, our Intelsat 28 satellite, formerly known as the Intelsat New Dawn satellite, was launched into orbit. Subsequent to the launch, the satellite experienced an anomaly during the deployment of its west antenna reflector, which controls communications in the C-band frequency. The anomaly had not been experienced previously on other STAR satellites manufactured by Orbital Sciences Corporation, including those in our fleet. The New Dawn joint venture filed a partial loss claim with its insurers relating to the C-band antenna reflector anomaly and all of the insurance proceeds from the partial loss claim were received in 2011. The Ku-band antenna reflector deployed and that portion of the satellite is operating as planned, entering service in June 2011. A Failure Review Board established to determine the cause of the anomaly, completed its investigation in July 2011 and concluded that the deployment anomaly of the C-band reflector was most likely due to a malfunction of the reflector sunshield. As a result, the sunshield interfered with the ejection release mechanism, and prevented the deployment of the C-band antenna. The Failure Review Board also recommended corrective actions for Orbital Sciences Corporation satellites not yet launched to prevent reoccurrence of the anomaly. Appropriate corrective actions were implemented on Intelsat 18, which was successfully launched on October 5, 2011, and on Intelsat 23, which was launched in October 2012.

During launch operations of Intelsat 19 on June 1, 2012, the satellite experienced damage to its south solar array. Although both solar arrays are deployed, the power available to the satellite is less than is required to operate 100% of the payload capacity. An Independent Oversight Board (“IOB”) was formed by Space Systems/Loral, LLC (“SSL”) and Sea Launch to investigate the solar array deployment anomaly. The IOB concluded that the anomaly occurred before the spacecraft separated from the launch vehicle, during the ascent phase of the launch, and originated in one of the satellite’s two solar array wings due to a rare combination of factors in the panel fabrication and was unrelated to the launch vehicle. While the satellite is operational, the anomaly resulted in structural and electrical damage to one solar array wing, which reduced the amount of power available for payload operation. Additionally, we filed a partial loss claim with our insurers relating to the solar array anomaly. We received \$84.8 million of insurance proceeds related to the claim in 2013. As planned, Intelsat 19 replaced Intelsat 8 at 166°E, in August 2012.

During orbit raising of Intelsat 33e in September 2016, the satellite experienced a malfunction of the main satellite thruster. Orbit raising was subsequently completed using a different set of satellite thrusters. The anomaly resulted in a delay of approximately three months in reaching the geostationary orbit, as well as a reduction in the projected lifetime of the satellite. Intelsat has filed a notice of occurrence with insurers relating to the reduction of life.

Other Anomalies

We have also identified four other types of common anomalies among the satellite models in our fleet, which have had an operational impact in the past and could, if they materialize, have an impact in the future. These are:

- failure of the on-board satellite control processor (“SCP”) in Boeing 601 (“BSS 601”) satellites;
- failure of the on-board Xenon-Ion Propulsion System (“XIPS”) used to maintain the in-orbit position of Boeing 601 High Power Series (“BSS 601 HP”) satellites;
- accelerated solar array degradation in early Boeing 702 High Power Series (“BSS 702 HP”) satellites; and
- electrical distribution anomalies on older SSL FS 1300 satellites.

SCP Failures. Many of our satellites use an on-board SCP to provide automatic on-board control of many operational functions. SCPs are a critical component in the operation of such satellites. Each such satellite has a backup SCP, which is available in the event of a failure of the primary SCP. Certain BSS 601 satellites have experienced SCP failures. The risk of SCP failure appears to decline as these satellites age.

As of December 31, 2016, we operated one BSS 601 satellite, Intelsat 26. This satellite was identified as having heightened susceptibility to the SCP problem. Intelsat 26 has been in continuous operation since 1997. Both primary and backup SCPs on this satellite are monitored regularly and remain fully functional. Accordingly, we believe it is unlikely that additional SCP failures will occur; however, should they occur, we do not anticipate an interruption in business or early replacement of this satellite as a result.

BSS 601 HP XIPS. The BSS 601 HP satellite uses XIPS as its primary propulsion system. There are two separate XIPS on each satellite, each one of which is capable of maintaining the satellite in its orbital position. The BS 601 HP satellite also has a completely independent chemical propulsion system as a backup to the XIPS. As a result, the failure of a XIPS on a BSS 601 HP satellite typically would have no effect on the satellite's performance or its operating life. However, the failure of both XIPS would require the use of the backup chemical propulsion system, which could result in a shorter operating life for the satellite depending on the amount of chemical fuel remaining. XIPS failures do not typically result in a catastrophic failure of the satellite or affect the communications capability of the satellite.

As of December 31, 2016, we operated four BSS 601 HP satellites, Intelsat 5, Intelsat 9, and Intelsat 10, which are now in inclined orbit, and Galaxy 13/Horizons-1. Galaxy 13/Horizons-1 has one XIPS system available as its primary propulsion system. Intelsat 5, Intelsat 9 and Intelsat 10 have experienced the failure of both XIPS and are operating on their backup chemical propulsion systems. Intelsat 5 was redeployed in 2012 following its replacement by Intelsat 8, which was subsequently replaced by Intelsat 19. Also in 2012, Intelsat 9 and Intelsat 10 were redeployed following their replacements by Intelsat 21 and Intelsat 20, respectively. No assurance can be given that we will not have further XIPS failures that result in shortened satellite lives. We have decommissioned three satellites that had experienced failure of both XIPS. Intelsat 6B was replaced by Intelsat 11 during the first quarter of 2008, Galaxy 10R was replaced by Galaxy 18 during the second quarter of 2008, and Galaxy 4R was decommissioned in March 2009.

BSS 702 HP Solar Arrays. All of our satellites have solar arrays that power their operating systems and transponders and recharge the batteries used when solar power is not available. Solar array performance typically degrades over time in a predictable manner. Additional power margins and other operational flexibility are designed into satellites to allow for such degradation without loss of performance or operating life. Certain BSS 702 HP satellites have experienced greater than anticipated degradation of their solar arrays resulting from the design of the solar arrays. Such degradation, if continued, results in a shortened operating life of a satellite or the need to reduce the use of the communications payload.

As of December 31, 2016, we operated three BSS 702 HP satellites, two of which are affected by accelerated solar array degradation, Galaxy 11 and Intelsat 1R. Service to customers has not been affected, and we expect that both of these satellites will continue to serve customers until we replace or supplement them with new satellites. Along with the manufacturer, we continually monitor the problem to determine its cause and its expected effect. Due to this continued degradation, Galaxy 11's estimated end of service life is in the first quarter of 2019 and Intelsat 1R's estimated end of service life is in the second quarter of 2017. Galaxy 11 was redeployed following its replacement by Intelsat 34 in 2015. Intelsat 1R was redeployed following its replacement by Intelsat 14. The third BSS 702 HP satellite that we operated as of December 31, 2016, Galaxy 3C, was launched after the solar array anomaly was identified, and it has a substantially different solar array design intended to eliminate the problem. This satellite has been in service since September 2002 and has not experienced similar degradation problems.

Note 10 Investments

We have an ownership interest in two entities that meet the criteria of a VIE, Horizons Satellite Holdings, LLC ("Horizons Holdings") and Horizons-3 Satellite LLC ("Horizons 3"). Horizons Holdings is discussed in further detail below, including our analyses of the primary beneficiary determination as required under FASB ASC Topic 810, *Consolidation* ("FASB ASC 810"). Horizons 3 is discussed in further detail below. Further, we have cost method investments where we have a minority investment, discussed further below.

(a) Horizons Holdings

Our first joint venture with JSAT International, Inc. ("JSAT") is named Horizons Satellite Holdings, LLC, and consists of two investments: Horizons-1 Satellite LLC ("Horizons-1") and Horizons-2 Satellite LLC ("Horizons-2"). Horizons Holdings borrowed from JSAT a portion of the funds necessary to finance the construction of the Horizons-2 satellite pursuant to a loan agreement. The borrowing was subsequently repaid. We provide certain services to the joint venture and utilize capacity from the joint venture.

We have determined that this joint venture meets the criteria of a VIE under FASB ASC 810, and we have concluded that we are the primary beneficiary because decisions relating to any future relocation of the Horizons-2 satellite, the most significant asset of the joint venture, are effectively controlled by us. In accordance with FASB ASC 810, as the primary beneficiary, we consolidate Horizons Holdings within our consolidated financial statements. Total assets and liabilities of Horizons Holdings were \$58.7 million and \$0.3 million as of December 31, 2015. Total assets were \$48.3 million as of December 31, 2016, while total liabilities as of the same date were a nominal amount.

We have a revenue sharing agreement with JSAT related to services sold on the Horizons-1 and Horizons-2 satellites. We are responsible for billing and collection for such services, and we remit 50% of the revenue, less applicable fees and commissions, to JSAT. Amounts payable to JSAT related to the revenue sharing agreement, net of applicable fees and commissions, from the Horizons-1 and Horizons-2 satellites were \$6.6 million and \$6.2 million as of December 31, 2015 and 2016, respectively.

(b) Horizons-3 Satellite LLC

On November 4, 2015, we entered into a new joint venture agreement with JSAT. The joint venture, named Horizons 3, was formed for the purpose of developing, launching, managing, operating and owning a high performance satellite to be located at the 169°E orbital location.

Horizons 3, which is 50% owned by each of Intelsat and JSAT, was set up with a joint share of management authority and equal rights to profits and revenues from the joint venture. Similar to Horizons Holdings, we have a revenue sharing agreement with JSAT related to services sold on the Horizons 3 satellite. In addition, we are responsible for billing and collection for such services, and we remit 50% of the revenue, less applicable fees and commissions, to JSAT.

We have determined that this joint venture meets the criteria of a VIE under FASB ASC 810, and we have concluded that we are not the primary beneficiary, and therefore, do not consolidate Horizons 3. The assessment considered both quantitative and qualitative factors, including an analysis of voting power and other means of control of the joint venture as well as each owner's exposure to risk of loss or gain. Because we and JSAT equally share control over the operations of the joint venture and also equally share exposure to risk of losses or gains, we concluded that we are not the primary beneficiary of Horizons 3. Our investment, included within other assets in our consolidated balance sheets, is accounted for using the equity method of accounting and the investment balance was \$19.1 million and \$31.1 million as of December 31, 2015 and 2016, respectively.

In connection with our investment in Horizons 3, we entered into a capital contribution and subscription agreement, which requires us to fund our 50% share of the amounts due in order to maintain our respective 50% interest in the joint venture. Pursuant to this agreement, we made contributions of \$19.1 million and \$10.3 million during the years ended December 31, 2015 and 2016, respectively. In addition, our indirect subsidiary that holds our investment in Horizons 3 has entered into a security and pledge agreement with Horizons 3, pursuant to which it has granted a security interest in its membership interests in Horizons 3. Further, our indirect subsidiary has granted a security interest to Horizons 3 in its customer capacity contracts and its ownership interest in its wholly-owned subsidiary that will hold the U.S. Federal Communications Commission license required for the joint venture's operations.

(c) Cost Method Investments

Our cost method investments recorded in other assets in our consolidated balance sheets had a total carrying value of \$25.0 million and \$29.0 million as of December 31, 2015 and 2016, respectively. The balance as of December 31, 2016 consists of two minority investments.

(d) 2017 Investments

In 2017, we made total payments of \$16.0 million for two additional investments. We are in the process of evaluating how we will account for these investments.

(e) Equity Attributable to Intelsat S.A. and Noncontrolling Interests

The following tables present changes in equity attributable to the Company and equity attributable to our noncontrolling interests, which is included in the equity section of our consolidated balance sheet (in thousands):

	Intelsat S.A. Shareholders'	Noncontrolling Interest	Total Shareholders' Deficit
Balance at January 1, 2015	\$ (776,268)	\$ 33,701	\$ (742,567)
Net income (loss)	(3,923,387)	3,934	(3,919,453)
Dividends paid to noncontrolling interests	—	(8,423)	(8,423)
Share-based compensation	25,921	—	25,921
Declaration of preferred stock dividend	(9,919)	—	(9,919)
Postretirement/pension liability adjustment	34,449	—	34,449
Other comprehensive income	(361)	—	(361)
Balance at December 31, 2015	\$ (4,649,565)	\$ 29,212	\$ (4,620,353)
	Intelsat S.A. Shareholders'	Noncontrolling Interest	Total Shareholders' Deficit
Balance at January 1, 2016	\$ (4,649,565)	\$ 29,212	\$ (4,620,353)
Net income	990,197	3,915	994,112
Dividends paid to noncontrolling interests	—	(8,980)	(8,980)
Share-based compensation	23,089	—	23,089
Postretirement/pension liability adjustment	2,041	—	2,041
Other comprehensive income	93	—	93
Balance at December 31, 2016	\$ (3,634,145)	\$ 24,147	\$ (3,609,998)

Note 11 Goodwill and Other Intangible Assets

The carrying amounts of goodwill and acquired intangible assets not subject to amortization consist of the following (in thousands):

	As of December 31, 2015	As of December 31, 2016
Goodwill ⁽¹⁾	\$ 2,620,627	\$ 2,620,627
Orbital locations	2,387,700	2,387,700
Trade name	65,200	65,200

(1) Net of accumulated impairment losses of \$4,160,200.

We account for goodwill and other non-amortizable intangible assets in accordance with FASB ASC 350, and have deemed these assets to have indefinite lives. Therefore, these assets are not amortized but are instead tested on an annual basis for impairment during the fourth quarter, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable.

(a) Goodwill

We perform our annual goodwill impairment assessment using a qualitative approach to identify and consider the significance of relevant key factors, events, and circumstances that affect the fair value of our reporting unit. We are required to identify reporting units at a level below the company's identified operating segments for impairment analysis. We have identified only one reporting unit for the goodwill impairment test.

Assumptions and Approach Used. We make our qualitative evaluation considering, among other things, general macroeconomic conditions, industry and market considerations, cost factors, overall financial performance and other relevant entity-specific events.

During the fourth quarter of 2015, our share price experienced a sustained reduction in trading values. Secondly, the trading values of our debt securities also showed sustained deterioration. This was also reflective of broader difficulties in the credit markets for high yield issuers. Finally, our annual business planning process which we undertook in the fourth quarter showed a decline in our forecasted results as compared to previous levels. Based on our examination of these and other qualitative factors at December 31, 2015, we concluded that further testing of goodwill was required. See below for details of testing performed.

Based on our examination of the qualitative factors at December 31, 2016, we concluded that there was not a likelihood of more than 50% that the fair value of our reporting unit was less than its carrying value; therefore, no further testing of goodwill was required.

The second step of the process applied at December 31 2015, required us to calculate a hypothetical purchase allocation to compare the current implied value of the goodwill to the current carrying value of the goodwill. The implied fair value of goodwill is determined in the same manner as the amount of goodwill recognized in a business combination, which is the excess of the fair value of the reporting unit over the aggregate fair values of the individual assets, liabilities and identifiable intangibles. If the implied fair value of goodwill as described above exceeds recorded goodwill, there is no impairment. If the recorded goodwill exceeds the implied fair value, an impairment charge would be recorded for the excess. Furthermore, an impairment loss cannot exceed the amount of goodwill assigned to a reporting unit. After recognizing the impairment loss, the corresponding loss establishes a new basis in the goodwill. Subsequent reversals of goodwill impairment losses are not permitted under applicable accounting standards.

At December 31, 2015, we determined the estimated fair value of our reporting unit using discounted cash flow analysis, along with independent source data related to the comparative market multiples and, when available, recent transactions, each of which is considered a Level 3 input within the fair value hierarchy under FASB ASC 820. The discounted cash flows were derived from a five-year projection of cash flows plus a residual value, with the resulting projected cash flows discounted at an appropriate weighted average cost of capital.

In estimating the undiscounted cash flows, we primarily used our internally prepared budgets and forecast information. The key assumptions included in our model were projected growth rates, cost of capital, effective tax rates, and industry and economic trends. A change in the estimated future cash flows or other assumptions could change our estimated fair values and result in future impairments. The result of our analysis resulted in a non-cash impairment charge of \$4.2 billion for the year ended December 31, 2015, which is included within impairment of goodwill and other intangibles in the consolidated statement of operations.

The analysis was performed using information available at that time and was based on estimates of fair values of the assets acquired and liabilities. We believe that the estimates and assumptions underlying the valuation methodologies are reasonable.

The assessment of qualitative factors requires significant judgment. Alternative interpretations of the qualitative factors could have resulted in a different conclusion as to whether it was not more likely than not that the fair value of our reporting unit was less than its carrying value. A different conclusion would require a more detailed quantitative analysis to be performed, which could, in future years, result in an additional impairment charge for goodwill.

(b) Orbital Locations, Trade Name and other Intangible Assets

Orbital Locations. Intelsat is authorized by governments to operate satellites at certain orbital locations—i.e., longitudinal coordinates along the Clarke Belt. The Clarke Belt is the part of space approximately 35,800 kilometers above the plane of the equator where geostationary orbit may be achieved. Various governments acquire rights to these orbital locations through filings made with the ITU, a sub-organization of the United Nations. We will continue to have rights to operate satellites at our orbital locations so long as we maintain our authorizations to do so.

Our rights to operate at orbital locations can be used and sold individually; however, since satellites and customers can be and are moved from one orbital location to another, our rights are used in conjunction with each other as a network that can be adapted to meet the changing needs of our customers and market demands. Due to the interchangeable nature of orbital locations, the aggregate value of all of the orbital locations is used to measure the extent of impairment, if any.

At December 31, 2015 we determined the estimated fair value of our rights to operate at orbital locations by using the build-up method to determine cash flows for the income approach, with the resulting projected cash flows discounted at an appropriate weighted average cost of capital. In instances where the build-up method did not generate positive value for the rights to operate at an orbital location, but the rights were expected to generate revenue, we assigned a value based upon independent source data for recent transactions relating to similar orbital locations, each of which is considered Level 3 input within the fair value hierarchy under FASB ASC 820.

The key assumptions used in estimating the fair values for our rights to operate at our orbital locations included: (i) market penetration leading to revenue growth, (ii) profit margin, (iii) duration and profile of the build-up period, (iv) estimated start-up costs and losses incurred during the build-up period and (v) weighted average cost of capital. In instances where the build-up method did not generate positive value for the rights to operate at an orbital location, but the rights were expected to generate revenue, we assigned a value based upon independent source data for transactions relating to similar orbital locations, each of which is considered a Level 3 input within the fair value hierarchy under FASB ASC 820.

At December 31, 2015, we completed our analysis of our orbital locations in connection with the analysis of goodwill described above, and concluded that there was no impairment. At December 31, 2016, we updated our assessment based on an examination of qualitative factors and concluded that there was no impairment related to our orbital slots.

Trade Name. We have implemented the relief from royalty method to determine the estimated fair value of the Intelsat trade name. The relief from royalty analysis is comprised of two major steps: i) a determination of the hypothetical royalty rate, and ii) the subsequent application of the royalty rate to projected revenue. In determining the hypothetical royalty rate utilized in the relief from royalty approach, we considered comparable license agreements, operating earnings benchmark rule of thumb, an excess earnings analysis to determine aggregate intangible asset earnings, and other qualitative factors, each of which is considered Level 3 input within the fair value hierarchy under FASB ASC 820.

The key assumptions used in our model to estimate the fair value of the Intelsat trade name include forecasted revenues, the tax rate and the discount rate. A change in the estimated tax rates or discount rate could result in future impairments. At December 31, 2015, we completed our analysis of the Intelsat trade name in connection with the analysis of goodwill, and it resulted in an impairment of our trade name intangible of \$5.2 million, which is included within goodwill and other intangibles in the consolidated statement of operations. At December 31, 2016, we updated our assessment based on an examination of qualitative factors and concluded that there was no impairment related to the Intelsat trade name.

The carrying amount and accumulated amortization of acquired intangible assets subject to amortization consisted of the following (in thousands):

	As of December 31, 2015			As of December 31, 2016		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Backlog and other	\$ 743,760	\$ (647,534)	\$ 96,226	\$ 743,760	\$ (669,045)	\$ 74,715
Customer relationships	534,030	(189,926)	344,104	534,030	(216,907)	317,123
Total	\$ 1,277,790	\$ (837,460)	\$ 440,330	\$ 1,277,790	\$ (885,952)	\$ 391,838

Intangible assets are amortized based on the expected pattern of consumption. We recorded amortization expense of \$68.2 million, \$60.2 million and \$48.5 million for the years ended December 31, 2014, 2015 and 2016, respectively.

Scheduled amortization charges for the intangible assets over the next five years are as follows (in thousands):

Year	Amount
2017	\$ 42,254
2018	38,481
2019	34,351
2020	31,103
2021	28,635

Our policy is to expense all costs incurred to renew or extend the terms of our intangible assets. The renewal expenses for the years ended December 31, 2014, 2015 and 2016 were immaterial to our consolidated results of operations.

Note 12 Long-Term Debt

The carrying values and fair values of our notes payable and long-term debt were as follows (in thousands):

	As of December 31, 2015		As of December 31, 2016	
	Carrying Value	Fair Value	Carrying Value	Fair Value
<i>Intelsat Luxembourg:</i>				
6.75% Senior Notes due June 2018	\$ 475,000	\$ 355,063	\$ 500,000	\$ 410,000
Unamortized prepaid debt issuance costs and discount on 6.75% Senior Notes	(2,066)	—	(5,746)	—
7.75% Senior Notes due June 2021	2,000,000	930,000	2,000,000	640,000
Unamortized prepaid debt issuance costs on 7.75% Senior Notes	(19,602)	—	(16,588)	—
8.125% Senior Notes due June 2023	1,000,000	450,000	1,000,000	295,000
Unamortized prepaid debt issuance costs on 8.125% Senior Notes	(10,870)	—	(9,764)	—
<i>Total Intelsat Luxembourg obligations</i>	<u>3,442,462</u>	<u>1,735,063</u>	<u>3,467,902</u>	<u>1,345,000</u>
<i>Intelsat Connect Finance:</i>				
12.5% Senior Notes due April 2022	\$ —	\$ —	\$ 731,884	\$ 475,725
Unamortized prepaid debt issuance costs and discount on 12.5% Senior Notes	—	—	(297,257)	—
<i>Total Intelsat Connect Finance obligations</i>	<u>—</u>	<u>—</u>	<u>434,627</u>	<u>475,725</u>
<i>Intelsat Jackson:</i>				
9.5% Senior Secured Notes due September 2022	\$ —	\$ —	\$ 490,000	\$ 543,900
Unamortized prepaid debt issuance costs and discount on 9.5% Senior Secured Notes	—	—	(20,243)	—
8.00% Senior Secured Notes due February 2024	—	—	1,349,678	1,383,420
Unamortized prepaid debt issuance costs and premium on 8.0% Senior Secured Notes	—	—	(6,005)	—
7.25% Senior Notes due October 2020	2,200,000	1,919,500	2,200,000	1,716,000
Unamortized prepaid debt issuance costs and premium on 7.25% Senior Notes	(8,248)	—	(6,756)	—
7.25% Senior Notes due April 2019	1,500,000	1,368,750	1,500,000	1,260,000
Unamortized prepaid debt issuance costs on 7.25% Senior Notes	(8,203)	—	(5,886)	—
7.5% Senior Notes due April 2021	1,150,000	1,000,500	1,150,000	879,750
Unamortized prepaid debt issuance costs on 7.5% Senior Notes	(8,137)	—	(6,828)	—
6.625% Senior Notes due December 2022	1,275,000	803,250	—	—
Unamortized prepaid debt issuance costs and premium on 6.625% Senior Notes	20,428	—	—	—
5.5% Senior Notes due August 2023	2,000,000	1,560,000	2,000,000	1,340,000
Unamortized prepaid debt issuance costs on 5.5% Senior Notes	(16,719)	—	(14,900)	—
Senior Secured Credit Facilities due June 2019	3,095,000	2,944,274	3,095,000	3,013,756
Jackson Revolver	—	—	—	—
Unamortized prepaid debt issuance costs and discount on Senior Secured Credit Facilities and Jackson Revolver	(30,204)	—	(21,682)	—
<i>Total Intelsat Jackson obligations</i>	<u>11,168,917</u>	<u>9,596,274</u>	<u>11,702,378</u>	<u>10,136,826</u>
<i>Eliminations:</i>				
6.75% Senior Notes due June 2018 owned by Intelsat Connect Finance	\$ —	\$ —	\$ (402,570)	\$ (330,107)
Unamortized prepaid debt issuance costs and discount on 6.75% Senior Notes	—	—	5,490	—
7.75% Senior Notes due June 2021 owned by Intelsat Connect Finance	—	—	(979,168)	(313,334)
Unamortized prepaid debt issuance costs on 7.75% Senior Notes	—	—	8,121	—
8.125% Senior Notes due June 2023 owned by Intelsat Connect Finance	—	—	(111,663)	(32,941)
Unamortized prepaid debt issuance costs on 8.125% Senior Notes	—	—	1,090	—
Unamortized prepaid debt issuance costs and discount on 12.5% Senior Notes	—	—	71,877	—
<i>Total eliminations:</i>	<u>—</u>	<u>—</u>	<u>(1,406,823)</u>	<u>(676,382)</u>
Total Intelsat S.A. long-term debt	<u>\$ 14,611,379</u>	<u>\$ 11,331,337</u>	<u>\$ 14,198,084</u>	<u>\$ 11,281,169</u>
<i>Less:</i>				
Current portion of long-term debt	—	—	—	—
Total long-term debt, excluding current portion	<u>\$ 14,611,379</u>	<u>\$ 11,331,337</u>	<u>\$ 14,198,084</u>	<u>\$ 11,281,169</u>

The fair value for publicly traded instruments is determined using quoted market prices, and for non-publicly traded instruments, fair value is based upon composite pricing from a variety of sources, including market leading data providers, market makers and leading brokerage firms. Substantially all of the inputs used to determine the fair value of our debt are classified as Level 1 inputs within the fair value hierarchy from FASB ASC 820, except our senior secured credit facilities, the inputs for which are classified as Level 2.

In April 2015, the FASB issued ASU 2015-03, *Interest—Imputation of Interest (Subtopic 835-30)*, to simplify the presentation of debt issuance costs. The amendments in this update require that debt issuance costs related to a recognized debt liability are presented in the balance sheet as a direct deduction from the carrying value of that debt liability. ASU 2015-03 is effective for interim and annual periods beginning after December 15, 2015 on a retrospective basis with early adoption allowed. Additionally, in the third

quarter of 2015, the FASB issued an amendment to this update to simplify the presentation of debt issuance costs to include line-of-credit arrangements. We adopted the amendments in the fourth quarter of 2015. The adoption of ASU 2015-03 had the effect of a reduction in each of our other assets and long-term debt, net of current portion of \$121.7 million as of December 31, 2015.

Required principal repayments of long-term debt over the next five years and thereafter as of December 31, 2016 are as follows (in thousands):

Year	Amount
2017	\$ —
2018	97,430
2019	4,595,000
2020	2,200,000
2021	2,170,832
2022 and thereafter	5,459,899
Total principal repayments	14,523,161
Unamortized discounts, premium and prepaid issuance costs	(325,077)
Total Intelsat S.A. long-term debt	\$ 14,198,084

January 2017 Intelsat Luxembourg Exchange Offer

In January 2017, Intelsat Luxembourg completed a debt exchange, (the “Second 2018 Luxembourg Exchange”) whereby it exchanged \$403.3 million aggregate principal amount of its 6 ³/₄% Senior Notes due 2018 (the “2018 Luxembourg Notes”) for an equal aggregate principal amount of newly issued unsecured 12 ¹/₂% Senior Notes due 2024 (the “2024 Luxembourg Notes”). The Second 2018 Luxembourg Exchange consisted of \$377.6 million aggregate principal amount of 2018 Luxembourg Notes held by ICF as a result of the First 2018 Luxembourg Exchange (as defined and described below), together with \$25 million aggregate principal amount of 2018 Luxembourg Notes repurchased by us in the fourth quarter of 2015. We consolidate ICF, the holder of the 2018 Luxembourg Notes exchanged in the Second 2018 Luxembourg Exchange. Accordingly, we do not expect the Second 2018 Luxembourg Exchange to have any material impact on our consolidated balance sheet or income statement.

2016 Debt Transactions

March 2016 Intelsat Jackson Senior Secured Notes Offering

On March 29, 2016, Intelsat Jackson completed an offering of \$1.25 billion aggregate principal amount of 8% Senior Secured Notes due 2024 (the “2024 Secured Jackson Notes”). The 2024 Secured Jackson Notes bear interest at 8% annually and mature in February 2024. These notes are guaranteed by ICF and certain of Intelsat Jackson’s subsidiaries. The net proceeds from this offering have been and, are expected to be, used for general corporate purposes, which may include repayment and repurchase of indebtedness, capital expenditures and working capital and to pay fees and expenses related to the offering. A portion of the net proceeds was used to prepay in full all amounts outstanding under the Intercompany Loan described below under—2015 Debt Transactions—Significant Intercompany Transaction.

May 2016 Intelsat Jackson Notes Repurchases

In May 2016, we repurchased \$459.7 million in aggregate principal amount of Intelsat Jackson’s outstanding 6 ⁵/₈% Senior Notes due 2022 (the “2022 Jackson Notes”). In connection with these repurchases, we recognized a net gain on early extinguishment of debt of \$131.4 million, consisting of the difference between the carrying value of the debt repurchased and the total cash amount paid (including related fees and expenses), together with a write-off of unamortized debt premium and unamortized debt issuance costs.

Subsidiary Guarantee of Intelsat Jackson’s 6 ⁵/₈% Senior Notes due 2022

In May 2016, Intelsat Jackson and each of the subsidiaries of Intelsat Jackson that guarantees loans under Intelsat Jackson’s Secured Credit Agreement executed a supplemental indenture to the indenture governing the 2022 Jackson Notes, following the execution of which such subsidiaries guarantee the 2022 Jackson Notes.

2016 Intelsat Jackson Tender Offers and June 2016 Senior Secured Notes Issuance

In May 2016, Intelsat Jackson commenced tender offers to purchase several tranches of outstanding debt (the “Tender Offers”). In June 2016, Intelsat Jackson completed an issuance of \$490 million aggregate principal amount of 9 ½% Senior Secured Notes due 2022 (the “2022 Jackson Secured Notes”), with an original issue discount of 2.0%. Under the terms of the issuance, in the event that all of the net proceeds of the 2022 Jackson Secured Notes were not applied to fund the Tender Offers, Intelsat Jackson would have been required to use the portion of the net proceeds not so applied to redeem the 2022 Jackson Secured Notes. Since the possible uses of the debt proceeds were restricted to repayment of long-term debt, the net proceeds were classified as restricted cash within long-term assets on the condensed consolidated balance sheet as of June 30, 2016. In July 2016, the net proceeds from the sale of the 2022 Jackson Secured Notes were used to repurchase \$673.5 million aggregate principal amount of the 2022 Jackson Notes pursuant to the terms of the previously commenced Tender Offers, and to pay related fees and expenses. Due to the classification of the net proceeds as restricted cash, both the June 2016 issuance and the July 2016 use of the net proceeds are disclosed supplementally as non-cash financing activities in the accompanying consolidated statement of cash flows. In connection with this repurchase, we recognized a gain on early extinguishment of debt of \$219.6 million during the year ending December 31, 2016, consisting of the difference between the carrying value of the debt repurchased and the total cash amount paid (including related fees and expenses), together with a write-off of unamortized debt premium and unamortized debt issuance costs.

September 2016 Intelsat Jackson Debt Exchange and Consent Solicitation

In September 2016, Intelsat Jackson completed a debt exchange receiving \$141.4 million aggregate principal amount of 2022 Jackson Notes in exchange for \$99.7 million aggregate principal amount of newly issued 2024 Secured Jackson Notes issued and \$17.0 million in cash. In connection with this exchange, Intelsat Jackson also received a consent from holders of \$141.5 million principal amount of 2022 Jackson Notes in exchange for \$9.2 million in cash to amend the indenture governing the 2022 Jackson Notes, among other things to: (i) eliminate substantially all of the restrictive covenants and certain events of default pertaining to the 2022 Jackson Notes, and (ii) waive any defaults or events of default potentially existing under the indenture governing the 2022 Jackson Notes as of September 12, 2016. We have determined the transaction will be accounted for as a modification and not as an extinguishment of debt under ASU 470, *Debt*. As a result, the fees paid to bondholders, including the consent payment, will be amortized over the remaining term of the debt instrument.

December 2016 Intelsat Connect Finance Exchange Offers

First 2018 Luxembourg Exchange—In December 2016, ICF completed an exchange, receiving \$377.6 million aggregate principal amount of 2018 Luxembourg Notes in exchange for \$132.1 million aggregate principal amount of its newly issued unsecured 12 ½% Senior Notes due 2022 (the “2022 ICF Notes”) and \$226.5 million in cash (the “First 2018 Luxembourg Exchange”). The 2022 ICF Notes are guaranteed by Intelsat Luxembourg. We accounted for the First 2018 Luxembourg Exchange as a modification of debt under ASU 470, *Debt*. As a result, remaining unamortized debt issuance costs on the exchanged 2018 Luxembourg Notes will be amortized over the remaining term of the newly issued 2022 ICF Notes. We expensed approximately \$3.3 million of fees related to the First 2018 Luxembourg Exchange.

2021 Luxembourg Exchange—In December 2016, ICF completed an exchange, receiving \$979.2 million aggregate principal amount of Intelsat Luxembourg’s 7 ¾% Senior Notes due 2021 (the “2021 Luxembourg Notes”) in exchange for \$538.4 million aggregate principal amount of its newly issued 2022 ICF Notes and \$29.4 million in cash (the “2021 Luxembourg Exchange”). We accounted for the 2021 Luxembourg Exchange as an extinguishment of debt under ASU 470, *Debt*. In connection with the 2021 Luxembourg Exchange, we recognized a net gain on early extinguishment of debt of \$609.8 million, consisting of the difference between the carrying value of the 2021 Luxembourg Notes exchanged and the fair value of the 2022 ICF Notes issued and the total cash paid (including related fees and expenses), together with a write-off of unamortized debt issuance costs.

2023 Luxembourg Exchange—In December 2016, ICF completed an exchange, receiving \$111.7 million aggregate principal amount of Intelsat Luxembourg’s 8 ⅛% Senior Notes due 2023 (the “2023 Luxembourg Notes”) in exchange for \$61.4 million aggregate principal amount of newly issued 2022 ICF Notes and \$3.3 million in cash (the “2023 Luxembourg Exchange”). We accounted for the 2023 Luxembourg Exchange as an extinguishment of debt under ASU 470, *Debt*. In connection with the 2023 Luxembourg Exchange, we recognized a net gain on early extinguishment of debt of \$69.4 million, consisting of the difference between the carrying value of the 2023 Luxembourg Notes exchanged and the fair value of the 2022 ICF Notes issued and the total cash paid (including related fees and expenses), together with a write-off of unamortized debt issuance costs.

2015 Debt Transactions

2015 Intelsat Luxembourg Notes Repurchases

During the fourth quarter of 2015, we repurchased \$25.0 million in aggregate principal amount of 2018 Luxembourg Notes. In connection with these repurchases, we recognized a gain on early extinguishment of debt of \$7.1 million in the fourth quarter of 2015, consisting of the difference between the carrying value of the debt purchased and the total cash amount paid, and a write-off of unamortized debt issuance costs.

2015 Significant Intercompany Transaction

During the third quarter of 2015, Intelsat Jackson declared and paid a dividend of \$360 million in cash to its direct parent at the time, Intelsat Luxembourg, also one of our subsidiaries. Subsequent to the payment of the dividend, a subsidiary of Intelsat Luxembourg loaned an aggregate principal amount of \$360 million to Intelsat Jackson (the "Intercompany Loan") pursuant to a promissory note. During the first quarter of 2016, Intelsat Jackson prepaid in full all amounts outstanding under the Intercompany Loan, using a portion of the proceeds of the issuance of the 2024 Secured Jackson Notes described above.

Description of Indebtedness

(a) Intelsat Luxembourg

6 3/4% Senior Notes due 2018

Intelsat Luxembourg had \$500.0 million in aggregate principal amount outstanding of the 2018 Luxembourg Notes. Following completion of the Second 2018 Luxembourg Exchange described above, \$96.7 million remained outstanding in January 2017. The 2018 Luxembourg Notes bear interest at 6 3/4% annually and mature in June 2018. The 2018 Luxembourg Notes are guaranteed by Intelsat S.A., Intelsat Investment Holdings S.à r.l., Intelsat Holdings S.A. and Intelsat Investments S.A. (the "Parent Guarantors").

Interest is payable on the 2018 Luxembourg Notes semi-annually on June 1 and December 1. Intelsat Luxembourg may redeem some or all of the notes at the applicable redemption prices set forth in the notes.

The 2018 Luxembourg Notes are senior unsecured obligations of Intelsat Luxembourg and rank equally with Intelsat Luxembourg's other senior unsecured indebtedness.

7 3/4% Senior Notes due 2021

Intelsat Luxembourg had \$2.0 billion in aggregate principal amount of the 2021 Luxembourg Notes outstanding at December 31, 2016. \$979.2 million principal amount were held by ICF. The 2021 Luxembourg Notes bear interest at 7 3/4% annually and mature in June 2021. The 2021 Luxembourg Notes are guaranteed by the Parent Guarantors.

Interest is payable on the 2021 Luxembourg Notes semi-annually on June 1 and December 1. Intelsat Luxembourg may redeem the 2021 Luxembourg Notes, in whole or in part, prior to June 1, 2017 at a price equal to 100% of the principal amount plus the applicable premium described in the notes. Thereafter, Intelsat Luxembourg may redeem some or all of the notes at the applicable redemption prices set forth in the notes.

Intelsat Luxembourg may redeem up to 40% of the aggregate principal amount of the 2021 Luxembourg Notes on or prior to June 1, 2016, with the net cash proceeds of one or more equity offerings by Intelsat Luxembourg or its direct or indirect parent, under the conditions set forth in the notes.

The 2021 Luxembourg Notes are senior unsecured obligations of Intelsat Luxembourg and rank equally with Intelsat Luxembourg's other senior unsecured indebtedness.

8 1/8% Senior Notes due 2023

Intelsat Luxembourg had \$1.0 billion in aggregate principal amount of the 2023 Luxembourg Notes outstanding at December 31, 2016. \$111.7 million principal amount were held by ICF. The 2023 Luxembourg Notes bear interest at 8 1/8% annually and mature in June 2023. The 2023 Luxembourg Notes are guaranteed by the Parent Guarantors.

Interest is payable on the 2023 Luxembourg Notes semi-annually on June 1 and December 1. Intelsat Luxembourg may redeem the 2023 Luxembourg Notes, in whole or in part, prior to June 1, 2018 at a price equal to 100% of the principal amount plus the applicable premium described in the notes. Thereafter, Intelsat Luxembourg may redeem some or all of the notes at the applicable redemption prices set forth in the notes.

Intelsat Luxembourg may redeem up to 40% of the aggregate principal amount of the 2023 Luxembourg Notes on or prior to June 1, 2016, with the net cash proceeds of one or more equity offerings by Intelsat Luxembourg or its direct or indirect parent, under the conditions set forth in the notes.

The 2023 Luxembourg Notes are senior unsecured obligations of Intelsat Luxembourg and rank equally with Intelsat Luxembourg's other senior unsecured indebtedness.

(b) Intelsat Connect Finance

12 1/2% Senior Secured Notes due 2022

ICF had \$731.9 million in aggregate principal amount of 2022 ICF Notes outstanding at December 31, 2016. The 2022 ICF Notes bear interest at 12 1/2% annually and mature in April 2022. These notes are guaranteed by Intelsat Luxembourg.

Interest is payable on the 2022 ICF Notes semi-annually on June 15 and December 15. ICF may redeem some or all of the notes at the applicable redemption prices set forth in the notes.

(c) Intelsat Jackson

9 1/2% Senior Secured Notes due 2022

Intelsat Jackson had \$490 million in aggregate principal amount of 2022 Jackson Secured Notes outstanding at December 31, 2016. The 2022 Jackson Secured Notes bear interest at 9 1/2% annually and mature in September 2022. These notes are guaranteed by ICF and certain of Intelsat Jackson's subsidiaries.

Interest is payable on the 2022 Jackson Secured Notes semi-annually on March 30 and September 30. Intelsat Jackson may redeem some or all of the notes at the applicable redemption prices set forth in the notes.

The 2022 Jackson Secured Notes are senior secured obligations of Intelsat Jackson.

8 % Senior Secured Notes due 2024

Intelsat Jackson had \$1.3 billion in aggregate principal amount of 2024 Jackson Secured Notes outstanding at December 31, 2016. The 2024 Jackson Secured Notes bear interest at 8% annually and mature in February 2024. These notes are guaranteed by ICF and certain of Intelsat Jackson's subsidiaries.

Interest is payable on the 2024 Jackson Secured Notes semi-annually on February 15 and August 15. Intelsat Jackson may redeem some or all of the notes at the applicable redemption prices set forth in the notes.

The 2024 Jackson Secured Notes are senior secured obligations of Intelsat Jackson.

7 1/4% Senior Notes due 2020

Intelsat Jackson had \$2.2 billion in aggregate principal amount of 2020 Jackson Notes outstanding at December 31, 2016. The 2020 Jackson Notes bear interest at 7 1/4% annually and mature in October 2020. These notes are guaranteed by the Parent Guarantors, Intelsat Luxembourg, ICF and certain of Intelsat Jackson's subsidiaries.

Interest is payable on the 2020 Jackson Notes semi-annually on April 15 and October 15. Intelsat Jackson may redeem some or all of the notes at the applicable redemption prices set forth in the notes.

The 2020 Jackson Notes are senior unsecured obligations of Intelsat Jackson and rank equally with Intelsat Jackson's other senior unsecured indebtedness.

7 1/4% Senior Notes due 2019 and 7 1/2% Senior Notes due 2021

Intelsat Jackson had \$1.5 billion in aggregate principal amount of its 7 1/4% Senior Notes due 2019 (the "2019 Jackson Notes") and \$1.15 billion aggregate principal amount of its 7 1/2% Senior Notes due 2021 (the "2021 Jackson Notes" and, together with the 2019 Jackson Notes, the "New Jackson Notes") outstanding at December 31, 2016. The New Jackson Notes are guaranteed by the Parent Guarantors, Intelsat Luxembourg, ICF and certain of Intelsat Jackson's subsidiaries.

Interest is payable on the New Jackson Notes semi-annually on April 1 and October 1.

The New Jackson Notes are senior unsecured obligations of Intelsat Jackson and rank equally with Intelsat Jackson's other senior unsecured indebtedness.

5 1/2% Senior Notes due 2023

Intelsat Jackson had \$2.0 billion in aggregate principal amount of the 2023 Jackson Notes outstanding at December 31, 2016. The 2023 Jackson Notes bear interest at 5 1/2% annually and mature in August 2023. These notes are guaranteed by the Parent Guarantors, Intelsat Luxembourg, ICF and certain of Intelsat Jackson's subsidiaries.

Interest is payable on the 2023 Jackson Notes semi-annually on February 1 and August 1. Intelsat Jackson may redeem some or all of the 2023 Jackson Notes at any time prior to August 1, 2018 at a price equal to 100% of the principal amount thereof plus the applicable premium described in the notes. Thereafter, Intelsat Jackson may redeem some or all of the 2023 Intelsat Jackson Notes at the applicable redemption prices set forth in the notes.

Intelsat Jackson may redeem up to 40% of the aggregate principal amount of the 2023 Jackson Notes prior to August 1, 2016, with the net cash proceeds of one or more equity offerings by Intelsat Jackson or its direct or indirect parent, under the conditions set forth in the notes.

The 2023 Jackson Notes are senior unsecured obligations of Intelsat Jackson and rank equally with Intelsat Jackson's other senior unsecured indebtedness.

Intelsat Jackson Senior Secured Credit Agreement

On January 12, 2011, Intelsat Jackson entered into a secured credit agreement (the "Intelsat Jackson Secured Credit Agreement"), which included a \$3.25 billion term loan facility and a \$500.0 million revolving credit facility, and borrowed the full \$3.25 billion under the term loan facility. The term loan facility required regularly scheduled quarterly payments of principal equal to 0.25% of the original principal amount of the term loan beginning six months after January 12, 2011, with the remaining unpaid amount due and payable at maturity.

Up to \$350.0 million of the revolving credit facility is available for issuance of letters of credit. Additionally, up to \$70.0 million of the revolving credit facility is available for swingline loans. Both the face amount of any outstanding letters of credit and any swingline loans reduce availability under the revolving credit facility on a dollar for dollar basis. Intelsat Jackson is required to pay a commitment fee for the unused commitments under the revolving credit facility, if any, at a rate per annum of 0.375%.

On October 3, 2012, Intelsat Jackson entered into an Amendment and Joinder Agreement (the "Jackson Credit Agreement Amendment"), which amended the Intelsat Jackson Secured Credit Agreement. As a result of the Jackson Credit Agreement Amendment, interest rates for borrowings under the term loan facility and the revolving credit facility were reduced. In April 2013, our corporate family rating was upgraded by Moody's, and as a result, the interest rate for the borrowing under the term loan facility and revolving credit facility were further reduced to LIBOR plus 3.00% or the Above Bank Rate ("ABR") plus 2.00%.

On November 27, 2013, Intelsat Jackson entered into a Second Amendment and Joinder Agreement (the "Second Jackson Credit Agreement Amendment"), which further amended the Intelsat Jackson Secured Credit Agreement. The Second Jackson Credit Agreement Amendment reduced interest rates for borrowings under the term loan facility and extended the maturity of the term loan facility. In addition, it reduced the interest rates applicable to \$450 million of the \$500 million total revolving credit facility and extended the maturity of such portion. As a result of the Second Jackson Credit Agreement Amendment, interest rates for borrowings under the term loan facility and the new tranche of the revolving credit facility are (i) LIBOR plus 2.75%, or (ii) the ABR plus 1.75%. The LIBOR and the ABR, plus applicable margins, related to the term loan facility and the new tranche of the revolving credit facility are determined as specified in the Intelsat Jackson Secured Credit Agreement, as amended by the Second Jackson Credit Agreement Amendment, and the LIBOR will not be less than 1.00% per annum. The maturity date of the term loan facility was extended from April 2, 2018 to June 30, 2019 and the maturity of the new \$450 million tranche of the revolving credit facility was extended from January 12, 2016 to July 12, 2017. The interest rates and maturity date applicable to the \$50 million tranche of the revolving credit facility that was not amended did not change. The Second Jackson Credit Agreement Amendment further removed the requirement for regularly scheduled quarterly principal payments under the term loan facility.

On December 22, 2016, Intelsat Jackson, Intelsat Luxembourg and ICF entered into a Joinder Agreement and a Release Agreement, which further amended the Intelsat Jackson Secured Credit Agreement. These agreements provided for the entry of ICF into the Intelsat Jackson Secured Credit Agreement, as amended, in place of Intelsat Luxembourg and the release of Intelsat Luxembourg from certain of its previous obligations thereunder.

As of December 31, 2016, Intelsat Jackson had \$432.8 million of undrawn capacity under its revolving credit facility. However, use of such capacity was subject to the covenants contained in its other debt agreements. As a result of the completion of senior secured note issuances in March, June and September, 2016, Intelsat Jackson currently has limited access to the undrawn capacity under the revolving credit facility, and has been relying for liquidity purposes, and intends to rely in the future, on a portion of the net proceeds of the March 2016 notes issuance. In January 2017 Intelsat Jackson permanently reduced the revolving credit commitments as defined in the Intelsat Jackson Secured Credit Agreement (defined above) from \$450 million to \$35 million.

Intelsat Jackson's obligations under the Intelsat Jackson Secured Credit Agreement are guaranteed by ICF, and certain of Intelsat Jackson's subsidiaries. Intelsat Jackson's obligations under the Intelsat Jackson Secured Credit Agreement are secured by a first priority security interest in substantially all of the assets of Intelsat Jackson and the guarantors, to the extent legally permissible and subject to certain agreed exceptions, and by a pledge of the equity interests of the subsidiary guarantors and the direct subsidiaries of each guarantor, subject to certain exceptions, including exceptions for equity interests in certain non-U.S. subsidiaries, existing contractual prohibitions and prohibitions under other legal requirements.

The Intelsat Jackson Secured Credit Agreement includes two financial covenants. Intelsat Jackson must maintain a consolidated secured debt to consolidated EBITDA ratio equal to or less than 3.50 to 1.00 at the end of each fiscal quarter, as well as a consolidated EBITDA to consolidated interest expense ratio equal to or greater than 1.75 to 1.00 at the end of each fiscal quarter, in each case as such financial measures are defined in the Intelsat Jackson Secured Credit Agreement. Intelsat Jackson was in compliance with these financial maintenance covenant ratios with a consolidated secured debt to consolidated EBITDA ratio of 2.65 to 1.00 and a consolidated EBITDA to consolidated interest expense ratio of 2.20 to 1.00 as of December 31, 2016.

Note 13 Derivative Instruments and Hedging Activities

Interest Rate Swaps

We are subject to interest rate risk primarily associated with our variable-rate borrowings. Interest rate risk is the risk that changes in interest rates could adversely affect earnings and cash flows. Specific interest rate risk includes: the risk of increasing interest rates on short-term debt; the risk of increasing interest rates for planned new fixed long-term financings; and the risk of increasing interest rates for planned refinancing using long-term fixed-rate debt.

At December 31, 2015, we held interest rate swaps with an aggregate notional amount of \$1.6 billion, which matured in January 2016. These swaps were entered into to economically hedge the variability in cash flow on a portion of the floating-rate loans under our senior secured credit facilities, but were not designated as hedges for accounting purposes.

Put Option Embedded Derivative Instrument

The 2022 ICF Notes contain a contingent put option clause within the host contract, which affords the holders of the notes the option to require us to repurchase such notes at 101% of their principal amount in the event of a change of control, as defined in the indenture governing the notes. We concluded that the contingent put option required bifurcation in accordance with ASC 815, and have recorded the embedded derivative at fair value on the consolidated balance sheet in "Other liabilities." We estimated the fair value of the put option derivative using a valuation technique which reflects the estimated date and probability of a change of control, the fair value of the 2022 ICF Notes, and a credit valuation adjustment reflecting our credit spreads. There was no change in fair value between the issuance date and December 31, 2016. The fair value of the embedded derivative was \$1.5 million at the issuance date of the 2022 ICF Notes and at December 31, 2016.

The following table sets forth the fair value of our derivatives by category (in thousands):

Derivatives not designated as hedging instruments	Balance Sheets Location	December 31, 2015	December 31, 2016
Undesignated interest rate swaps	Other current liabilities	\$ 2,013	\$ —
Put option embedded derivative	Other current liabilities	—	1,496
Total derivatives		\$ 2,013	\$ 1,496

The following table sets forth the effect of the derivative instruments, included in interest expense, net in our consolidated statements of operations (in thousands):

Derivatives not designated as hedging instruments	Presentation in Statements of Operations	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Undesignated interest rate swaps	Included in interest expense, net	\$ 5,649	\$ 3,483	\$ —
Put option embedded derivative	Included in interest expense, net	—	—	—
Total loss on derivative financial instruments		\$ 5,649	\$ 3,483	\$ —

Note 14 Income Taxes

The following table summarizes our total income (loss) before income taxes (in thousands):

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Domestic income (loss) before income taxes	\$ 199,682	\$ (3,966,322)	\$ 938,156
Foreign income before income taxes	59,795	48,382	71,942
Total income (loss) before income taxes	\$ 259,477	\$ (3,917,940)	\$ 1,010,098

The primary reason for the variance in domestic income before income tax was that our Luxembourg entities recorded a net gain on the extinguishment of debt in 2016. In 2015, they recorded impairments of goodwill and other intangible assets. No comparable amounts were recorded in 2014.

The provision for (benefit from) income taxes consisted of the following (in thousands):

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Current income tax provision			
Domestic	\$ 2,306	\$ —	\$ (35)
Foreign	33,311	10,817	25,721
Total	35,617	10,817	25,686
Deferred income tax benefit:			
Domestic	\$ —	\$ —	\$ (80)
Foreign	(12,646)	(9,304)	(9,620)
Total	(12,646)	(9,304)	(9,700)
Total income tax provision (benefit):	\$ 22,971	\$ 1,513	\$ 15,986

The income tax provision (benefit) was different from the amount computed using the Luxembourg statutory income tax rate of 29.22% for the reasons set forth in the following table (in thousands):

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
Expected tax provision (benefit) at Luxembourg statutory income tax rate	\$ 75,819	\$ (1,144,822)	\$ 295,150
Foreign income tax differential	40,099	42,339	51,787
Nontaxable interest income	(53,361)	(67,651)	—
Domestic financing activities	6,038	40,169	(8,279)
Change in tax rate	—	—	416,156
Tax deductible impairment charges in Luxembourg subsidiaries	—	(854,393)	(1,280,759)
Goodwill impairment	—	599,974	—
Changes in unrecognized tax benefits	1,229	(15,465)	(1,629)
Changes in valuation allowance	(24,147)	1,463,774	554,479
Tax effect of 2011 Intercompany Sale	(6,740)	(6,112)	(6,701)
Foreign tax credits	(2,147)	(2,171)	(5,480)
Research and development tax credits	(5,564)	(2,103)	(3,275)
Other	(8,255)	(52,026)	4,537
Total income tax provision (benefit)	\$ 22,971	\$ 1,513	\$ 15,986

The majority of our operations are located in taxable jurisdictions, including Luxembourg, the United States and the United Kingdom. Our Luxembourg companies that file tax returns as a consolidated group generated a taxable loss for the year ended December 31, 2016. Due to our cumulative losses in recent years, and the inherent uncertainty associated with the realization of taxable income in the foreseeable future, we recorded a full valuation allowance against the net operating losses generated in Luxembourg. The difference between tax expense (benefit) reported in the consolidated statements of operations and tax computed at statutory rates is attributable to the valuation allowance on losses generated in Luxembourg, the provision for foreign taxes, which were principally in the United States and the United Kingdom, as well as withholding taxes on revenue earned in many of the foreign markets in which we operate.

Our Luxembourg net operating loss includes the effect of Luxembourg GAAP to U.S. GAAP differences, primarily related to fair value adjustments attributable to the migration of certain holding companies and subsidiaries' jurisdiction of organization from Bermuda to Luxembourg on December 15, 2009 and the result of a series of internal transactions and related steps completed on January 12, 2011, that reorganized the ownership of our assets among our subsidiaries and effectively combined the legacy business of Intelsat Subsidiary Holding Company S.A. and Intelsat Corporation. Another reason for our Luxembourg net operating loss is the impairment charges against Luxembourg GAAP values of certain intangible assets and investments in subsidiaries.

The following table details the composition of the net deferred tax balances as of December 31, 2015 and 2016 (in thousands):

	As of December 31, 2015	As of December 31, 2016
Long-term deferred taxes, net	\$ (160,802)	\$ (168,445)
Other assets	12,203	15,181
Net deferred taxes	\$ (148,599)	\$ (153,264)

The components of the net deferred tax liability were as follows (in thousands):

	As of December 31, 2015	As of December 31, 2016
Deferred tax assets:		
Accruals and advances	\$ 26,672	\$ 31,015
Amortizable intangible assets	739,058	17,549
Performance incentives	17,596	14,599
Customer deposits	17,771	20,664
Bad debt reserve	3,607	8,659
Accrued retirement benefits	72,520	67,988
Disallowed interest expense carryforward	111,038	109,575
Net operating loss carryforward	2,232,359	3,937,736
Tax credits	36,656	17,562
Other	14,646	16,491
Total deferred tax assets	<u>3,271,923</u>	<u>4,241,848</u>
Deferred tax liabilities:		
Satellites and other property and equipment	(172,574)	(186,390)
Amortizable intangible assets	(30,788)	(379,653)
Non-amortizable intangible assets	(116,526)	(109,844)
Tax basis differences in investments and affiliates	(218,583)	(231,210)
Other	(21,040)	(72,524)
Total deferred tax liabilities	<u>(559,511)</u>	<u>(979,621)</u>
Valuation allowance	<u>(2,861,011)</u>	<u>(3,415,491)</u>
Total net deferred tax liabilities	<u>\$ (148,599)</u>	<u>\$ (153,264)</u>

In November 2015, the FASB issued ASU 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes* to simplify the presentation of deferred income taxes. The amendments in this update require that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position. ASU 2015-17 is effective for interim and annual periods beginning after December 15, 2016 on a prospective or retrospective basis with early adoption allowed. We adopted the amendments in the fourth quarter of 2015 on a prospective basis.

As of December 31, 2015 and 2016, our consolidated balance sheets included a deferred tax asset in the amount of \$2.2 billion and \$3.9 billion, respectively, attributable to the future benefit from the utilization of certain net operating loss carryforwards. The reason for this increase is that during the year ending December 31, 2016, our Luxembourg subsidiaries recorded various impairment charges in their Luxembourg GAAP books. Due to our full valuation allowance on deferred tax assets in our Luxembourg subsidiaries, these impairment charges had no impact on our tax expense. In addition, our balance sheets as of December 31, 2015 and December 31, 2016 included \$46.3 million and \$28.7 million of deferred tax assets, respectively, attributable to the future benefit from the utilization of tax credit carryforwards. As of December 31, 2016, we had tax-effected U.S. federal, state and other foreign tax net operating loss carryforwards of \$56.4 million expiring, for the most part, between 2021 and 2036, and tax effected Luxembourg net operating loss carryforwards of \$3.9 billion without expiration. These Luxembourg net operating loss carryforwards were caused primarily by our interest expense, satellite depreciation and amortization and impairment charges under Luxembourg GAAP related to investments in subsidiaries, goodwill and other intangible assets. Our alternative minimum tax credit carryforward of \$8.9 million may be carried forward indefinitely, our foreign tax credit carryforward of \$17.2 million may be carried forward to years between 2023 and 2026, and the \$2.6 million research and development credit may be carried forward to 2036.

Our valuation allowance as of December 31, 2015 and 2016 was \$2.9 billion and \$3.4 billion, respectively. Almost all of the valuation allowance relates to Luxembourg net operating loss carryforwards and deferred tax assets created by differences between U.S. GAAP and Luxembourg tax basis. Certain operations of our subsidiaries are controlled by various intercompany agreements which provide these subsidiaries with predictable operating profits. Other subsidiaries, principally Luxembourg subsidiaries, are subject to the risks of our overall business conditions which make their earnings less predictable.

The following table summarizes the activity related to our unrecognized tax benefits (in thousands):

	<u>2015</u>	<u>2016</u>
Balance at January 1	\$ 67,135	\$ 40,248
Increases related to current year tax positions	3,237	2,301
Increases related to prior year tax positions	962	1,530
Decreases related to prior year tax positions	(1,068)	(878)
Expiration of statute of limitations for the assessment of taxes	(30,018)	(7,034)
Balance at December 31	<u>\$ 40,248</u>	<u>\$ 36,167</u>

As of December 31, 2015 and December 31, 2016 our gross unrecognized tax benefits were \$40.2 million and \$36.2 million, respectively (including interest and penalties), of which \$29.6 million and \$27.9 million, respectively, if recognized, would affect our effective tax rate. As of December 31, 2015 and 2016, we had recorded reserves for interest and penalties in the amount of \$5.0 million and \$3.1 million, respectively. We continue to recognize interest and, to the extent applicable, penalties with respect to the unrecognized tax benefits as income tax expense. Since December 31, 2016, the change in the balance of unrecognized tax benefits consisted of an increase of \$2.3 million related to current tax positions, an increase of \$1.5 million related to prior tax positions, a decrease of \$0.8 million related to prior tax positions and due to a settlement of an audit, and a decrease of \$7.0 million due to the expiration of statute of limitations for the assessment of taxes.

We operate in various taxable jurisdictions throughout the world and our tax returns are subject to audit and review from time to time. We consider Luxembourg, the United States, the United Kingdom and Brazil to be our significant tax jurisdictions. Our Luxembourg, U.S., United Kingdom and Brazilian subsidiaries are subject to income tax examination for periods after December 31, 2010. Within the next twelve months, we believe that there are no jurisdictions in which the outcome of unresolved tax issues or claims is likely to be material to our results of operations, financial position or cash flows.

On March 3, 2014, Intelsat Corp, Intelsat Global Service LLC, Intelsat General, Intelsat USA License LLC and Intelsat USA Sales LLC were notified by the District of Columbia Office of the Tax Revenue of its intent to initiate an audit for the tax years ending 2010 and 2011. In June 2016, we received a notice of proposed audit changes with no material assessment.

Note 15 Contractual Commitments

In the further development and operation of our commercial global communications satellite system, significant additional expenditures are anticipated. In connection with these and other expenditures, we have a significant amount of long-term debt, as described in “Note 12—Long-Term Debt.” In addition to these debt and related interest obligations, we have expenditures represented by other contractual commitments. The additional expenditures as of December 31, 2016 and the expected year of payment are as follows (in thousands):

	<u>Satellite Construction and Launch Obligations</u>	<u>Satellite Performance Incentive Obligations</u>	<u>Horizons-3 Satellite LLC Contribution Obligations⁽¹⁾</u>	<u>Operating Leases</u>	<u>Sublease Rental Income</u>	<u>Customer and Vendor Contracts</u>	<u>Total</u>
2017	\$ 482,546	\$ 44,878	\$ 21,700	\$ 14,304	\$ (410)	\$ 118,672	\$ 681,690
2018	234,238	34,147	36,400	13,795	(407)	47,327	365,500
2019	121,925	32,224	4,600	13,597	(355)	41,157	213,148
2020	32,269	32,150	11,700	13,128	(263)	17,336	106,320
2021	30,682	31,354	13,300	12,954	(48)	870	89,112
2022 and thereafter	47,814	187,459	74,700	106,357	(184)	—	416,146
Total contractual commitments	<u>\$ 949,474</u>	<u>\$ 362,212</u>	<u>\$ 162,400</u>	<u>\$ 174,135</u>	<u>\$ (1,667)</u>	<u>\$ 225,362</u>	<u>\$ 1,871,916</u>

(1) See Note 10(b)—Investments—Horizons-3 Satellite LLC.

(a) Satellite Construction and Launch Obligations

As of December 31, 2016, we had approximately \$949.5 million of expenditures remaining under our existing satellite construction and launch contracts. Satellite launch and in-orbit insurance contracts related to future satellites to be launched are cancelable up to thirty days prior to the satellite’s launch. As of December 31, 2016, we did not have any non-cancelable commitments related to existing launch insurance or in-orbit insurance contracts for satellites to be launched.

The satellite construction contracts typically require that we make progress payments during the period of the satellites' construction. The satellite construction contracts contain provisions that allow us to terminate the contracts with or without cause. If terminated without cause, we would forfeit the progress payments and be subject to termination payments that escalate with the passage of time. If terminated for cause, we would be entitled to recover any payments we made under the contracts and certain liquidated damages as specified in the contracts.

(b) Satellite Performance Incentive Obligations

Satellite construction contracts also typically require that we make orbital incentive payments (plus interest as defined in each agreement with the satellite manufacturer) over the orbital life of the satellite. The incentive obligations may be subject to reduction or refund if the satellite fails to meet specific technical operating standards. As of December 31, 2016, we had \$362.2 million of satellite performance incentive obligations, including future interest payments.

(c) Operating Leases

We have commitments for operating leases primarily relating to equipment and office facilities, including our U.S. Administrative Headquarters in McLean, Virginia. As of December 31, 2016, the total obligation related to operating leases, net of sublease income on leased facilities and rental income, was \$172.5 million. Rental income and sublease income are included in other expense, net in the accompanying consolidated statements of operations.

Total rent expense for the years ended December 31, 2014, 2015 and 2016, was \$13.0 million, \$14.9 million and \$14.0 million, respectively.

(d) Customer and Vendor Contracts

We have contracts with certain customers that require us to provide equipment, services and other support during the term of the related contracts. We also have long-term contractual obligations with service providers primarily for the operation of certain of our satellites. As of December 31, 2016, we had commitments under these customer and vendor contracts which totaled approximately \$225.4 million related to the provision of equipment, services and other support.

Note 16 Contingencies

We are subject to litigation in the ordinary course of business. Management does not believe that the resolution of any pending proceedings would have a material adverse effect on our financial position or results of operations.

Note 17 Business and Geographic Segment Information

We operate in a single industry segment in which we provide satellite services to our communications customers around the world. Revenue by region is based on the locations of customers to which services are billed. Our satellites are in geosynchronous orbit, and consequently are not attributable to any geographic location. Of our remaining assets, substantially all are located in the United States.

The geographic distribution of our revenue based upon billing region of the customer was as follows:

	Year Ended December 31, 2014	Year Ended December 31, 2015	Year Ended December 31, 2016
North America	45%	47%	49%
Europe	17%	15%	14%
Latin America and Caribbean	16%	15%	15%
Africa and Middle East	14%	14%	13%
Asia-Pacific	8%	9%	9%

Approximately 4%, 7% and 8% of our revenue was derived from our largest customer during each of the years ended December 31, 2014, 2015 and 2016, respectively. The ten largest customers accounted for approximately 26%, 29% and 31% of our revenue for the years ended December 31, 2014, 2015 and 2016, respectively.

We earn revenue primarily by providing services to our customers using our satellite transponder capacity. Our customers generally obtain satellite capacity from us by placing an order pursuant to one of several master customer service agreements. On-network services are comprised primarily of services delivered on our owned network infrastructure, as well as commitments for third-party capacity, generally long-term in nature, that we integrate and market as part of our owned infrastructure. In the case of third-party services in support of government applications, the commitments for third-party capacity are shorter and matched to the government contracting period, and thus remain classified as off-network services. Off-network services can include transponder services and other satellite-based transmission services, such as mobile satellite services (“MSS”), which are sourced from other operators, often in frequencies not available on our network. Under the category Off-Network and Other Revenues, we also include revenues from consulting and other services. In addition, effective first quarter 2015, certain revenues have been reclassified between transponder services and managed services across our customer sets in order to better reflect the nature of the underlying business.

Our revenues were derived from the following services, with Off-Network and Other Revenues shown separately from On-Network Revenues (in thousands, except percentages):

	Year Ended December 31, 2014		Year Ended December 31, 2015		Year Ended December 31, 2016	
On-Network Revenues						
Transponder services	\$ 1,779,458	72%	\$ 1,705,568	73%	\$ 1,561,108	71%
Managed services	415,269	17%	405,330	17%	414,758	19%
Channel	58,669	2%	38,872	2%	9,134	0%
Total on-network revenues	2,253,396	91%	2,149,770	91%	1,985,000	91%
Off-Network and Other Revenues						
Transponder, MSS and other off-network services	171,637	7%	160,063	7%	157,212	7%
Satellite-related services	47,353	2%	42,688	2%	45,835	2%
Total off-network and other revenues	218,990	9%	202,751	9%	203,047	9%
Total	\$ 2,472,386	100%	\$ 2,352,521	100%	\$ 2,188,047	100%

Note 18 Related Party Transactions

(a) Shareholders’ Agreements

Certain shareholders of Intelsat Global S.A. entered into shareholders’ agreements on February 4, 2008. The shareholders’ agreements were assigned to Intelsat S.A. by amendments effective as of March 30, 2012. The shareholders’ agreements and the articles of incorporation of Intelsat S.A. provided, among other things, for the governance of Intelsat S.A. and its subsidiaries and provided specific rights to and limitations upon the holders of Intelsat S.A.’s share capital with respect to shares held by such holders. In connection with the IPO in April 2013, these articles of incorporation and shareholders’ agreements were amended.

(b) Governance Agreement

Prior to the consummation of the IPO, we entered into a governance agreement (as amended, the “Governance Agreement”) with our shareholder affiliated with BC Partners (the “BC Shareholder”), our shareholder affiliated with Silver Lake (the “Silver Lake Shareholder”) and David McGlade (collectively with the BC Shareholder and the Silver Lake Shareholder, the “Governance Shareholders”). The Governance Agreement contains provisions relating to the composition of our board of directors and certain other matters.

(c) Indemnification Agreements

We have entered into agreements with our executive officers and directors to provide contractual indemnification in addition to the indemnification provided for in our articles of incorporation.

(d) Horizons Holdings

We have a 50% ownership interest in Horizons Holdings as a result of a joint venture with JSAT (see Note 10(a)—Investments—Horizons Holdings).

(e) *Horizons-3 Satellite LLC*

We have a 50% ownership interest in Horizons-3 Satellite LLC as a result of a joint venture with JSAT (see Note 10(b)—Investments—Horizons-3 Satellite LLC).

Note 19 Quarterly Results of Operations (in thousands, unaudited)

2015	Quarter Ended			
	March 31	June 30	September 30	December 31
Revenue ⁽¹⁾	\$ 602,306	\$ 598,109	\$ 580,847	\$ 571,259
Income (loss) from operations ⁽¹⁾	292,762	290,842	284,999	(3,897,122)
Net income (loss)	55,665	61,236	78,967	(4,115,321) ⁽³⁾
Net income (loss) attributable to Intelsat S.A.	54,717	60,220	77,982	(4,116,306) ⁽³⁾
Net income (loss) attributable to common shareholders	54,717	50,301	77,982	(4,116,306) ⁽³⁾
Net income (loss) per share attributable to Intelsat S.A.:				
Basic ⁽²⁾	\$ 0.51	\$ 0.47	\$ 0.73	\$ (38.29)
Diluted ⁽²⁾	0.47	0.47	0.66	(38.29)

2016	Quarter Ended			
	March 31	June 30	September 30	December 31
Revenue ⁽¹⁾	\$ 552,643	\$ 541,983	\$ 542,727	\$ 550,694
Income from operations ⁽¹⁾	239,173	227,324	220,410	233,705
Net income	16,292	117,412 ⁽⁴⁾	196,605 ⁽⁴⁾	663,803 ⁽⁴⁾
Net income attributable to Intelsat S.A.	15,326	116,429 ⁽⁴⁾	195,622 ⁽⁴⁾	662,820 ⁽⁴⁾
Net income attributable to common shareholders	15,326	116,429 ⁽⁴⁾	195,622 ⁽⁴⁾	662,820 ⁽⁴⁾
Net income per share attributable to Intelsat S.A.:				
Basic ⁽²⁾	\$ 0.14	\$ 1.02	\$ 1.66	\$ 5.62
Diluted ⁽²⁾	0.13	0.98	1.65	5.56

- (1) Our quarterly revenue and operating income (loss) are generally not impacted by seasonality, as customer contracts for satellite utilization are generally long-term. Revenue declines shown above were primarily due to declines from our network services customers, mainly due to reduced volumes resulting from non-renewals and point-to-point connectivity and certain cellular backhaul services which are eroding to fiber alternatives, together with non-renewals and renewal pricing at lower rates for enterprise network services. Additional declines in Channel services related to the continued migration of international point-to-point satellite traffic to fiber optic cable, a trend which we expect will continue.
- (2) Basic and diluted earnings per share are computed independently for each of the quarters presented. Therefore, the sum of quarterly basic and diluted per share information may not equal annual basic and diluted earnings per share.
- (3) Includes a \$4.2 billion impairment of goodwill and other intangibles.
- (4) The quarter ended June 30, 2016 includes a \$131.4 million gain on early extinguishment of debt related to the May 2016 Intelsat Jackson Notes Repurchase. The quarter ended September 30, 2016 includes a \$219.6 million gain on early extinguishment of debt related to the September 2016 Intelsat Jackson Debt Exchange and Consent Solicitation. The quarter ended December 31, 2016 includes a \$679.1 million gain on early extinguishment of debt related to the December 2016 ICF Exchange Offers.

Note 20 Supplemental Consolidating Financial Information

On April 5, 2011, Intelsat Jackson completed an offering of \$2.65 billion aggregate principal amount of the New Jackson Notes. The New Jackson Notes are fully and unconditionally guaranteed, jointly and severally, by Intelsat S.A., Intelsat Holdings, Intelsat Investment Holdings S.à r.l. and Intelsat Investments (collectively, the “Parent Guarantors”); Intelsat Luxembourg and certain wholly-owned subsidiaries of Intelsat Jackson (the “Subsidiary Guarantors”).

On April 26, 2012, Intelsat Jackson completed an offering of \$1.2 billion aggregate principal amount of the 2020 Jackson Notes, which are fully and unconditionally guaranteed, jointly and severally, by the Parent Guarantors, Intelsat Luxembourg, ICF and the Subsidiary Guarantors.

Separate financial statements of the Parent Guarantors, Intelsat Luxembourg, ICF, Intelsat Jackson and the Subsidiary Guarantors are not presented because management believes that such financial statements would not be material to investors. Investments in Intelsat Jackson's subsidiaries in the following condensed consolidating financial information are accounted for under the equity method of accounting. Consolidating adjustments include the following:

- elimination of investment in subsidiaries;
- elimination of intercompany accounts;
- elimination of intercompany sales between guarantor and non-guarantor subsidiaries; and
- elimination of equity in earnings (losses) of subsidiaries.

We had other comprehensive loss of \$52.1 million for the year ended December 31, 2014, and other comprehensive income of \$34.1 million and \$2.1 million for the years ended December 31, 2015 and 2016, respectively. Other comprehensive income (loss) is fully attributable to the Subsidiary Guarantors, which are also consolidated within Intelsat Jackson.

INTELSAT S.A. AND SUBSIDIARIES
CONDENSED CONSOLIDATING BALANCE SHEET
AS OF DECEMBER 31, 2016
(in thousands)

	<u>Intelsat S.A. and Other Parent Guarantors</u>	<u>Intelsat Luxembourg</u>	<u>Intelsat Connect Finance</u>	<u>Intelsat Jackson</u>	<u>Jackson Subsidiary Guarantors</u>	<u>Non- Guarantor Subsidiaries</u>	<u>Consolidation and Eliminations</u>	<u>Consolidated</u>
ASSETS								
Current assets:								
Cash and cash equivalents	\$ 552	\$ 59,752	\$ 29,985	\$ 495,225	\$ 414,339	\$ 80,510	\$ (414,339)	\$ 666,024
Receivables, net of allowance	2	—	—	151,345	151,322	51,689	(151,322)	203,036
Prepaid expenses and other current assets	882	3	—	48,320	48,263	6,703	(48,263)	55,908
Intercompany receivables	—	—	8,867	557,959	—	302,118	(868,944)	—
Total current assets	<u>\$ 1,436</u>	<u>\$ 59,755</u>	<u>\$ 38,852</u>	<u>\$ 1,252,849</u>	<u>\$ 613,924</u>	<u>\$ 441,020</u>	<u>\$ (1,482,868)</u>	<u>\$ 924,968</u>
Satellites and other property and equipment, net	—	—	—	6,096,459	6,096,459	89,383	(6,096,459)	6,185,842
Goodwill	—	—	—	2,620,627	2,620,627	—	(2,620,627)	2,620,627
Non-amortizable intangible assets	—	—	—	2,452,900	2,452,900	—	(2,452,900)	2,452,900
Amortizable intangible assets, net	—	—	—	391,838	391,838	—	(391,838)	391,838
Investment in affiliates	(3,086,095)	(23,113)	(651,909)	184,804	184,804	—	3,391,509	—
Other assets	169	—	681,910	303,623	303,623	62,123	(985,614)	365,834
Total assets	<u>\$ (3,084,490)</u>	<u>\$ 36,642</u>	<u>\$ 68,853</u>	<u>\$ 13,303,100</u>	<u>\$ 12,664,175</u>	<u>\$ 592,526</u>	<u>\$ (10,638,797)</u>	<u>\$ 12,942,009</u>
LIABILITIES AND SHAREHOLDERS' EQUITY (DEFICIT)								
Current liabilities:								
Accounts payable and accrued liabilities	\$ 23,153	\$ —	\$ 10,830	\$ 221,564	\$ 218,897	\$ 27,351	\$ (218,897)	\$ 282,898
Accrued interest payable	—	13,158	2,287	189,395	3,146	—	(3,146)	204,840
Deferred satellite performance incentives	—	—	—	23,455	23,455	—	(23,455)	23,455
Other current liabilities	—	—	—	219,389	219,389	3,081	(219,389)	222,470
Intercompany payables	502,355	366,589	—	—	2,183,616	—	(3,052,560)	—
Total current liabilities	<u>525,508</u>	<u>379,747</u>	<u>13,117</u>	<u>653,803</u>	<u>2,648,503</u>	<u>30,432</u>	<u>(3,517,447)</u>	<u>733,663</u>
Long-term debt, net of current portion	—	3,467,902	434,627	11,702,378	—	—	(1,406,823)	14,198,084
Deferred satellite performance incentives, net of current portion	—	—	—	210,706	210,706	—	(210,706)	210,706
Deferred revenue, net of current portion	—	—	—	906,521	906,521	223	(906,521)	906,744
Deferred income taxes	—	—	—	156,081	156,081	12,444	(156,161)	168,445
Accrued retirement benefits	—	—	—	186,086	186,086	198	(186,086)	186,284
Other long-term liabilities	—	—	1,554	139,434	139,434	7,093	(139,434)	148,081
Shareholders' equity (deficit):								
Common shares	1,180	7,202	—	200	5,558,066	24	(5,565,492)	1,180
Other shareholders' equity (deficit)	<u>(3,611,178)</u>	<u>(3,818,209)</u>	<u>(380,445)</u>	<u>(652,109)</u>	<u>2,858,778</u>	<u>542,112</u>	<u>1,449,873</u>	<u>(3,611,178)</u>
Total liabilities and shareholders' equity	<u>\$ (3,084,490)</u>	<u>\$ 36,642</u>	<u>\$ 68,853</u>	<u>\$ 13,303,100</u>	<u>\$ 12,664,175</u>	<u>\$ 592,526</u>	<u>\$ (10,638,797)</u>	<u>\$ 12,942,009</u>

(Certain totals may not add due to the effects of rounding)

INTELSAT S.A. AND SUBSIDIARIES
CONDENSED CONSOLIDATING BALANCE SHEET
AS OF DECEMBER 31, 2015
(in thousands)

	Intelsat S.A. and Other Parent Guarantors	Intelsat Luxembourg	Intelsat Jackson	Jackson Subsidiary Guarantors	Non- Guarantor Subsidiaries	Consolidation and Eliminations	Consolidated
ASSETS							
Current assets:							
Cash and cash equivalents	\$ 16,941	\$ 760	\$ 109,959	\$ 89,641	\$ 43,881	\$ (89,641)	\$ 171,541
Receivables, net of allowance	—	—	173,869	173,638	58,906	(173,638)	232,775
Prepaid expenses and other current assets	919	—	28,633	28,593	6,680	(29,041)	35,784
Intercompany receivables	—	116,396	49,539	—	323,173	(489,108)	—
Total current assets	<u>17,860</u>	<u>117,156</u>	<u>362,000</u>	<u>291,872</u>	<u>432,640</u>	<u>(781,428)</u>	<u>440,100</u>
Satellites and other property and equipment, net	—	—	5,897,103	5,897,103	91,214	(5,897,103)	5,988,317
Goodwill	—	—	2,620,627	2,620,627	—	(2,620,627)	2,620,627
Non-amortizable intangible assets	—	—	2,452,900	2,452,900	—	(2,452,900)	2,452,900
Amortizable intangible assets, net	—	—	440,330	440,330	—	(440,330)	440,330
Investment in affiliates	(4,120,570)	(769,452)	139,983	139,983	—	4,610,056	—
Other assets	87	—	278,771	278,771	32,458	(278,771)	311,316
Total assets	<u>\$ (4,102,623)</u>	<u>\$ (652,296)</u>	<u>\$ 12,191,714</u>	<u>\$ 12,121,586</u>	<u>\$ 556,312</u>	<u>\$ (7,861,103)</u>	<u>\$ 12,253,590</u>
LIABILITIES AND SHAREHOLDERS' EQUITY							
Current liabilities:							
Accounts payable and accrued liabilities	\$ 28,622	\$ 10	\$ 154,247	\$ 154,861	\$ 29,053	\$ (155,309)	\$ 211,484
Accrued interest payable	—	22,360	139,133	1,964	—	(1,964)	161,493
Deferred satellite performance incentives	—	—	19,411	19,411	—	(19,411)	19,411
Other current liabilities	—	—	168,261	166,248	3,793	(166,248)	172,054
Intercompany payables	489,108	—	—	2,038,908	—	(2,528,016)	—
Total current liabilities	<u>517,730</u>	<u>22,370</u>	<u>481,052</u>	<u>2,381,392</u>	<u>32,846</u>	<u>(2,870,948)</u>	<u>564,442</u>
Long-term debt, net of current portion	—	3,442,462	11,168,917	—	—	—	14,611,379
Deferred satellite performance incentives, net of current portion	—	—	162,177	162,177	—	(162,177)	162,177
Deferred revenue, net of current portion	—	—	1,010,019	1,010,019	223	(1,010,019)	1,010,242
Deferred income taxes	—	—	150,283	150,283	10,519	(150,283)	160,802
Accrued retirement benefits	—	—	195,170	195,170	215	(195,170)	195,385
Other long-term liabilities	—	—	161,420	161,420	8,096	(161,420)	169,516
Shareholders' equity (deficit):							
Common shares	1,076	7,202	3,114,981	5,558,066	24	(8,680,273)	1,076
Preferred shares	35	—	—	—	—	—	35
Other shareholders' equity (deficit)	<u>(4,621,464)</u>	<u>(4,124,330)</u>	<u>(4,252,305)</u>	<u>2,503,059</u>	<u>504,389</u>	<u>5,369,187</u>	<u>(4,621,464)</u>
Total liabilities and shareholders' equity	<u>\$ (4,102,623)</u>	<u>\$ (652,296)</u>	<u>\$ 12,191,714</u>	<u>\$ 12,121,586</u>	<u>\$ 556,312</u>	<u>\$ (7,861,103)</u>	<u>\$ 12,253,590</u>

(Certain totals may not add due to the effects of rounding)

INTELSAT S.A. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF OPERATIONS
FOR THE YEAR ENDED DECEMBER 31, 2016
(in thousands)

	<u>Intelsat S.A. and Other Parent Guarantors</u>	<u>Intelsat Luxembourg</u>	<u>Intelsat Connect Finance</u>	<u>Intelsat Jackson</u>	<u>Jackson Subsidiary Guarantors</u>	<u>Non- Guarantor Subsidiaries</u>	<u>Consolidation and Eliminations</u>	<u>Consolidated</u>
Revenue	\$ 2,952	\$ —	\$ —	\$ 1,999,114	\$ 1,999,129	\$ 562,372	\$ (2,375,520)	\$ 2,188,047
Operating expenses:								
Direct costs of revenue (excluding depreciation and amortization)	—	—	—	264,587	264,587	452,899	(640,926)	341,147
Selling, general and administrative	7,884	168	61	140,952	137,488	79,083	(134,239)	231,397
Depreciation and amortization	—	—	—	676,542	676,542	18,349	(676,542)	694,891
Total operating expenses	7,884	168	61	1,082,081	1,078,617	550,331	(1,451,707)	1,267,435
Income (loss) from operations	(4,932)	(168)	(61)	917,033	920,512	12,041	(923,813)	920,612
Interest expense (income), net	13,596	272,791	8	661,671	183,931	(9,505)	(183,991)	938,501
Gain on early extinguishment of debt	—	—	—	350,962	—	—	679,130	1,030,092
Subsidiary income	1,008,614	605,685	597,995	9,869	9,869	—	(2,232,032)	—
Other income (expense), net	(4)	—	—	(5,909)	1,812	3,808	(1,812)	(2,105)
Income before income taxes	990,082	332,726	597,926	610,284	748,262	25,354	(2,294,536)	1,010,098
Provision for (benefit from) income taxes	(115)	—	—	12,290	12,290	3,811	(12,290)	15,986
Net income	990,197	332,726	597,926	597,994	735,972	21,543	(2,282,246)	994,112
Net income attributable to noncontrolling interest	—	—	—	—	—	(3,915)	—	(3,915)
Net income attributable to Intelsat S.A.	\$ 990,197	\$ 332,726	\$ 597,926	\$ 597,994	\$ 735,972	\$ 17,628	\$ (2,282,246)	\$ 990,197

(Certain totals may not add due to the effects of rounding)

INTELSAT S.A. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF OPERATIONS
FOR THE YEAR ENDED DECEMBER 31, 2015
(in thousands)

	Intelsat S.A. and Other Parent Guarantors	Intelsat Luxembourg	Intelsat Jackson	Jackson Subsidiary Guarantors	Non- Guarantor Subsidiaries	Consolidation and Eliminations	Consolidated
Revenue	\$ —	\$ —	\$ 2,160,235	\$ 2,160,251	\$ 554,831	\$ (2,522,796)	\$ 2,352,521
Operating expenses:							
Direct costs of revenue (exclusive of depreciation and amortization)	—	—	241,603	241,603	449,274	(603,979)	328,501
Selling, general and administrative	7,912	193	126,331	125,494	65,143	(125,661)	199,412
Impairment of goodwill and other intangibles	—	—	4,165,400	4,165,400	—	(4,165,400)	4,165,400
Depreciation and amortization	—	—	654,784	654,784	32,945	(654,784)	687,729
Total operating expenses	7,912	193	5,188,118	5,187,281	547,362	(5,549,824)	5,381,042
Income (loss) from operations	(7,912)	(193)	(3,027,883)	(3,027,030)	7,469	3,027,028	(3,028,521)
Interest expense (income), net	10,723	274,451	613,162	36,059	(8,057)	(36,059)	890,279
Gain on early extinguishment of debt	—	7,061	—	—	—	—	7,061
Subsidiary income (loss)	(3,904,747)	(3,614,952)	11,983	11,983	—	7,495,733	—
Other income (expense), net	—	—	4,367	(5,136)	(10,568)	5,136	(6,201)
Income (loss) before income taxes	(3,923,382)	(3,882,535)	(3,624,695)	(3,056,242)	4,958	10,563,956	(3,917,940)
Provision for (benefit from) income taxes	3	—	(1,871)	(1,885)	3,381	1,885	1,513
Net income (loss)	(3,923,385)	(3,882,535)	(3,622,824)	(3,054,357)	1,577	10,562,071	(3,919,453)
Net income attributable to noncontrolling interest	—	—	—	—	(3,934)	—	(3,934)
Net income (loss) attributable to Intelsat S.A.	(3,923,385)	(3,882,535)	(3,622,824)	(3,054,357)	(2,357)	10,562,071	(3,923,387)
Cumulative preferred dividends	(9,919)	—	—	—	—	—	(9,919)
Net income (loss) attributable to common shareholders	\$ (3,933,304)	\$ (3,882,535)	\$ (3,622,824)	\$ (3,054,357)	\$ (2,357)	\$ 10,562,071	\$ (3,933,306)

(Certain totals may not add due to the effects of rounding)

INTELSAT S.A. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF OPERATIONS
FOR THE YEAR ENDED DECEMBER 31, 2014
(in thousands)

	Intelsat S.A. and Other Parent Guarantors	Intelsat Luxembourg	Intelsat Jackson	Jackson Subsidiary Guarantors	Non- Guarantor Subsidiaries	Consolidation and Eliminations	Consolidated
Revenue	\$ —	\$ —	\$ 2,281,331	\$ 2,281,348	\$ 592,317	\$ (2,682,610)	\$ 2,472,386
Operating expenses:							
Direct costs of revenue (exclusive of depreciation and amortization)	—	—	257,999	257,999	491,460	(659,110)	348,348
Selling, general and administrative	7,547	139	132,379	131,874	57,493	(132,025)	197,407
Depreciation and amortization	—	—	644,597	644,597	34,754	(644,597)	679,351
Total operating expenses	7,547	139	1,034,975	1,034,470	583,707	(1,435,732)	1,225,106
Income (loss) from operations	(7,547)	(139)	1,246,356	1,246,878	8,610	(1,246,878)	1,247,280
Interest expense, net	10,153	274,253	660,763	6,605	(382)	(6,605)	944,787
Loss on early extinguishment of debt	—	—	(40,423)	—	—	—	(40,423)
Subsidiary income	250,281	545,402	14,729	14,729	—	(825,141)	—
Other income (expense), net	2	—	2,864	2,770	(5,461)	(2,768)	(2,593)
Income before income taxes	232,583	271,010	562,763	1,257,772	3,531	(2,068,182)	259,477
Provision for income taxes	53	—	17,361	17,268	5,557	(17,268)	22,971
Net income (loss)	232,530	271,010	545,402	1,240,504	(2,026)	(2,050,914)	236,506
Net income attributable to noncontrolling interest	—	—	—	—	(3,974)	—	(3,974)
Net income (loss) attributable to Intelsat S.A.	232,530	271,010	545,402	1,240,504	(6,000)	(2,050,914)	232,532
Cumulative preferred dividends	(9,917)	—	—	—	—	—	(9,917)
Net income (loss) attributable to common shareholders	\$ 222,613	\$ 271,010	\$ 545,402	\$ 1,240,504	\$ (6,000)	\$ (2,050,914)	\$ 222,615

(Certain totals may not add due to the effects of rounding)

INTELSAT S.A. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2016
(in thousands)

	Intelsat S.A. and Other Parent Guarantors	Intelsat Luxembourg	Intelsat Connect Finance	Intelsat Jackson	Jackson Subsidiary Guarantors	Non- Guarantor Subsidiaries	Consolidation and Eliminations	Consolidated
Cash flows from operating activities:	\$ (10,234)	\$ 89,342	\$ 4,764	\$ 917,923	\$ 1,506,746	\$ (314,986)	\$ (1,510,049)	\$ 683,506
Cash flows from investing activities:								
Payments for satellites and other property and equipment (including capitalized interest)	—	—	—	(699,213)	(699,213)	(15,357)	699,213	(714,570)
Repayment from intercompany loans	4,895	—	—	—	—	359,237	(364,132)	—
Investment in subsidiaries	(6,087)	(300,050)	—	(30,655)	(10,955)	—	347,747	—
Dividend from affiliates	—	269,700	—	8,980	8,980	—	(287,660)	—
Purchase of cost method investment	—	—	—	(4,000)	(4,000)	—	4,000	(4,000)
Capital contributions to unconsolidated affiliates	—	—	—	—	—	(10,340)	—	(10,340)
Other investing activities	—	—	—	—	—	(1,679)	—	(1,679)
Net cash provided by (used in) investing activities	(1,192)	(30,350)	—	(724,888)	(705,188)	331,861	399,168	(730,589)
Cash flows from financing activities:								
Proceeds from issuance of long-term debt	—	—	—	1,250,000	—	—	—	1,250,000
Repayments of long-term debt	—	—	—	(328,944)	—	—	—	(328,944)
Disbursements for intercompany loans	—	—	—	(364,132)	(12,438)	—	376,570	—
Payment of premium on early extinguishment of debt	—	—	—	(32)	—	—	—	(32)
Debt issuance costs	—	—	(15,562)	(26,133)	—	—	3,302	(38,393)
Payments on tender, debt exchange and consent transaction	—	—	(259,267)	(34,009)	—	—	—	(293,276)
Dividends paid to preferred shareholders	(4,959)	—	—	—	—	—	—	(4,959)
Other payments for satellites	—	—	—	(18,333)	(18,333)	—	18,333	(18,333)
Capital contribution from parent	—	—	300,050	—	96,658	36,742	(433,450)	—
Dividends to shareholders	—	—	—	(269,700)	(524,327)	(8,980)	803,007	—
Principal payments on deferred satellite performance incentives	—	—	—	(17,429)	(17,429)	—	17,429	(17,429)
Dividends paid to noncontrolling interest	—	—	—	—	—	(8,980)	—	(8,980)
Other financing activities	—	—	—	1,942	—	—	—	1,942
Net cash provided by (used in) financing activities	(4,959)	—	25,221	193,230	(475,869)	18,782	785,191	541,596
Effect of exchange rate changes on cash and cash equivalents	(4)	—	—	(999)	(991)	972	992	(30)
Net change in cash and cash equivalents	(16,389)	58,992	29,985	385,266	324,698	36,629	(324,698)	494,483
Cash and cash equivalents, beginning of period	16,941	760	—	109,959	89,641	43,881	(89,641)	171,541
Cash and cash equivalents, end of period	\$ 552	\$ 59,752	\$ 29,985	\$ 495,225	\$ 414,339	\$ 80,510	\$ (414,339)	\$ 666,024

(Certain totals may not add due to the effects of rounding)

INTELSAT S.A. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2015
(in thousands)

	Intelsat S.A. and Other Parent Guarantors	Intelsat Luxembourg	Intelsat Jackson	Jackson Subsidiary Guarantors	Non- Guarantor Subsidiaries	Consolidation and Eliminations	Consolidated
Cash flows from operating activities:	\$ 724	\$ (251,879)	\$ 1,138,747	\$ 1,629,412	\$ 22,438	\$ (1,629,411)	\$ 910,031
Cash flows from investing activities:							
Payments for satellites and other property and equipment (including capitalized interest)	—	—	(720,273)	(720,273)	(4,089)	720,273	(724,362)
Repayment from (disbursements for) intercompany loans	9,538	—	2,064	2,064	(346,799)	333,133	—
Investment in subsidiaries	(7,355)	(610,000)	(198)	(40,444)	—	657,997	—
Dividend from affiliates	19,000	898,400	28,423	28,423	—	(974,246)	—
Purchase of cost method investment	—	—	(25,000)	(25,000)	—	25,000	(25,000)
Other investing activities	—	—	432	432	(424)	(432)	8
Net cash provided by (used in) investing activities	21,183	288,400	(714,552)	(754,798)	(351,312)	761,725	(749,354)
Cash flows from financing activities:							
Repayments of long-term debt	—	(17,829)	(479,000)	—	—	—	(496,829)
Proceeds from drawdown of long-term debt	—	—	430,000	—	—	—	430,000
Proceeds from (repayment of) intercompany borrowing	(1,430)	—	337,261	—	(634)	(335,197)	—
Dividends paid to preferred shareholders	(9,919)	—	—	—	—	—	(9,919)
Capital contribution from parent	—	—	250,000	86,316	367,553	(703,869)	—
Dividends to shareholders	—	(19,000)	(898,400)	(916,697)	(28,423)	1,862,520	—
Principal payments on deferred satellite performance incentives	—	—	(18,405)	(18,405)	(1,163)	18,405	(19,568)
Dividends paid to noncontrolling interest	—	—	—	—	(8,423)	—	(8,423)
Other financing activities	154	—	1,600	1,600	—	(1,601)	1,753
Net cash provided by (used in) financing activities	(11,195)	(36,829)	(376,944)	(847,186)	328,910	840,258	(102,986)
Effect of exchange rate changes on cash and cash equivalents	—	—	(925)	(931)	(8,372)	931	(9,297)
Net change in cash and cash equivalents	10,712	(308)	46,326	26,497	(8,336)	(26,497)	48,394
Cash and cash equivalents, beginning of period	6,229	1,068	63,633	63,144	52,217	(63,144)	123,147
Cash and cash equivalents, end of period	\$ 16,941	\$ 760	\$ 109,959	\$ 89,641	\$ 43,881	\$ (89,641)	\$ 171,541

(Certain totals may not add due to the effects of rounding)

INTELSAT S.A. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2014
(in thousands)

	Intelsat S.A. and Other Parent Guarantors	Intelsat Luxembourg	Intelsat Jackson	Jackson Subsidiary Guarantors	Non- Guarantor Subsidiaries	Consolidation and Eliminations	Consolidated
Cash flows from operating activities:	\$ (1,366)	\$ (270,171)	\$ 1,253,342	\$ 1,887,340	\$ 64,363	\$ (1,887,338)	\$ 1,046,170
Cash flows from investing activities:							
Payments for satellites and other property and equipment (including capitalized interest)	—	—	(639,603)	(639,603)	(5,821)	639,603	(645,424)
Repayment from (disbursements for) intercompany loans	9,214	—	3,873	3,873	—	(16,960)	—
Investment in subsidiaries	(3,790)	—	(194)	(194)	—	4,178	—
Dividend from affiliates	8,300	279,400	33,943	33,943	—	(355,586)	—
Other investing activities	—	—	174	174	—	(174)	174
Net cash provided by (used in) investing activities	13,724	279,400	(601,807)	(601,807)	(5,821)	271,061	(645,250)
Cash flows from financing activities:							
Repayments of long-term debt	—	—	(586,000)	—	(24,418)	—	(610,418)
Payment of premium on early extinguishment of debt	—	—	(21,250)	—	—	—	(21,250)
Proceeds from issuance of long-term debt	—	—	135,000	—	—	—	135,000
Proceeds from (repayment of) intercompany borrowing	(4,233)	—	(9,214)	—	360	13,087	—
Dividends paid to preferred shareholders	(9,919)	—	—	—	—	—	(9,919)
Capital contribution from parent	—	—	—	103,698	3,984	(107,682)	—
Dividends to shareholders	—	(8,300)	(279,400)	(1,473,781)	(33,943)	1,795,424	—
Principal payments on deferred satellite performance incentives	—	—	(18,705)	(18,705)	(1,069)	18,705	(19,774)
Capital contribution from noncontrolling interest	—	—	—	—	12,209	—	12,209
Dividends paid to noncontrolling interest	—	—	—	—	(8,744)	—	(8,744)
Other financing activities	4,231	—	(338)	(338)	—	338	3,893
Net cash provided by (used in) financing activities	(9,921)	(8,300)	(779,907)	(1,389,126)	(51,621)	1,719,872	(519,003)
Effect of exchange rate changes on cash and cash equivalents	—	—	(1,085)	(1,063)	(5,473)	1,061	(6,560)
Net change in cash and cash equivalents	2,437	929	(129,457)	(104,656)	1,448	104,656	(124,643)
Cash and cash equivalents, beginning of period	3,792	139	193,090	167,800	50,769	(167,800)	247,790
Cash and cash equivalents, end of period	\$ 6,229	\$ 1,068	\$ 63,633	\$ 63,144	\$ 52,217	\$ (63,144)	\$ 123,147

(Certain totals may not add due to the effects of rounding)

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS

Description	Balance at Beginning of Period	Charged to Costs and Expenses	Deductions	Balance at End of Period
	(in thousands)			
Year ended December 31, 2014:				
Allowance for doubtful accounts	\$ 35,288	\$ 2,306	\$ (2,420)	\$ 35,174
Year ended December 31, 2015:				
Allowance for doubtful accounts	\$ 35,174	\$ 7,432	\$ (5,428)	\$ 37,178
Year ended December 31, 2016:				
Allowance for doubtful accounts	\$ 37,178	\$ 24,591	\$ (7,025)	\$ 54,744

See accompanying notes to consolidated financial statements.

SUPPLEMENTAL INDENTURE NO. 10

SUPPLEMENTAL INDENTURE NO. 10 (this “Supplemental Indenture”) dated as of December 22, 2016, among INTELSAT CONNECT FINANCE S.A., a *société anonyme* existing under the laws of Luxembourg (the “New Guarantor”), INTELSAT JACKSON HOLDINGS S.A., a *société anonyme* existing under the laws of Luxembourg (the “Issuer”) and U.S. BANK NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “Trustee”).

WITNESSETH:

WHEREAS, the Issuer and the existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of September 30, 2010 (as amended, supplemented or otherwise modified prior to the date hereof, the “Indenture”), providing for the issuance of the Issuer’s 7.25% Senior Notes due 2020 (the “Notes”), initially in the aggregate principal amount of \$1,000,000,000.00;

WHEREAS, the New Guarantor desires to unconditionally guarantee all the Issuer’s obligations under the Notes pursuant to a Guarantee on the terms and conditions set forth herein; and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Trustee and the Issuer are authorized to execute one or more supplemental indentures, including this Supplemental Indenture, to add Guarantors with respect to the Notes;

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantor, the Issuer and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. Defined Terms. As used in this Supplemental Indenture, terms defined in the Indenture or in the preamble or recital hereto are used herein as therein defined, except that the term “Holders” in this Supplemental Indenture shall refer to the term “Holders” as defined in the Indenture and the Trustee acting on behalf of and for the benefit of such Holders. The words “herein,” “hereof,” and “hereby” and other words of similar import used in this Supplemental Indenture refer to this Supplemental Indenture as a whole and not to any particular section hereof.
2. Agreement to Guarantee. The New Guarantor hereby agrees, jointly and severally with all existing Guarantors (if any), to unconditionally guarantee the Issuer’s obligations under the Notes on the terms and subject to the conditions set forth in Article 10 of the Indenture as a Guarantor and to be bound by all other applicable provisions of the Indenture and the Notes as applying to a Guarantor and to perform all of the obligations and agreements of a Guarantor under the Indenture.
3. Notices. All notices or other communications to the New Guarantor shall be given as provided in Section 11.02 of the Indenture.
4. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
5. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW. THE APPLICATION TO THE NOTES OF THE PROVISIONS SET OUT IN ARTICLES 84 TO 94-8 OF THE LUXEMBOURG LAW ON COMMERCIAL COMPANIES DATED AUGUST 10, 1915, AS AMENDED, IS EXCLUDED.**
6. Trustee Makes No Representation. The Trustee makes no representations as to the validity or sufficiency of this Supplemental Indenture.
7. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement. One signed copy is enough to prove this Supplemental Indenture. Notwithstanding the foregoing, the exchange of copies of this Supplemental Indenture and of signature pages by facsimile or PDF transmission shall constitute effective execution and delivery of this Supplemental Indenture as to the parties hereto and may be used in lieu of the original Supplemental Indenture and signature pages for all purposes.
8. Effect of Headings. The Section headings of this Supplemental Indenture have been inserted for convenience of reference only, are not intended to be considered a part hereof and shall not modify or restrict any of the terms or provisions hereof.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be duly executed as of the date first written above.

INTELSAT JACKSON HOLDINGS S.A.

By: /s/ Franz Russ

Name: Franz Russ

Title: Chairman and Chief Executive Officer

INTELSAT CONNECT FINANCE S.A.

By: /s/ Sajid Ajmeri

Name: Sajid Ajmeri

Title: Assistant Secretary

[Signature Page to 2020 Unsecured Notes Supplemental Indenture]

U.S. BANK NATIONAL ASSOCIATION, not in
its individual capacity, but solely as Trustee

By: /s/ Richard Prokosch

Name: Richard Prokosch

Title: Vice President

[Signature Page to 2020 Unsecured Notes Supplemental Indenture]

SUPPLEMENTAL INDENTURE NO. 7

SUPPLEMENTAL INDENTURE NO. 7 (this “Supplemental Indenture”) dated as of December 22, 2016, among INTELSAT CONNECT FINANCE S.A., a *société anonyme* existing under the laws of Luxembourg (the “New Guarantor”), INTELSAT JACKSON HOLDINGS S.A., a *société anonyme* existing under the laws of Luxembourg (the “Issuer”) and U.S. BANK NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “Trustee”).

WITNESSETH:

WHEREAS, the Issuer and the existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of April 5, 2011 (as amended, supplemented or otherwise modified prior to the date hereof, the “Indenture”), providing for the issuance of the Issuer’s 7.25% Senior Notes due 2019 and the Issuer’s Senior Notes due 2021 (the “Notes”), initially in the aggregate principal amounts of \$1,500,000,000.00 and \$1,150,000,000.00, respectively;

WHEREAS, the New Guarantor desires to unconditionally guarantee all the Issuer’s obligations under the Notes pursuant to a Guarantee on the terms and conditions set forth herein; and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Trustee and the Issuer are authorized to execute one or more supplemental indentures, including this Supplemental Indenture, to add Guarantors with respect to the Notes;

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantor, the Issuer and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. Defined Terms. As used in this Supplemental Indenture, terms defined in the Indenture or in the preamble or recital hereto are used herein as therein defined, except that the term “Holders” in this Supplemental Indenture shall refer to the term “Holders” as defined in the Indenture and the Trustee acting on behalf of and for the benefit of such Holders. The words “herein,” “hereof,” and “hereby” and other words of similar import used in this Supplemental Indenture refer to this Supplemental Indenture as a whole and not to any particular section hereof.
2. Agreement to Guarantee. The New Guarantor hereby agrees, jointly and severally with all existing Guarantors (if any), to unconditionally guarantee the Issuer’s obligations under the Notes on the terms and subject to the conditions set forth in Article 10 of the Indenture as a Guarantor and to be bound by all other applicable provisions of the Indenture and the Notes as applying to a Guarantor and to perform all of the obligations and agreements of a Guarantor under the Indenture.
3. Notices. All notices or other communications to the New Guarantor shall be given as provided in Section 11.02 of the Indenture.
4. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
5. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW. THE APPLICATION TO THE NOTES OF THE PROVISIONS SET OUT IN ARTICLES 84 TO 94-8 OF THE LUXEMBOURG LAW ON COMMERCIAL COMPANIES DATED AUGUST 10, 1915, AS AMENDED, IS EXCLUDED.**
6. Trustee Makes No Representation. The Trustee makes no representations as to the validity or sufficiency of this Supplemental Indenture.
7. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement. One signed copy is enough to prove this Supplemental Indenture. Notwithstanding the foregoing, the exchange of copies of this Supplemental Indenture and of signature pages by facsimile or PDF transmission shall constitute effective execution and delivery of this Supplemental Indenture as to the parties hereto and may be used in lieu of the original Supplemental Indenture and signature pages for all purposes.
8. Effect of Headings. The Section headings of this Supplemental Indenture have been inserted for convenience of reference only, are not intended to be considered a part hereof and shall not modify or restrict any of the terms or provisions hereof.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be duly executed as of the date first written above.

INTELSAT JACKSON HOLDINGS S.A.

By: /s/ Franz Russ

Name: Franz Russ

Title: Chairman and Chief Executive Officer

INTELSAT CONNECT FINANCE S.A.

By: /s/ Sajid Ajmeri

Name: Sajid Ajmeri

Title: Assistant Secretary

[Signature Page to 2019/21 Unsecured Notes Supplemental Indenture]

U.S. BANK NATIONAL ASSOCIATION, not in
its individual capacity, but solely as Trustee

By: /s/ Richard Prokosch

Name: Richard Prokosch

Title: Vice President

[Signature Page to 2019/21 Unsecured Notes Supplemental Indenture]

SUPPLEMENTAL INDENTURE NO. 3

SUPPLEMENTAL INDENTURE NO. 3 (this “Supplemental Indenture”) dated as of December 22, 2016, among INTELSAT CONNECT FINANCE S.A., a *société anonyme* existing under the laws of Luxembourg (the “New Guarantor”), INTELSAT JACKSON HOLDINGS S.A., a *société anonyme* existing under the laws of Luxembourg (the “Issuer”) and U.S. BANK NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “Trustee”).

WITNESSETH:

WHEREAS, the Issuer and the existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of June 5, 2013 (as amended, supplemented or otherwise modified prior to the date hereof, the “Indenture”), providing for the issuance of the Issuer’s 5.50% Senior Notes due 2023 (the “Notes”), initially in the aggregate principal amount of \$2,000,000,000.00;

WHEREAS, the New Guarantor desires to unconditionally guarantee all the Issuer’s obligations under the Notes pursuant to a Guarantee on the terms and conditions set forth herein; and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Trustee and the Issuer are authorized to execute one or more supplemental indentures, including this Supplemental Indenture, to add Guarantors with respect to the Notes;

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantor, the Issuer and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. Defined Terms. As used in this Supplemental Indenture, terms defined in the Indenture or in the preamble or recital hereto are used herein as therein defined, except that the term “Holders” in this Supplemental Indenture shall refer to the term “Holders” as defined in the Indenture and the Trustee acting on behalf of and for the benefit of such Holders. The words “herein,” “hereof,” and “hereby” and other words of similar import used in this Supplemental Indenture refer to this Supplemental Indenture as a whole and not to any particular section hereof.
2. Agreement to Guarantee. The New Guarantor hereby agrees, jointly and severally with all existing Guarantors (if any), to unconditionally guarantee the Issuer’s obligations under the Notes on the terms and subject to the conditions set forth in Article 10 of the Indenture as a Guarantor and to be bound by all other applicable provisions of the Indenture and the Notes as applying to a Guarantor and to perform all of the obligations and agreements of a Guarantor under the Indenture.
3. Notices. All notices or other communications to the New Guarantor shall be given as provided in Section 11.02 of the Indenture.
4. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
5. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW. THE APPLICATION TO THE NOTES OF THE PROVISIONS SET OUT IN ARTICLES 84 TO 94-8 OF THE LUXEMBOURG LAW ON COMMERCIAL COMPANIES DATED AUGUST 10, 1915, AS AMENDED, IS EXCLUDED.**
6. Trustee Makes No Representation. The Trustee makes no representations as to the validity or sufficiency of this Supplemental Indenture.
7. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement. One signed copy is enough to prove this Supplemental Indenture. Notwithstanding the foregoing, the exchange of copies of this Supplemental Indenture and of signature pages by facsimile or PDF transmission shall constitute effective execution and delivery of this Supplemental Indenture as to the parties hereto and may be used in lieu of the original Supplemental Indenture and signature pages for all purposes.
8. Effect of Headings. The Section headings of this Supplemental Indenture have been inserted for convenience of reference only, are not intended to be considered a part hereof and shall not modify or restrict any of the terms or provisions hereof.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be duly executed as of the date first written above.

INTELSAT JACKSON HOLDINGS S.A.

By: /s/ Franz Russ

Name: Franz Russ

Title: Chairman and Chief Executive Officer

INTELSAT CONNECT FINANCE S.A.

By: /s/ Sajid Ajmeri

Name: Sajid Ajmeri

Title: Assistant Secretary

[Signature Page to 2023 Unsecured Notes Supplemental Indenture]

U.S. BANK NATIONAL ASSOCIATION, not in
its individual capacity, but solely as Trustee

By: /s/ Richard Prokosch

Name: Richard Prokosch

Title: Vice President

[Signature Page to 2023 Unsecured Notes Supplemental Indenture]

SUPPLEMENTAL INDENTURE NO. 1

SUPPLEMENTAL INDENTURE NO. 1 (this “Supplemental Indenture”) dated as of December 22, 2016, among INTELSAT (LUXEMBOURG) S.A., a *société anonyme* existing under the laws of Luxembourg (the “Released Guarantor”), INTELSAT CONNECT FINANCE S.A., a *société anonyme* existing under the laws of Luxembourg (the “New Guarantor”), INTELSAT JACKSON HOLDINGS S.A., a *société anonyme* existing under the laws of Luxembourg (the “Issuer”) and WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “Trustee”).

WITNESSETH:

WHEREAS, the Issuer, the Released Guarantor, certain subsidiary guarantors and the Trustee have heretofore executed an indenture, dated as of March 29, 2016 (as amended, supplemented or otherwise modified prior to the date hereof, the “Indenture”), providing for the issuance of the Issuer’s 8.00% Senior Secured Notes due 2024 (the “Notes”), initially in the aggregate principal amount of \$1,250,000,000.00;

WHEREAS, Section 10.02(d) of the Indenture provides that the Parent Guarantor shall not transfer all or substantially all of the Capital Stock of the Issuer to a Parent Successor unless the Parent Successor shall assume all of the obligations of the Parent Guarantor under the Indenture and the Security Documents pursuant to a supplemental indenture, amendment or other documents or instruments (such transfer, a “Permitted Transfer”);

WHEREAS, Section 10.02(c) and 10.02(d) of the Indenture also provide that upon the consummation of a Permitted Transfer, the Parent Guarantor (as defined prior to the consummation of such Permitted Transfer) shall be deemed to be automatically released from its Guarantee and from all other covenants and obligations of the Parent Guarantor under the Indenture and the Security Documents;

WHEREAS, the Released Guarantor has transferred all of the Capital Stock of the Issuer to the New Guarantor (the “Contribution”);

WHEREAS, the New Guarantor desires by execution of this Supplemental Indenture to assume all of the obligations of the Released Guarantor under the Indenture and the Security Documents;

WHEREAS, the Released Guarantor desires by execution of this Supplemental Indenture to be released from its Guarantee and from all other covenants and obligations as Parent Guarantor under the Indenture and the Security Documents; and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Trustee, the Released Guarantor, the New Guarantor and the Issuer are authorized to execute and deliver this Supplemental Indenture without notice to or consent of any Holder;

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Released Guarantor, the New Guarantor, the Issuer and the Trustee mutually covenant and agree for the equal and ratable benefit of the holders of the Notes as follows:

1. Defined Terms. Terms defined in the Indenture and not otherwise defined in this Supplemental Indenture shall have the meanings assigned thereto in the Indenture, except that the term “holders” in this Supplemental Indenture shall refer to the term “holders” as defined in the Indenture and the Trustee acting on behalf of and for the benefit of such holders. The words “herein,” “hereof” and “hereby” and other words of similar import used in this Supplemental Indenture refer to this Supplemental Indenture as a whole and not to any particular Section hereof.
2. Release of Released Guarantor. Pursuant to Section 10.02(c) and 10.02(d) of the Indenture, the Released Guarantor was deemed to be automatically released from its Guarantee of and under the Indenture and the Notes Obligations and from all other covenants and obligations under the Indenture and the Security Documents upon the consummation of the Contribution. The New Guarantor and Released Guarantor agree to the release of the Released Guarantor’s Guarantee, and the Trustee acknowledges the deemed release of the Released Guarantor’s Guarantee pursuant to Section 10.02(c) and 10.02(d) of the Indenture.
3. Agreement to Guarantee. The New Guarantor hereby agrees to, and hereby does, assume all of the obligations of the Released Guarantor as Parent Guarantor under the Indenture and Security Documents, including the Guarantee of the Notes Obligations pursuant to Article 10 of the Indenture, and to be bound by all other applicable provisions of the Indenture and the Security Documents and to perform all of the obligations and agreements of the Released Guarantor as Parent Guarantor and a Guarantor under the Indenture.

4. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

5. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW. THE APPLICATION TO THE NOTES OF THE PROVISIONS SET OUT IN ARTICLES 86 TO 94-8 OF THE LUXEMBOURG LAW ON COMMERCIAL COMPANIES DATED AUGUST 10, 1915, AS AMENDED, IS EXCLUDED.**

6. Trustee Makes No Representation. The Trustee accepts the amendments of the Indenture and the Security Documents effected by this Supplemental Indenture on the terms and conditions set forth in the Indenture and Security Documents, including the terms and provisions defining and limiting the liabilities and responsibilities of the Trustee. Without limiting the generality of the foregoing, the Trustee shall not be responsible in any manner whatsoever for or with respect to any of the recitals or statements contained herein, all of which recitals or statements are made solely by the Issuer.

7. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement. One signed copy is enough to prove this Supplemental Indenture. Notwithstanding the foregoing, the exchange of copies of this Supplemental Indenture and of signature pages by facsimile or PDF transmission shall constitute effective execution and delivery of this Supplemental Indenture as to the parties hereto and may be used in lieu of the original Supplemental Indenture and signature pages for all purposes.

8. Effect of Headings. The Section headings of this Supplemental Indenture have been inserted for convenience of reference only, are not intended to be considered a part hereof and shall not modify or restrict any of the terms or provisions hereof.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be duly executed as of the date first written above.

INTELSAT JACKSON HOLDINGS S.A.

By: /s/ Jacques Kerrest

Name: Jacques Kerrest

Title: Director

INTELSAT (LUXEMBOURG) S.A.

By: /s/ Franz Russ

Name: Franz Russ

Title: Director

INTELSAT CONNECT FINANCE S.A.

By: /s/ Mirjana Hervy

Name: Mirjana Hervy

Title: Director

[Signature Page to 2024 Secured Notes Supplemental Indenture]

AGREED BY (EXCEPT WITH RESPECT TO SECTION 2, WHICH IT ACKNOWLEDGES):

WILMINGTON TRUST, NATIONAL ASSOCIATION, not in its individual capacity, but solely as Trustee

By: /s/ Lynn M. Steiner

Name: Lynn M. Steiner

Title: Vice President

[Signature Page to 2024 Secured Notes Supplemental Indenture]

SUPPLEMENTAL INDENTURE NO. 1

SUPPLEMENTAL INDENTURE NO. 1 (this “Supplemental Indenture”) dated as of December 22, 2016, among INTELSAT (LUXEMBOURG) S.A., a *société anonyme* existing under the laws of Luxembourg (the “Released Guarantor”), INTELSAT CONNECT FINANCE S.A., a *société anonyme* existing under the laws of Luxembourg (the “New Guarantor”), INTELSAT JACKSON HOLDINGS S.A., a *société anonyme* existing under the laws of Luxembourg (the “Issuer”) and WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “Trustee”).

WITNESSETH:

WHEREAS, the Issuer, the Released Guarantor, certain subsidiary guarantors and the Trustee have heretofore executed an indenture, dated as of June 30, 2016 (as amended, supplemented or otherwise modified prior to the date hereof, the “Indenture”), providing for the issuance of the Issuer’s 9.50% Senior Secured Notes due 2022 (the “Notes”), initially in the aggregate principal amount of \$490,000,000.00;

WHEREAS, Section 10.02(d) of the Indenture provides that the Parent Guarantor shall not transfer all or substantially all of the Capital Stock of the Issuer to a Parent Successor unless the Parent Successor shall assume all of the obligations of the Parent Guarantor under the Indenture and the Security Documents pursuant to a supplemental indenture, amendment or other documents or instruments (such transfer, a “Permitted Transfer”);

WHEREAS, Section 10.02(c) and 10.02(d) of the Indenture also provide that upon the consummation of a Permitted Transfer, the Parent Guarantor (as defined prior to the consummation of such Permitted Transfer) shall be deemed to be automatically released from its Guarantee and from all other covenants and obligations of the Parent Guarantor under the Indenture and the Security Documents;

WHEREAS, the Released Guarantor has transferred all of the Capital Stock of the Issuer to the New Guarantor (the “Contribution”);

WHEREAS, the New Guarantor desires by execution of this Supplemental Indenture to assume all of the obligations of the Released Guarantor under the Indenture and the Security Documents;

WHEREAS, the Released Guarantor desires by execution of this Supplemental Indenture to be released from its Guarantee and from all other covenants and obligations as Parent Guarantor under the Indenture and the Security Documents; and

WHEREAS, pursuant to Section 9.01 of the Indenture, the Trustee, the Released Guarantor, the New Guarantor and the Issuer are authorized to execute and deliver this Supplemental Indenture without notice to or consent of any Holder;

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Released Guarantor, the New Guarantor, the Issuer and the Trustee mutually covenant and agree for the equal and ratable benefit of the holders of the Notes as follows:

1. Defined Terms. Terms defined in the Indenture and not otherwise defined in this Supplemental Indenture shall have the meanings assigned thereto in the Indenture, except that the term “holders” in this Supplemental Indenture shall refer to the term “holders” as defined in the Indenture and the Trustee acting on behalf of and for the benefit of such holders. The words “herein,” “hereof” and “hereby” and other words of similar import used in this Supplemental Indenture refer to this Supplemental Indenture as a whole and not to any particular Section hereof.
2. Release of Released Guarantor. Pursuant to Section 10.02(c) and 10.02(d) of the Indenture, the Released Guarantor was deemed to be automatically released from its Guarantee of and under the Indenture and the Notes Obligations and from all other covenants and obligations under the Indenture and the Security Documents upon the consummation of the Contribution. The New Guarantor and Released Guarantor agree to the release of the Released Guarantor’s Guarantee, and the Trustee acknowledges the deemed release of the Released Guarantor’s Guarantee pursuant to Section 10.02(c) and 10.02(d) of the Indenture.
3. Agreement to Guarantee. The New Guarantor hereby agrees to, and hereby does, assume all of the obligations of the Released Guarantor as Parent Guarantor under the Indenture and Security Documents, including the Guarantee of the Notes Obligations pursuant to Article 10 of the Indenture, and to be bound by all other applicable provisions of the Indenture and the Security Documents and to perform all of the obligations and agreements of the Released Guarantor as Parent Guarantor and a Guarantor under the Indenture.

4. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

5. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW. THE APPLICATION TO THE NOTES OF THE PROVISIONS SET OUT IN ARTICLES 86 TO 94-8 OF THE LUXEMBOURG LAW ON COMMERCIAL COMPANIES DATED AUGUST 10, 1915, AS AMENDED, IS EXCLUDED.**

6. Trustee Makes No Representation. The Trustee accepts the amendments of the Indenture and the Security Documents effected by this Supplemental Indenture on the terms and conditions set forth in the Indenture and Security Documents, including the terms and provisions defining and limiting the liabilities and responsibilities of the Trustee. Without limiting the generality of the foregoing, the Trustee shall not be responsible in any manner whatsoever for or with respect to any of the recitals or statements contained herein, all of which recitals or statements are made solely by the Issuer.

7. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement. One signed copy is enough to prove this Supplemental Indenture. Notwithstanding the foregoing, the exchange of copies of this Supplemental Indenture and of signature pages by facsimile or PDF transmission shall constitute effective execution and delivery of this Supplemental Indenture as to the parties hereto and may be used in lieu of the original Supplemental Indenture and signature pages for all purposes.

8. Effect of Headings. The Section headings of this Supplemental Indenture have been inserted for convenience of reference only, are not intended to be considered a part hereof and shall not modify or restrict any of the terms or provisions hereof.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be duly executed as of the date first written above.

INTELSAT JACKSON HOLDINGS S.A.

By: /s/ Jacques Kerrest

Name: Jacques Kerrest

Title: Director

INTELSAT (LUXEMBOURG) S.A.

By: /s/ Franz Russ

Name: Franz Russ

Title: Director

INTELSAT CONNECT FINANCE S.A.

By: /s/ Mirjana Hervy

Name: Mirjana Hervy

Title: Director

[Signature Page to 2022 Secured Notes Supplemental Indenture]

AGREED BY (EXCEPT WITH RESPECT TO SECTION 2, WHICH IT ACKNOWLEDGES):

WILMINGTON TRUST, NATIONAL ASSOCIATION, not in its individual capacity, but solely as Trustee

By: /s/ Lynn M. Steiner

Name: Lynn M. Steiner

Title: Vice President

[Signature Page to 2022 Secured Notes Supplemental Indenture]

EXECUTION VERSION

**COLLATERAL AGENCY AND INTERCREDITOR JOINDER –
ADDITIONAL FIRST LIEN DEBT**

Reference is made to the Collateral Agency and Intercreditor Agreement dated as of January 12, 2011 (as amended, supplemented, amended and restated or otherwise modified and in effect from time to time, the “Collateral Agency and Intercreditor Agreement”) among INTELSAT (LUXEMBOURG) S.A., a public limited liability company (*société anonyme*) existing as *société anonyme* under the laws of the Grand Duchy of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered with the Luxembourg trade and companies’ register under number B149.942 (“Holdings”), INTELSAT JACKSON HOLDINGS S.A., a public limited liability company (*société anonyme*) existing as *société anonyme* under the laws of the Grand Duchy of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered with the Luxembourg trade and companies’ register under number B149.959 (the “Company”), the other Grantors from time to time party hereto, BANK OF AMERICA, N.A., as Administrative Agent under the Existing Credit Agreement, the other First Lien Representatives and Second Lien Representatives from time to time party thereto, and WILMINGTON TRUST, NATIONAL ASSOCIATION, as Collateral Trustee (in such capacity and together with its successors in such capacity, the “Collateral Trustee”). Capitalized terms used but not otherwise defined herein have the meanings assigned to them in the Collateral Agency and Intercreditor Agreement. This Collateral Agency and Intercreditor Joinder is being executed and delivered pursuant to Section 3.8 of the Collateral Agency and Intercreditor Agreement as a condition precedent to the debt for which the undersigned is acting as agent being entitled to the benefits of being additional secured debt under the Collateral Agency and Intercreditor Agreement.

1. Joinder. The undersigned, WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association (the “New Representative”), as trustee under that certain indenture dated as of the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the “Indenture”), by and among Intelsat Jackson Holdings S.A., as issuer (the “Issuer”), the Parent Guarantors party thereto, the Subsidiary Guarantors party thereto, and the New Representative, as trustee, pursuant to which the Issuer has issued 8.00% Secured Notes due 2024 (the “Secured Notes”), hereby agrees to become party to the Collateral Agency and Intercreditor Agreement as a First Lien Representative thereunder for all purposes thereof on the terms set forth therein, and to be bound by the terms of the Collateral Agency and Intercreditor Agreement as fully as if the undersigned had executed and delivered the Collateral Agency and Intercreditor Agreement as of the date thereof.

2. Lien Sharing and Priority Confirmation. The undersigned New Representative, on behalf of itself and each holder of Obligations in respect of the Series of First Lien Debt for which the undersigned is acting as First Lien Representative hereby agrees, for the enforceable benefit of all holders of each existing and future Series of First Lien Debt and Second Lien Debt, each current and future Second Lien Representative, each other existing and future First Lien Representative and each current and future holder of First Lien Obligations and Second Lien Obligations and as a condition to being treated as Secured Debt under the Collateral Agency and Intercreditor Agreement that:

(a) all First Lien Obligations will be and are secured equally and ratably by all First Liens at any time granted by the Company or any Guarantor to secure any Obligations in respect of any Series of First Lien Debt, whether or not upon property otherwise constituting collateral for such Series of First Lien Debt, and that all such First Liens will be enforceable by the Collateral Trustee for the benefit of all holders of First Lien Obligations equally and ratably;

(b) the New Representative and each holder of Obligations in respect of the Series of First Lien Debt for which the undersigned is acting as First Lien Representative are bound by the provisions of this Agreement, including the provisions relating to the ranking of First Liens and the order of application of proceeds from the enforcement of First Liens; and

(c) the Collateral Trustee shall perform its obligations under the Collateral Agency and Intercreditor Agreement and the other Security Documents.

3. Secured Notes as First Lien Obligations. The Notes Obligations (as defined in the Indenture) constitute First Lien Obligations for purposes of the Collateral Agency and Intercreditor Agreement and the First Lien Security Documents. The New Representative and the holders of the Secured Notes shall be First Lien Secured Parties for purposes of the Collateral Agency and Intercreditor Agreement and the First Lien Security Documents. The Indenture, the Secured Notes and any other document or agreement entered into in connection therewith shall be First Lien Documents for purposes of the Collateral Agency and Intercreditor Agreement and the First Lien Security Documents.

4. Governing Law and Miscellaneous Provisions. The provisions of Article 8 of the Collateral Agency and Intercreditor Agreement will apply with like effect to this Collateral Agency and Intercreditor Joinder.

[signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Collateral Agency and Intercreditor Joinder to be executed by their respective officers or representatives as of March 29, 2016.

WILMINGTON TRUST, NATIONAL
ASSOCIATION, as New Representative

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President

The Collateral Trustee hereby acknowledges receipt of this Collateral Agency and Intercreditor Joinder and agrees to act as Collateral Trustee for the New Representative and the holders of the Obligations represented thereby:

WILMINGTON TRUST, NATIONAL
ASSOCIATION, as Collateral Trustee

By: /s/ Joshua G. James

Name: Joshua G. James

Title: Vice President

**COLLATERAL AGENCY AND INTERCREDITOR JOINDER –
ADDITIONAL FIRST LIEN DEBT**

Reference is made to the Collateral Agency and Intercreditor Agreement dated as of January 12, 2011 (as amended, supplemented, amended and restated or otherwise modified and in effect from time to time, the “Collateral Agency and Intercreditor Agreement”) among INTELSAT (LUXEMBOURG) S.A., a public limited liability company (*société anonyme*) existing as *société anonyme* under the laws of the Grand Duchy of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered with the Luxembourg trade and companies’ register under number B149.942 (“Holdings”), INTELSAT JACKSON HOLDINGS S.A., a public limited liability company (*société anonyme*) existing as *société anonyme* under the laws of the Grand Duchy of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered with the Luxembourg trade and companies’ register under number B149.959 (the “Company”), the other Grantors from time to time party hereto, BANK OF AMERICA, N.A., as Administrative Agent under the Existing Credit Agreement, the other First Lien Representatives and Second Lien Representatives from time to time party thereto (including Wilmington Trust, National Association, as Trustee under the Indenture with the Company and the other parties thereto, dated as of March 29, 2016, pursuant to a joinder to the Collateral Agency and Intercreditor Agreement dated March 29, 2016), and WILMINGTON TRUST, NATIONAL ASSOCIATION, as Collateral Trustee (in such capacity and together with its successors in such capacity, the “Collateral Trustee”). Capitalized terms used but not otherwise defined herein have the meanings assigned to them in the Collateral Agency and Intercreditor Agreement. This Collateral Agency and Intercreditor Joinder is being executed and delivered pursuant to Section 3.8 of the Collateral Agency and Intercreditor Agreement as a condition precedent to the debt for which the undersigned is acting as agent being entitled to the benefits of being additional First Lien Debt under the Collateral Agency and Intercreditor Agreement.

1. Joinder. The undersigned, WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association (the “New Representative”), as trustee under that certain indenture dated as of the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the “Indenture”), by and among the Company, as issuer, Holdings, the Subsidiary Guarantors party thereto, and the New Representative, as trustee, pursuant to which the Company has issued 9.50% Senior Secured Notes due 2022 (the “Secured Notes”), hereby agrees to become party to the Collateral Agency and Intercreditor Agreement as a First Lien Representative thereunder for all purposes thereof on the terms set forth therein, and to be bound by the terms of the Collateral Agency and Intercreditor Agreement as fully as if the undersigned had executed and delivered the Collateral Agency and Intercreditor Agreement as of the date thereof.

2. Lien Sharing and Priority Confirmation. The undersigned New Representative, on behalf of itself and each holder of Obligations in respect of the Series of First Lien Debt for which the undersigned is acting as First Lien Representative hereby agrees, for the enforceable benefit of all holders of each existing and future Series of First Lien Debt and Series of Second Lien Debt, each current and future Second Lien Representative, each other existing and future First Lien Representative and each current and future holder of First Lien Obligations and Second Lien Obligations and as a condition to the Obligations in respect of the Secured Notes being treated as Secured Debt under the Collateral Agency and Intercreditor Agreement that:

(a) all First Lien Obligations (including the Secured Notes) will be and are secured equally and ratably by all First Liens at any time granted by the Company or any Guarantor to secure any Obligations in respect of any Series of First Lien Debt, whether or not upon property otherwise constituting collateral for such Series of First Lien Debt, and that all such First Liens will be enforceable by the Collateral Trustee for the benefit of all holders of First Lien Obligations equally and ratably;

(b) the New Representative and each holder of Obligations in respect of the Series of First Lien Debt for which the undersigned is acting as First Lien Representative are bound by the provisions of this Agreement, including the provisions relating to the ranking of First Liens and the order of application of proceeds from the enforcement of First Liens; and

(c) the Collateral Trustee shall perform its obligations under the Collateral Agency and Intercreditor Agreement and the other Security Documents.

3. Secured Notes as First Lien Obligations. The Notes Obligations (as defined in the Indenture) constitute First Lien Obligations for purposes of the Collateral Agency and Intercreditor Agreement and the First Lien Security Documents. The New Representative and the holders of the Secured Notes shall be First Lien Secured Parties for purposes of the Collateral Agency and Intercreditor Agreement and the First Lien Security Documents. The Indenture, the Secured Notes and any other document or agreement entered into in connection therewith shall be First Lien Documents for purposes of the Collateral Agency and Intercreditor Agreement and the First Lien Security Documents.

4. Governing Law and Miscellaneous Provisions. The provisions of Article 8 of the Collateral Agency and Intercreditor Agreement will apply with like effect to this Collateral Agency and Intercreditor Joinder.

[signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Collateral Agency and Intercreditor Joinder to be executed by their respective officers or representatives as of June 30, 2016.

WILMINGTON TRUST, NATIONAL
ASSOCIATION, as New Representative

By: /s/ Lynn M. Steiner

Name: Lynn M. Steiner

Title: Vice President

The Collateral Trustee hereby acknowledges receipt of this Collateral Agency and Intercreditor Joinder and agrees to act as Collateral Trustee for the New Representative and the holders of the Obligations represented thereby:

WILMINGTON TRUST, NATIONAL
ASSOCIATION, as Collateral Trustee

By: /s/ Joshua G. James

Name: Joshua G. James

Title: Vice President

AMENDMENT AGREEMENT

Dated March 23, 2016

TO THE

LUXEMBOURG SHARES AND BENEFICIARY CERTIFICATES PLEDGE

AGREEMENT

DATED 12 JANUARY 2011

This Amendment Agreement to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011 (as amended from time to time), dated March 23, 2016 (the "Agreement"), has been entered by and,

BETWEEN:

(1) **The Pledgors set forth in Schedule 1** (together the "Pledgors" and each a "Pledgor");

AND

(2) **Wilmington Trust, National Association** (as successor by merger to Wilmington Trust FSB), as Collateral Trustee for the Secured Parties together with its successors and assigns in such capacity (the "Collateral Trustee" or the "Pledgee");

IN THE PRESENCE OF:

(3) **The Companies set forth in Schedule 2** (together the "Companies" and each a "Company");

WHEREAS:

- (A) On 12 January 2011, the Borrower, the Lenders and Bank of America, N.A. as Administrative Agent, and other agent parties party thereto, entered into the Credit Agreement.
- (B) In relation to the Credit Agreement, a shares and beneficiary certificates pledge agreement has been entered into on 12 January 2011 by *inter alia* the Pledgors and the Pledgee in the presence of the Companies (each as defined therein) (as amended from time to time, the "Pledge Agreement").
- (C) It is intended that Operations as the new shareholder of Intelsat Align be a party to the Pledge Agreement not only as Company but also as Pledgor.

NOW THEREFORE IT IS AGREED as follows:

Clause 1. DEFINITIONS AND INTERPRETATION

1.1. Capitalized terms used herein as defined terms shall have the meaning given thereto in the Pledge Agreement and/or the Credit Agreement, unless otherwise defined in the present Agreement, and:

Intelsat Align

Means Intelsat Align S.à.r.l., a *société a responsabilité limitée* incorporated under Luxembourg law having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered at the RCS under number RCS Luxembourg B174.892;

Operations

Means Intelsat Operations S.A., a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered at the RCS under number RCS Luxembourg B156.669;

RCS

Means the *Registre de Commerce et des Sociétés* of Luxembourg;

1.2. The recitals and Schedules to this Agreement form an integral part thereof.

1.3. The Pledgee shall not be responsible for the sufficiency of any terms used herein or transactions as set out in the recitals of this Agreement.

Clause 2. ADHERENCE, PLEDGE ON NEW SHARES

2.1. Operations in addition to being a party to the Pledge Agreement as "Company" hereby becomes a party to the Pledge Agreement as "Pledgor".

2.2. Operations, in its capacity as sole shareholder of Intelsat Align and as a Pledgor under the Pledge Agreement, pledges, and confirms the pledge as from the date it became the shareholder of Intelsat Align, on all shares of Intelsat Align held by it (now or in the future) as Pledged Shares and all Related Assets relating thereto pursuant to the terms and conditions of the Pledge Agreement and the Pledgee acknowledges and accepts.

2.3. Intelsat Align hereby acknowledges the Pledge.

Clause 3. AMENDMENT OF THE PLEDGE AGREEMENT

The parties hereto agree that the Pledge Agreement shall be amended so that (i) the list of Pledgors and (ii) the list of Companies are updated and consequentially schedule 1 thereto is amended and replaced by Schedule 1 of this Agreement, schedule 2 thereto is amended and replaced by Schedule 2 of this Agreement, and schedule 4 thereto is amended and replaced by Schedule 3 of this Agreement.

Clause 4. ADDITIONAL PROVISIONS

The parties hereto agree that Clauses 1.2 and 15 to 19 of the Pledge Agreement are included by way of reference into the present Agreement.

Clause 5. COUNTERPARTS

This Agreement may be executed in any number of counterparts and by way of facsimile or scanned PDF exchange of executed signature pages, all of which together shall constitute one and the same Agreement.

Schedule 1

The Pledgors

- (1) **Intelsat (Luxembourg) S.A.**, a *société anonyme* under the laws of Luxembourg with registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B149.942;
- (2) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg with registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B149.959;
- (3) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered at the RCS under number RCS Luxembourg B156.669; and
- (4) **Intelsat Corporation**, a corporation incorporated under the laws of Delaware having its registered office at 2711 Centerville Road Suite 400, Wilmington, New Castle County 19808, Delaware State, United States of America registered with the Division of Corporations of the State of Delaware under number 2664446.

Schedule 2

The Companies

- (1) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg with registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B149.959;
- (2) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg with registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B156669;
- (3) **Intelsat Align S.à.r.l.**, a *société a responsabilité limitée* incorporated under Luxembourg law having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered at the RCS under number RCS Luxembourg B174.892.

Signature Page – Amendment Agreement to the Shares and BCs Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Companies

Intelsat Jackson Holdings S.A.

By: /s/ Franz Russ
Name: Franz Russ
Title: Chairman & Chief Executive Officer

Intelsat Operations S.A.

By: /s/ Franz Russ
Name: Franz Russ
Title: Chairman & Chief Executive Officer

Intelsat Align S.à r.l.

By: /s/ Franz Russ
Name: Franz Russ
Title: Manager

CONFIRMATION AND AMENDMENT AGREEMENT

Dated 24 October 2016

WITH RESPECT TO THE

LUXEMBOURG CLAIMS PLEDGE AGREEMENT DATED 12 JANUARY 2011,

AS AMENDED

This Confirmation and Amendment Agreement with respect to the Luxembourg Claims Pledge Agreement dated 12 January 2011 (as amended from time to time) dated 2016 (the “Agreement”), has been entered by and,

BETWEEN:

(1) **The Pledgors set forth in Schedule 1** (together the “Pledgors” and each a “Pledgor”);

AND

(2) **Wilmington Trust, National Association** (as successor by merger to Wilmington Trust FSB), as Collateral Trustee for the Secured Parties together with its successors and assigns in such capacity (the “Collateral Trustee” or the “Pledgee”);

IN THE PRESENCE OF:

(3) **The Debtors set forth in Schedule 2** (together the “Debtors” and each a “Debtor”);

IT IS AGREED as follows:

(1) Capitalized terms used herein as defined terms shall have the meaning given thereto in the Pledge Agreement (as defined below), unless otherwise defined in the present Agreement, and:

<u>Credit Facility Obligations</u>	Shall have the meaning given to such term in the 2022 Indenture;
<u>2022 Indenture</u>	Means the Indenture for the 2022 Notes of Intelsat Jackson Holdings S.A. dated 30 June 2016 between Intelsat Jackson Holdings S.A. as Issuer, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee;
<u>2022 Notes</u>	Means the 9.5% Senior Secured Notes due 2022 issued by Intelsat Jackson Holdings S.A. under the 2022 Indenture;
<u>2024 Indenture</u>	Means the Indenture for the 2024 Notes of Intelsat Jackson Holdings S.A. dated as of March 29, 2016 between Intelsat Jackson Holdings S.A. as Issuer, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee;
<u>2024 Notes</u>	Means the 8% Senior Secured Notes due 2024 issued by Intelsat Jackson Holdings S.A. under the 2024 Indenture;
<u>Pledge Agreement</u>	Means the Luxembourg Claims Pledge Agreement dated 12 January 2011 (as amended from time to time) between the Pledgors and the Pledgee; and
<u>RCS</u>	Means the <i>Registre de Commerce et des Sociétés</i> of Luxembourg.

(2) The Schedules to this Agreement form an integral part thereof.

(3) The Pledgee shall not be responsible for the sufficiency of any terms used herein.

(4) The Pledgors and the Pledgee agree, and the Debtors acknowledge, that the definition of “Secured Obligations” in the Pledge Agreement shall read as follows:

*“**Secured Obligations**” means the Credit Facility Obligations and, without duplication, the guarantees by the Issuer and the Guarantors of all Notes Obligations (as defined in the 2024 Indenture) in relation to the 2024 Notes and the guarantees by the Issuer and the Guarantors of all Notes Obligations (as defined in the 2022 Indenture) in relation to the 2022 Notes, any obligations of the Issuer and the Guarantors under any additional notes issued under the 2024 Indenture and the 2022 Indenture, and any other Secured Obligations as defined in the Pledge Agreement to the extent not included in the foregoing.*

- (5) The Pledgors and the Pledgee agree, and the Debtors acknowledge, that the following definitions shall be included to clause 1.1 (“*Definitions and interpretation*”) of the Pledge Agreement:

<u>Credit Facility Obligations</u>	Shall have the meaning given to such term in the 2022 Indenture;
<u>2022 Indenture</u>	Means the Indenture for the 2022 Notes of Intelsat Jackson Holdings S.A. dated 30 June 2016 between Intelsat Jackson Holdings S.A. as Issuer, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee;
<u>2022 Notes</u>	Means the 9.5% Senior Secured Notes due 2022 issued by Intelsat Jackson Holdings S.A. under the 2022 Indenture;
<u>2024 Indenture</u>	Means the Indenture for the 2024 Notes of Intelsat Jackson Holdings S.A. dated as of March 29, 2016 between Intelsat Jackson Holdings S.A. as Issuer, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee; and
<u>2024 Notes</u>	Means the 8% Senior Secured Notes due 2024 issued by Intelsat Jackson Holdings S.A. under the 2024 Indenture.

- (6) To the extent necessary, the Pledgors, the Pledgee and the Debtors hereby confirm that the Pledged Assets pledged pursuant to the relevant Pledge Agreement are and continue to be subject to the relevant Pledge, such Pledge securing, further to this Agreement, the Secured Obligations as defined in clause (4).
- (7) The parties hereto agree that Clauses 1.2 and 15 to 19 of the Pledge Agreement are included by way of reference into the present Agreement.
- (8) This Agreement may be executed in any number of counterparts and by way of facsimile or scanned PDF exchange of executed signature pages, all of which together shall constitute one and the same Agreement.

Schedule 1

The Pledgors

- (1) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B149.959;
- (2) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B156.669; and
- (3) **Intelsat Align S.à r.l.**, a *société a responsabilité limitée* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B174.892.

Schedule 2

The Debtors

- (1) **Intelsat S.A.** , a *société anonyme* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B162.135;
- (2) **Intelsat Investment Holdings S.à r.l.**, a *société à responsabilité limitée* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B162.240;
- (3) **Intelsat Holdings S.A.**, a *société anonyme* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B149.954;
- (4) **Intelsat Investments S.A.**, a *société anonyme* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B149.970;
- (5) **Intelsat (Luxembourg) S.A.**, a *société anonyme* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B149.942;
- (6) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B149.959;
- (7) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B156.669;
- (8) **Intelsat Align S.à r.l.**, a *société à responsabilité limitée* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B174.892.

Signature Page – Confirmation and Amendment Agreement to the Luxembourg Claims Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Pledgors:

Intelsat Jackson Holdings S.A.

By: /s/ Michelle Bryan

Name: Michelle Bryan

Title: Deputy Chairman and Secretary

Intelsat Operations S.A.

By: /s/ Michelle Bryan

Name: Michelle Bryan

Title: Deputy Chairman and Secretary

Intelsat Align S.à r.l.

By: /s/ Jean-Philippe Gillet

Name: Jean-Philippe Gillet

Title: Director

Signature Page – Confirmation and Amendment Agreement to the Luxembourg Claims Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Debtors:

Intelsat S.A.

By: /s/ Stephen Spengler
Name: Stephen Spengler
Title: Chief Executive Officer

Intelsat Investment Holdings S.à r.l.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat Holdings S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat Investments S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat (Luxembourg) S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat Jackson Holdings S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat Operations S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat Align S.à r.l.

By: /s/ Jean-Philippe Gillet
Name: Jean-Philippe Gillet
Title: Director

CONFIRMATION AND AMENDMENT AGREEMENT

Dated 24 October 2016

WITH RESPECT TO THE

LUXEMBOURG SHARES AND BENEFICIARY CERTIFICATES PLEDGE

AGREEMENT DATED 12 JANUARY 2011, AS AMENDED

This Confirmation and Amendment Agreement with respect to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011 (as amended from time to time) dated 24 October 2016 (the "Agreement"), has been entered by and,

BETWEEN:

- (1) **The Pledgors set forth in Schedule 1** (together the "Pledgors" and each a "Pledgor");

AND

- (2) **Wilmington Trust, National Association** (as successor by merger to Wilmington Trust FSB), as Collateral Trustee for the Secured Parties together with its successors and assigns in such capacity (the "Collateral Trustee" or the "Pledgee");

IN THE PRESENCE OF:

- (3) **The Companies set forth in Schedule 2** (together the "Companies" and each a "Company");

IT IS AGREED as follows:

- (1) Capitalized terms used herein as defined terms shall have the meaning given thereto in the Pledge Agreement (as defined below), unless otherwise defined in the present Agreement, and:

<u>Credit Facility Obligations</u>	Shall have the meaning given to such term in the 2022 Indenture;
<u>2022 Indenture</u>	Means the Indenture for the 2022 Notes of Intelsat Jackson Holdings S.A. dated 30 June 2016 between Intelsat Jackson Holdings S.A. as Issuer, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee;
<u>2022 Notes</u>	Means the 9.5% Senior Secured Notes due 2022 issued by Intelsat Jackson Holdings S.A. under the 2022 Indenture;
<u>2024 Indenture</u>	Means the Indenture for the 2024 Notes of Intelsat Jackson Holdings S.A. dated as of March 29, 2016 between Intelsat Jackson Holdings S.A. as Issuer, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee;
<u>2024 Notes</u>	Means the 8% Senior Secured Notes due 2024 issued by Intelsat Jackson Holdings S.A. under the 2024 Indenture;
<u>Pledge Agreement</u>	Means the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011 (as amended from time to time) between the Pledgors and the Pledgee; and
<u>RCS</u>	Means the <i>Registre de Commerce et des Sociétés</i> of Luxembourg.

- (2) The Schedules to this Agreement form an integral part thereof.
- (3) The Pledgee shall not be responsible for the sufficiency of any terms used herein.
- (4) The Pledgors and the Pledgee agree, and the Companies acknowledge, that the definition of "Secured Obligations" in the Pledge Agreement shall read as follows:

"Secured Obligations" means the Credit Facility Obligations and, without duplication, the guarantees by the Issuer and the Guarantors of all Notes Obligations (as defined in the 2024 Indenture) in relation to the 2024 Notes and the guarantees by the Issuer and the Guarantors of all Notes Obligations (as defined in the 2022 Indenture) in relation to the 2022 Notes, any obligations of the Issuer and the Guarantors under any additional notes issued under the 2024 Indenture and the 2022 Indenture, and any other Secured Obligations as defined in the Pledge Agreement to the extent not included in the foregoing.

- (5) The Pledgors and the Pledgee agree, and the Companies acknowledge, that the following definitions shall be included to clause 1.1 (“*Definitions and interpretation*”) of the Pledge Agreement:

<u>Credit Facility Obligations</u>	Shall have the meaning given to such term in the 2022 Indenture;
<u>2022 Indenture</u>	Means the Indenture for the 2022 Notes of Intelsat Jackson Holdings S.A. dated 30 June 2016 between Intelsat Jackson Holdings S.A. as Issuer, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee;
<u>2022 Notes</u>	Means the 9.5% Senior Secured Notes due 2022 issued by Intelsat Jackson Holdings S.A. under the 2022 Indenture;
<u>2024 Indenture</u>	Means the Indenture for the 2024 Notes of Intelsat Jackson Holdings S.A. dated as of March 29, 2016 between Intelsat Jackson Holdings S.A. as Issuer, the Guarantors (as defined therein) and Wilmington Trust, National Association, as Trustee; and
<u>2024 Notes</u>	Means the 8% Senior Secured Notes due 2024 issued by Intelsat Jackson Holdings S.A. under the 2024 Indenture.

- (6) To the extent necessary, the Pledgors, the Pledgee and the Companies hereby confirm that the Pledged Assets pledged pursuant to the relevant Pledge Agreement are and continue to be subject to the relevant Pledge, such Pledge securing, further to this Agreement, the Secured Obligations as defined in clause (4).
- (7) The parties hereto agree that Clauses 1.2 and 15 to 19 of the Pledge Agreement are included by way of reference into the present Agreement.
- (8) This Agreement may be executed in any number of counterparts and by way of facsimile or scanned PDF exchange of executed signature pages, all of which together shall constitute one and the same Agreement.

Schedule 1

The Pledgors

- (1) **Intelsat (Luxembourg) S.A.**, a *société anonyme* under the laws of Luxembourg with registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B149.942;
- (2) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg with registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B149.959;
- (3) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered at the RCS under number RCS Luxembourg B156.669; and
- (4) **Intelsat Corporation**, a corporation incorporated under the laws of Delaware having its registered office at 2711 Centerville Road Suite 400, Wilmington, New Castle County 19808, Delaware State, United States of America registered with the Division of Corporations of the State of Delaware under number 2664446.

Schedule 2

The Companies

- (1) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg with registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B149.959;
- (2) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg with registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B156669;
- (3) **Intelsat Align S.à r.l.**, a *société a responsabilité limitée* incorporated under Luxembourg law having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered at the RCS under number RCS Luxembourg B174.892.

Signature Page – Confirmation and Amendment Agreement to the Shares and BCs Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Pledgors:

Intelsat (Luxembourg) S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat Jackson Holdings S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat Corporation

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Executive Vice President, General Counsel,
Chief Administrative Officer and Secretary

Intelsat Operations S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Signature Page – Confirmation and Amendment Agreement to the Shares and BCs Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Companies:

Intelsat Jackson Holdings S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat Operations S.A.

By: /s/ Michelle Bryan
Name: Michelle Bryan
Title: Deputy Chairman and Secretary

Intelsat Align S.à r.l.

By: /s/ Jean-Philippe Gillet
Name: Jean-Philippe Gillet
Title: Director

INTELSAT CONNECT FINANCE S.A.**COLLATERAL AGENCY AND INTERCREDITOR AGREEMENT
JOINDER OF ADDITIONAL GRANTORS**

December 22, 2016

Reference is made to the Collateral Agency and Intercreditor Agreement dated as of January 12, 2011 (as amended, supplemented, amended and restated or otherwise modified and in effect from time to time, the “Collateral Agency and Intercreditor Agreement”) among INTELSAT (LUXEMBOURG) S.A., a public limited liability company (*société anonyme*) existing as *société anonyme* under the laws of the Grand Duchy of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered with the Luxembourg trade and companies’ register under number B149.942 (“Holdings”), INTELSAT JACKSON HOLDINGS S.A., a public limited liability company (*société anonyme*) existing as *société anonyme* under the laws of the Grand Duchy of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered with the Luxembourg trade and companies’ register under number B149.959 (the “Company”), the other Grantors from time to time party hereto, BANK OF AMERICA, N.A., as Administrative Agent under the Existing Credit Agreement, the other First Lien Representatives and Second Lien Representatives from time to time party thereto, and WILMINGTON TRUST, NATIONAL ASSOCIATION (as successor by merger to Wilmington Trust FSB), as Collateral Trustee (in such capacity and together with its successors in such capacity, the “Collateral Trustee”). Capitalized terms used but not otherwise defined herein have the meanings assigned to them in the Collateral Agency and Intercreditor Agreement. This Collateral Agency and Intercreditor Joinder is being executed and delivered pursuant to Section 8.18 of the Collateral Agency and Intercreditor Agreement.

The undersigned, INTELSAT CONNECT FINANCE S.A., a public limited liability company (*société anonyme*) existing as *société anonyme* under the laws of the Grand Duchy of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered with the Luxembourg trade and companies’ register under number B210.760 (the “Grantor”) hereby agrees to become party as a Grantor under the Collateral Agency and Intercreditor Agreement for all purposes thereof on the terms set forth therein, and to be bound by the terms of the Collateral Agency and Intercreditor Agreement as fully as if the undersigned had executed and delivered the Collateral Agency and Intercreditor Agreement as of the date thereof.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Collateral Agency and Intercreditor Joinder to be executed by their respective officers or representatives as of December 22, 2016.

INTELSAT CONNECT FINANCE S.A.

By: /s/ Jacques Kerrest

Name: Jacques Kerrest

Title: Director

[Signature Page to Joinder as Guarantor under CAIA]

The Collateral Trustee hereby acknowledges receipt of this Collateral Agency and Intercreditor Joinder and agrees to act as Collateral Trustee with respect to the Collateral pledged by the new Grantor:

**WILMINGTON TRUST, NATIONAL
ASSOCIATION**, as Collateral Trustee

By: /s/ Joshua G. James

Name: Joshua G. James

Title: Vice President

[Signature Page to Joinder as Guarantor under CAIA]

EXECUTION VERSION

JOINDER NO. 1 (this “Joinder”) dated as of December 22, 2016 to the Credit Agreement, dated as of January 12, 2011 (as amended, restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), among INTELSAT (LUXEMBOURG) S.A., INTELSAT JACKSON HOLDINGS S.A. (the “Borrower”), the lending institutions from time to time parties thereto (the “Lenders”), BANK OF AMERICA, N.A., as administrative agent (in such capacity the “Administrative Agent”), MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED, CREDIT SUISSE SECURITIES (USA) LLC and J.P. MORGAN SECURITIES LLC, as joint lead arrangers, MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED, CREDIT SUISSE SECURITIES (USA) LLC, J.P. MORGAN SECURITIES LLC, BARCLAYS CAPITAL INC., DEUTSCHE BANK SECURITIES INC., MORGAN STANLEY & CO. INCORPORATED and UBS SECURITIES LLC, as joint bookrunners, CREDIT SUISSE SECURITIES (USA) LLC and J.P. MORGAN SECURITIES LLC, as Co-Syndication Agents, BARCLAYS BANK PLC and MORGAN STANLEY SENIOR FUNDING, INC., as Co-Documentation Agents and BANK OF AMERICA, N.A., as a Letter of Credit Issuer.

A. Capitalized terms used herein and not otherwise defined herein shall have the meanings assigned to such terms in the Credit Agreement.

B. As of December 22, 2016, (i) Intelsat Connect Finance S.A., a *société anonyme* existing under the laws of Luxembourg (“Intermediate Holdco”) was formed and became a wholly-owned direct subsidiary of Holdings, (ii) Holdings contributed all of the capital stock of the Borrower, to Intermediate Holdco and (iii) the Borrower wishes to join Intermediate Holdco to the Credit Agreement as Holdings Successor pursuant to the terms of Section 15.11 of the Credit Agreement.

C. The Guarantors have provided the Guarantees in order to induce the Administrative Agent, Syndication Agents, Joint Lead Arrangers and the Lenders, Documentation Agents and the Letter of Credit Issuers to enter into the Credit Agreement and to induce the Lenders and the Letter of Credit Issuers to make their respective Credit Events to the Borrower under the Credit Agreement and to induce one or more Lenders or affiliates of Lenders to enter into Hedge Agreements with the Credit Parties. Section 15.11 of the Credit Agreement provides that Holdings Successor shall assume and succeed to the obligations of Holdings (including the Holdings Guarantee under the Credit Agreement) by execution and delivery of an instrument in the form of this Joinder. Intermediate Holdco is executing this Joinder as Holding Successor in accordance with the requirements of the Credit Agreement to become Holdings and a Guarantor in order to induce the Lenders and the Letter of Credit Issuers to make additional Credit Events and as consideration for Credit Events previously made.

Accordingly, the Administrative Agent and Intermediate Holdco as Holdings Successor agree as follows:

SECTION 1. In accordance with Section 15.11 of the Credit Agreement, the Holdings Successor by its signature below hereby becomes Holdings and a Guarantor under the Credit Agreement and the other Credit Documents with the same force and effect as if originally named therein as Holdings and a Guarantor, and Holdings Successor hereby (a) agrees to all the terms and provisions of the Credit Agreement applicable to it as Holdings and a Guarantor thereunder and (b) represents and warrants that the representations and warranties made by it as Holdings and a Guarantor thereunder are true and correct on and as of the date hereof. Each reference to Holdings or a Guarantor in the Credit Agreement and each other Credit Document shall be deemed to refer to Holdings Successor. The Credit Agreement is hereby incorporated herein by reference. This joinder shall be a Credit Document. Without limitation of the generality of the foregoing, Holdings Successor hereby unconditionally and irrevocably guarantees as primary obligor and not merely as surety the full and prompt payment when due, whether upon maturity, acceleration or otherwise, of any and all of the Obligations of the Credit Parties to the Secured Parties, on the terms set forth in Section 15 of the Credit Agreement.

SECTION 2. Holdings Successor represents and warrants to the Administrative Agent and the other Guaranteed Parties that this Joinder has been duly authorized, executed and delivered by it and constitutes its legal, valid and binding obligation, enforceable against it in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency or similar laws affecting creditors' rights generally and subject to general principles of equity and subject to mandatory Luxembourg law provisions.

SECTION 3. This Joinder may be executed by one or more of the parties to this Joinder on any number of separate counterparts (including by facsimile or other electronic transmission), and all of said counterparts taken together shall be deemed to constitute one and the same instrument. A set of the copies of this Joinder signed by all the parties shall be lodged with the Borrower and the Administrative Agent. This Joinder shall become effective as to Holding Successor when the Administrative Agent shall have received counterparts of this Joinder that, when taken together, bear the signature of such Holdings Successor and the Administrative Agent.

SECTION 4. Except as expressly supplemented hereby, the Credit Agreement shall remain in full force and effect.

SECTION 5. THIS JOINDER AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

SECTION 6. Any provision of this Joinder that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof and in the Credit Agreement, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. The parties hereto shall endeavor in good-faith negotiations to replace the invalid, illegal or unenforceable provisions with valid provisions the economic effect of which comes as close as possible to that of the invalid, illegal or unenforceable provisions.

SECTION 7. All notices, requests and demands pursuant hereto shall be made in accordance with Section 14.2 of the Credit Agreement. All communications and notices hereunder to Holdings Successor shall be given to it in care of the Borrower at the Borrower's address set forth in Section 14.2 of the Credit Agreement.

SECTION 8. Holdings Successor agrees to reimburse the Administrative Agent for its out-of-pocket expenses in connection with this Joinder, including the fees, disbursements and other charges of counsel for the Administrative Agent.

IN WITNESS WHEREOF, Holdings Successor and the Administrative Agent have duly executed this Joinder to the Credit Agreement as of the day and year first above written.

INTELSAT CONNECT FINANCE S.A.

By: /s/ Jacques Kerrest

Name: Jacques Kerrest

Title: Director

BANK OF AMERICA, N.A., as Administrative
Agent

By: /s/ Paley Chen

Name: Paley Chen

Title: Vice President

RELEASE OF INTELSAT (LUXEMBOURG) S.A. FROM CREDIT AGREEMENT

December 22, 2016

Reference is hereby made to the Credit Agreement, dated as of January 12, 2011 (as amended, amended and restated, supplemented or otherwise modified from time to time in accordance with the provisions thereof, the “**Credit Agreement**”), among **INTELSAT JACKSON HOLDINGS S.A.**, a public limited liability company (*société anonyme*) existing as *société anonyme* under the laws of the Grand Duchy of Luxembourg (the “**Borrower**”), **INTELSAT (LUXEMBOURG) S.A.**, a public limited liability company (*société anonyme*) existing as *société anonyme* under the laws of the Grand Duchy of Luxembourg (“**Holdings**”), the lenders party thereto from time to time, BANK OF AMERICA, N.A., as administrative agent (the “**Administrative Agent**”) and the other parties from time to time party thereto. Capitalized terms which are used herein without definition and which are defined in the Credit Agreement shall have the respective meanings assigned to such terms in the Credit Agreement.

In connection with (i) the formation of Intelsat Connect Finance S.A., a *société anonyme* existing under the laws of Luxembourg (“**Intermediate Holdco**”), a wholly-owned direct subsidiary of Holdings and (ii) the contribution by Holdings of all of the capital stock of the Borrower, to Intermediate Holdco, the Borrower has requested, pursuant to the Officer’s Certificate attached hereto as Exhibit A, that the Administrative Agent release Holdings from the Holdings Guarantee and its covenants and obligations under the Credit Agreement, as permitted by Section 15.11 of the Credit Agreement.

Based upon the foregoing, the Administrative Agent, on behalf of the Lenders, hereby releases and forever discharges Holdings from any obligations it may have to the Administrative Agent and Lenders as Guarantor or Holdings under the Credit Agreement (including its Holdings Guarantee thereunder).

IN WITNESS WHEREOF, the undersigned has executed this release as of the first date written above.

BANK OF AMERICA, N.A.,
as Administrative Agent

By: /s/ Paley Chen
Name: Paley Chen
Title: Vice President

OFFICER'S CERTIFICATE

[Attached]

OFFICER'S CERTIFICATE

Dated as of December 22, 2016

Reference is made to (i) the Credit Agreement, dated as of January 12, 2011 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), among Intelsat Jackson Holdings S.A. (the "Borrower"), Intelsat (Luxembourg) S.A. ("Holdings"), the lenders party thereto from time to time, Bank of America, N.A., as administrative agent (the "Administrative Agent"), and the other agent parties party thereto, (ii) the Collateral Agency and Intercreditor Agreement, dated as of January 12, 2011 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Intercreditor Agreement"), among the Borrower, Holdings, the grantors from time to time party thereto, the Administrative Agent, Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as collateral trustee (the "Collateral Trustee"), and the other parties from time to time party thereto, (iii) the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011 (as amended or otherwise modified from time to time, the "Share Pledge") among the Pledgors set forth in Schedule 1 thereto and the Collateral Trustee, and (iv) the Luxembourg Claims Pledge Agreement dated 12 January 2011 (as amended or otherwise modified from time to time, the "Claims Pledge") among the Pledgors set forth in Schedule 1 thereto and the Collateral Trustee. Capitalized terms used but not otherwise defined herein have the meanings provided in the Credit Agreement.

The undersigned hereby certifies to the Collateral Trustee and the Administrative Agent, in his official capacity and not in his personal capacity, as of the date hereof, that:

1. The undersigned is a duly appointed and qualified Authorized Officer of each of the Borrower and Holdings and is authorized to execute and deliver this Officer's Certificate.
2. As of December 22, 2016, (i) Intelsat Connect Finance S.A., a *soci t  anonyme* existing under the laws of Luxembourg ("Intermediate Holdco") was formed and became a wholly-owned direct subsidiary of Holdings, (ii) Holdings contributed all of its assets, including all of the capital stock of the Borrower, to Intermediate Holdco (the "Restructuring"), (iii) concurrently with the release of Holdings as requested in paragraph 4 below, Intermediate Holdco is joining the Credit Agreement and adhering to the Share Pledge and Claims Pledge as Successor Holdings and will pledge all of the capital stock of the Borrower in connection therewith (the "Joinder"), (iv) the Borrower is in compliance, on a pro forma basis after giving effect to the Transactions (as defined below), with the covenants set forth in Section 11 of the Credit Agreement and (v) no Default or Event of Default has occurred and is continuing or would result from the Transactions.
3. The Restructuring is permitted pursuant to Section 15.11(y) of the Credit Agreement and will accordingly permit, pursuant to Section 15.11 of the Credit Agreement, (i) the release of Holdings as a Guarantor under the Credit Agreement and (ii) the release of the security interests on the assets of Holdings constituting Collateral under the Credit Agreement. The Restructuring, the releases described in this paragraph 3, the Joinder and the related transactions and payment of the related fees and expenses are hereby known as the "Transactions".
4. In consideration of the foregoing and in accordance with Section 15.11 of the Credit Agreement, the Borrower (i) requests that the Collateral Trustee release the security interests granted by Holdings under the Share Pledge pursuant to Section 4.1(d) of the Intercreditor Agreement and Section 10.2 of the Share Pledge with respect to the equity interests of the Borrower and confirms that such release is permitted pursuant to Section 4.1(d) of the Intercreditor Agreement, (ii) directs and instructs the Collateral Trustee to enter into each of the documents attached as exhibits hereto, (iii) requests that the Administrative Agent, pursuant to and as permitted by Section 15.11 of the Credit Agreement, release Holdings from the Holdings Guarantee and its covenants and obligations under the Credit Agreement and enter into the Joinder to the Credit Agreement with Intermediate Holdco and (iv) reaffirms its indemnification obligations pursuant to Section 8.9 of the Intercreditor Agreement.
5. The aggregate amount of the outstanding Credit Facility Obligations (as defined in the Intercreditor Agreement) and the aggregate unutilized commitments under the Credit Agreement exceeds \$2,000,000,000.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Officer's Certificate to be duly executed as of the date first written above.

INTELSAT (LUXEMBOURG) S.A.

By: /s/ Franz Russ

Name:

Franz Russ

Title: Chairman and Chief Executive Officer

INTELSAT JACKSON HOLDINGS S.A.

By: /s/ Sajid Ajmeri

Name: Sajid Ajmeri

Title: Assistant Secretary

[Signature page to Officer's Certificate]

Exhibit A

[Agreement for the Adherence by Intelsat Connect Finance S.A. as a New Pledgor in Replacement of Intelsat (Luxembourg) S.A. to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011, as amended, and for the Amendment of the Pledge Agreement]

Exhibit B

[Agreement for the Adherence by Intelsat Connect Finance S.A. (as New Debtor) to the Luxembourg Claims Pledge Agreement dated 12 January 2011, as amended, and for the Amendment of the Pledge Agreement]

Exhibit C

[Joinder by Intelsat Connect Finance S.A. to the Collateral Agency and Intercreditor Agreement]

Exhibit D

[Request for Release of Lien on Collateral]

AGREEMENT
FOR THE ADHERENCE
BY
INTELSAT CONNECT FINANCE S.A.
(as new Debtor)
TO THE
LUXEMBOURG CLAIMS PLEDGE AGREEMENT
DATED 12 JANUARY 2011, AS AMENDED
AND
FOR THE AMENDMENT OF THE PLEDGE AGREEMENT

22 December 2016

This Agreement for the Adherence by Intelsat Connect to the Luxembourg Claims Pledge Agreement dated 12 January 2011 (as amended from time to time) as new Debtor and for the Amendment of the Pledge Agreement, dated 22 December 2016 (the “Agreement”), has been entered by and,

BETWEEN:

- (1) **The Pledgors set forth in Schedule 1** (together the “Pledgors” and each a “Pledgor”);
- (2) **Intelsat Connect Finance S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B210.760 (“Intelsat Connect”);

AND

- (3) **Wilmington Trust, National Association** (as successor by merger to Wilmington Trust FSB), as Collateral Trustee for the Secured Parties together with its successors and assigns in such capacity (the “Collateral Trustee” or the “Pledgee”) pursuant to that certain Collateral Agency and Intercreditor Agreement dated as of 12 January 2011 among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., the other Grantors from time to time party thereto, Bank of America, N.A., each additional First Lien Representative, each Second Lien Representative and the Collateral Trustee (as amended from time to time, the “Intercreditor Agreement”);

IN THE PRESENCE OF:

- (4) **The Existing Debtors set forth in Schedule 2** (together the “Existing Debtors” and each a “Debtor”);

WHEREAS:

- (A) On 12 January 2011, the Borrower, the Lenders and Bank of America, N.A. as Administrative Agent, and other agent parties party thereto, entered into the Credit Agreement.
- (B) In relation to the Credit Agreement, a Luxembourg claims pledge agreement has been entered into on 12 January 2011 by the Collateral Trustee as pledgee, and *inter alia* Jackson and Intelsat Operations as pledgors and in the presence of *inter alia* Intelsat Holdings S.A., Intelsat Investments S.A., Intelsat Luxembourg, Jackson and Intelsat Operations S.A. as debtors over the claims owed by any of the Debtors to any of the Pledgors (as defined therein); such agreement was thereafter amended by (i) the Luxembourg law agreement dated 31 July 2012 between the Collateral Trustee as pledgee, Jackson and Intelsat Operations S.A. as pledgors for *inter alia* the adherence by Intelsat Luxembourg Investment S.à.r.l. to the Pledge Agreement, (ii) the Luxembourg law agreement dated 31 January 2013 between *inter alia* the Collateral Trustee as pledgee, Jackson, Intelsat Operations S.A. and Intelsat Align S.à r.l. as pledgors for *inter alia* the adherence by Intelsat Align S.à r.l. to the Pledge Agreement and (iii) by the Luxembourg law Confirmation and Amendment Agreement to the Pledge Agreement referred to below, (as amended from time to time, the “Pledge Agreement”).
- (C) On 24 October 2016, the Pledgors, the Collateral Trustee and the Debtors entered into a Confirmation and Amendment Agreement to the Pledge Agreement (as defined below) pursuant to which the parties to the Pledge Agreement agreed to *inter alia* (i) amend the definition of “Secured Obligations” in the Pledge Agreement so that it covers “*the Credit Facility Obligations and, without duplication, the guarantees by the Issuer and the Guarantors of all Notes Obligations (as defined in the 2024 Indenture) in relation to the 2024 Notes and the guarantees by the Issuer and the Guarantors of all Notes Obligations (as defined in the 2022 Indenture) in relation to the 2022 Notes, any obligations of the Issuer and the Guarantors under any additional notes issued under the 2024 Indenture and the 2022 Indenture, and any other Secured Obligations as defined in the Pledge Agreement to the extent not included in the foregoing*” and (ii) confirm that the Pledged Assets pledged pursuant to the relevant Pledge Agreement are and continue to be subject to the relevant Pledge, such Pledge securing the Secured Obligations.
- (D) Intelsat Connect, a direct wholly-owned subsidiary of Intelsat Luxembourg, has been incorporated on 22 November 2016.
- (E) Intelsat Connect wishes to adhere and become a party to the Pledge Agreement as “Debtor” (as defined therein).

NOW THEREFORE IT IS AGREED as follows:

Clause 1. DEFINITIONS AND INTERPRETATION

1.1 Capitalized terms used herein as defined terms shall have the meaning given thereto in the Pledge Agreement and/or the Credit Agreement, unless otherwise defined in the present Agreement, and:

Confirmation and Amendment Agreement to the Pledge Agreement Means the Luxembourg law confirmation and amendment agreement to the Pledge Agreement dated 24 October 2016 entered into by and between the Collateral Trustee as pledgee, Jackson, Intelsat Operations S.A. and Intelsat Align S.à.r.l. as pledgors as well as Intelsat S.A., Intelsat Investment Holdings S.à r.l., Intelsat Holdings S.A., Intelsat Investments S.A., Intelsat Luxembourg, Jackson, Intelsat Operations S.A. and Intelsat Align S.à .rl. as debtors;

Intelsat Luxembourg Means Intelsat (Luxembourg) S.A., a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.942;

Jackson or the Borrower Means Intelsat Jackson Holdings S.A., a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.959;

RCS Means the *Registre de Commerce et des Sociétés* of Luxembourg.

1.2 The recitals and Schedules to this Agreement form an integral part hereof.

1.3 The Pledgee shall not be responsible for the sufficiency of any terms used herein or any of the reorganization transactions as set out in the recitals of this Agreement and is entering into this Agreement at the direction of the Administrative Agent pursuant to the Intercreditor Agreement.

Clause 2. ADHERENCE AS DEBTOR

2.1 Intelsat Connect hereby becomes a party to the Pledge Agreement as “Debtor”.

Clause 3. AMENDMENT PLEDGE AGREEMENT

3.1 The parties agree that the Pledge Agreement shall be amended so that the list of Debtors is updated and consequentially schedule 2 thereto is amended and replaced by Schedule 3 of this Agreement.

Clause 4. ADDITIONAL PROVISIONS

The parties hereto agree that Clauses 1.2 and 15 through 19 of the Pledge Agreement are included by way of reference into the present Agreement.

Clause 5. RIGHTS OF THE COLLATERAL TRUSTEE

The rights, protections and indemnities granted to the Collateral Trustee under the Intercreditor Agreement and the Pledge Agreement shall apply to any action taken hereunder or in connection herewith to the same extent as provided for under the Intercreditor Agreement and the Pledge Agreement.

Clause 6. COUNTERPARTS

This Agreement may be executed in any number of counterparts and by way of facsimile or scanned PDF exchange of executed signature pages, all of which together shall constitute one and the same Agreement.

Schedule 1

The Pledgors

- (1) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B149.959;
- (2) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B156.669;
- (3) **Intelsat Align S.à r.l.**, a *société a responsabilité limitée* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B174.892.

Schedule 2

The Existing Debtors

- (1) **Intelsat S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B162.135;
- (2) **Intelsat Investment Holdings S.à r.l.**, a *société a responsabilité limitée* under Luxembourg law having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number B 162.240;
- (3) **Intelsat Holdings S.A.** a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.954;
- (4) **Intelsat Investments S.A.** a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.970;
- (5) **Intelsat (Luxembourg) S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.942;
- (6) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and registered with the RCS under number RCS Luxembourg B149.959;
- (7) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and registered with the RCS under number RCS Luxembourg B156.669;
- (8) **Intelsat Align S.à r.l.**, a *société a responsabilité limitée* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B174.892.

Schedule 3

(in replacement of schedule 2 to the Pledge Agreement)

The Debtors

- (1) **Intelsat S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B162.135;
- (2) **Intelsat Investment Holdings S.à.r.l.**, a *société a responsabilité limitée* under Luxembourg law having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number B 162.240;
- (3) **Intelsat Holdings S.A.** a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.954;
- (4) **Intelsat Investments S.A.** a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.970;
- (5) **Intelsat (Luxembourg) S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.942;
- (6) **Intelsat Connect Finance S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B210.760;
- (7) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and registered with the RCS under number RCS Luxembourg B149.959;
- (8) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and registered with the RCS under number RCS Luxembourg B156.669;
- (9) **Intelsat Align S.à r.l.**, a *société a responsabilité limitée* under the laws of Luxembourg, having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B174.892.

Signature Page – Agreement for the Adherence to and Amendment of the Claims Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Pledgors:

Intelsat Jackson Holdings S.A.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

Intelsat Operations S.A.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

Intelsat Align S.à r.l.

By: /s/ Franz Russ
Name: Franz Russ
Title: Manager

Signature Page – Agreement for the Adherence to and Amendment of the Claims Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Pledgee:

Wilmington Trust, National Association, as Collateral Trustee

By: /s/ Joshua G. James

Name: Joshua G. James

Title: Vice President

Signature Page – Agreement for the Adherence to and Amendment of the Claims Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

Intelsat Connect Finance S.A.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

**FOR ACKNOWLEDGEMENT AND
ACCEPTANCE**

The Existing Debtors

Intelsat S.A.

By: /s/ Stephen Spengler
Name: Stephen Spengler
Title: Director

Intelsat Investment Holdings S.à r.l.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Manager

Intelsat Holdings S.A.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

Intelsat Investments S.A.

By: /s/ Franz Russ
Name: Franz Russ
Title: Directors

Intelsat (Luxembourg) S.A.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

Intelsat Jackson Holdings S.A.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

Intelsat Operations S.A.

By: /s/ Franz Russ

Name: Franz Russ

Title: Director

Intelsat Align S.à r.l.

By: /s/ Franz Russ

Name: Franz Russ

Title: Manager

AGREEMENT
FOR THE ADHERENCE BY
INTELSAT CONNECT FINANCE S.A.
as a new Pledgor
in replacement of
INTELSAT (LUXEMBOURG) S.A.
TO THE
LUXEMBOURG SHARES AND BENEFICIARY CERTIFICATES PLEDGE AGREEMENT
DATED 12 JANUARY 2011, AS AMENDED
AND
FOR THE AMENDMENT OF THE PLEDGE AGREEMENT

22 December 2016

This Agreement for the Adherence by Intelsat Connect Finance S.A. (in replacement of Intelsat Luxembourg (as defined below)) to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011 (as amended from time to time) and for the Amendment of the Pledge Agreement, dated 22 December 2016 (the "Agreement"), has been entered by and,

BETWEEN:

- (1) **The Existing Pledgors set forth in Schedule 1** (together the "Existing Pledgors");
- (2) **Intelsat Connect Finance S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B210.760 ("Intelsat Connect");

AND

- (3) **Wilmington Trust, National Association** (as successor by merger to Wilmington Trust FSB), as Collateral Trustee for the Secured Parties together with its successors and assigns in such capacity (the "Collateral Trustee" or the "Pledgee") pursuant to that certain Collateral Agency and Intercreditor Agreement dated as of 12 January 2011 among Intelsat (Luxembourg) S.A., Intelsat Jackson Holdings S.A., the other Grantors from time to time party thereto, Bank of America, N.A., each additional First Lien Representative, each Second Lien Representative and the Collateral Trustee (as amended from time to time, the "Intercreditor Agreement");

IN THE PRESENCE OF:

- (4) **The Companies set forth in Schedule 2** (together the "Companies" and each a "Company");

WHEREAS:

- (A) On 12 January 2011, the Borrower, the Lenders and Bank of America, N.A. as Administrative Agent, and other agent parties party thereto, entered into the Credit Agreement.
- (B) In relation to the Credit Agreement, a Luxembourg law pledge over shares and beneficiary certificates agreement has been entered into on 12 January 2011 by the Collateral Trustee as pledgee, and *inter alia* Intelsat Luxembourg and Jackson as pledgors, and *inter alia* Jackson and Intelsat Operations as companies; such agreement was thereafter amended by (i) the Luxembourg law agreement dated 31 July 2012 between the Collateral Trustee as pledgee, and *inter alia* Jackson, Intelsat Luxembourg, and Intelsat Corporation for *inter alia* the adherence by Intelsat Luxembourg Investment S.à.r.l. and Intelsat Corporation to the Pledge Agreement, (ii) by the Luxembourg law agreement dated 31 January 2013 between the Collateral Trustee as pledgee, and *inter alia* Jackson, Intelsat Luxembourg and Intelsat Corporation for *inter alia* the adherence by Intelsat Align S.à r.l. to the Pledge Agreement, (iii) by the Luxembourg law agreement dated 23 March 2016 between the Collateral Trustee as pledgee, and *inter alia* Intelsat Operations S.A., Jackson, Intelsat Luxembourg, Intelsat Align S.à r.l. and Intelsat Corporation providing for Intelsat Operations to become a pledgor under the Pledge Agreement and (iv) by the Luxembourg law Confirmation and Amendment Agreement to the Pledge Agreement referred to below, (as amended from time to time, the "Pledge Agreement").
- (C) On 24 October 2016, the Existing Pledgors, the Collateral Trustee and the Companies entered into a Confirmation and Amendment Agreement to the Pledge Agreement (as defined below) pursuant to which the parties thereto agreed to *inter alia* (i) amend the definition of "Secured Obligations" in the Pledge Agreement so that it covers "*the Credit Facility Obligations and, without duplication, the guarantees by the Issuer and the Guarantors of all Notes Obligations (as defined in the 2024 Indenture) in relation to the 2024 Notes and the guarantees by the Issuer and the Guarantors of all Notes Obligations (as defined in the 2022 Indenture) in relation to the 2022 Notes, any obligations of the Issuer and the Guarantors under any additional notes issued under the 2024 Indenture and the 2022 Indenture, and any other Secured Obligations as defined in the Pledge Agreement to the extent not included in the foregoing*" and (ii) confirm that the Pledged Assets (as defined in the Pledge Agreement) pledged pursuant to the relevant Pledge Agreement are and continue to be subject to the relevant Pledge (as defined in the Pledge Agreement), such Pledge securing the Secured Obligations.
- (D) Intelsat Luxembourg intends to contribute all the 200,000 shares it holds in Jackson (as defined below) (the "Jackson Shares") to Intelsat Connect, a newly formed direct wholly-owned subsidiary of Intelsat Luxembourg pursuant to a contribution to reserves agreement dated 22 December 2016 entered into by and between Intelsat Luxembourg as contributor, Intelsat Connect as recipient and Jackson as company (the "Jackson Shares Contribution").
- (E) In compliance with Section 15.11. of the Credit Agreement the Jackson Share Contribution will only take effect after Intelsat Connect has become a party (as "Pledgor") to the Pledge Agreement.

- (F) Therefore, (i) Intelsat Connect wishes to adhere and become a party to the Pledge Agreement as Pledgor in replacement of Intelsat Luxembourg and to confirm that the Jackson Shares and Related Assets (as defined in the Pledge Agreement) pledged pursuant to the Pledge Agreement shall further to the Jackson Shares Contribution be and continue to be subject to the relevant Pledge, such Pledge securing, the Secured Obligations and (ii) Intelsat Luxembourg shall upon the effectiveness of the Jackson Shares Contribution and the transfer of the Jackson Shares to Intelsat Connect cease to be a party to the Pledge Agreement. The Pledge Agreement shall be amended in consequence as set forth herein.

NOW THEREFORE IT IS AGREED as follows:

Clause 1. DEFINITIONS AND INTERPRETATION

- 1.1. Capitalized terms used herein as defined terms shall have the meaning given thereto in the Pledge Agreement and/or the Credit Agreement, unless otherwise defined in the present Agreement, and:

<u>Confirmation and Amendment Agreement to the Pledge Agreement</u>	Means the Luxembourg law confirmation and amendment agreement to the Pledge Agreement dated 24 October 2016 entered into by and between the Collateral Trustee as pledgee, Intelsat Luxembourg, Jackson, Intelsat Operations S.A. and Intelsat Corporation as pledgors as well as Jackson, Intelsat Operations S.A. and Intelsat Align S.à r.l. as companies;
<u>Intelsat Luxembourg</u>	Means Intelsat (Luxembourg) S.A., a <i>société anonyme</i> under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.942;
<u>Jackson or the Borrower</u>	Means Intelsat Jackson Holdings S.A., a <i>société anonyme</i> under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.959;
<u>RCS</u>	Means the <i>Registre de Commerce et des Sociétés</i> of Luxembourg.

- 1.2. The recitals and Schedules to this Agreement form an integral part hereof.
- 1.3. The Pledgee shall not be responsible for the sufficiency of any terms used herein or any of the reorganization transactions as set out in the recitals of this Agreement and is entering into this Agreement at the instruction of the Administrative Agent (other than in connection with Clause 3 hereof, with respect to which the Collateral Trustee is being instructed by the Borrower and Intelsat Luxembourg) pursuant to the Intercreditor Agreement.

Clause 2. ADHERENCE, CONFIRMATION OF PLEDGE

- 2.1. Intelsat Connect hereby becomes a party to the Pledge Agreement as “Pledgor” (as defined in the Pledge Agreement).
- 2.2. Intelsat Connect confirms that, on the effectiveness of the Jackson Shares Contribution and the transfer of the Jackson Shares (encumbered by the Pledge thereon) by Intelsat Luxembourg to Intelsat Connect, the Jackson Shares and Related Assets pledged pursuant to the Pledge Agreement are and continue to be subject to the relevant Pledge (with Intelsat Connect replacing Intelsat Luxembourg as Pledgor), such Pledge securing the Secured Obligations (as defined in the Pledge Agreement) pursuant to the terms and conditions of the Pledge Agreement, and the Pledgee acknowledges and accepts such pledge.
- 2.3. Jackson hereby acknowledges and confirms the continuation of the existing Pledge over the Jackson Shares and Related Assets (with Intelsat Connect replacing Intelsat Luxembourg as Pledgor) on the effectiveness of the Jackson Share Contribution, and undertakes to make due inscription thereof in its register of shareholders. A copy of the register of shareholders updated upon the effectiveness of the Jackson Shares Contribution shall be delivered by Jackson to the Pledgee.

Clause 3. RELEASE INTELSAT LUXEMBOURG

The Parties agree that upon the effectiveness of the Jackson Shares Contribution, Intelsat Luxembourg shall cease to be a party to the Pledge Agreement and be released from all of its obligations thereunder. At the direction of the Borrower and Intelsat Luxembourg pursuant to the Intercreditor Agreement, the Collateral Trustee expressly agrees and confirms such release with effect on the transfer of the Jackson Shares (encumbered with the Pledge thereon) by Intelsat Luxembourg to Intelsat Connect.

Clause 4. AMENDMENT PLEDGE AGREEMENT

The parties hereto agree that the Pledge Agreement shall be amended so that (i) the list of Pledgors, is updated and consequentially schedule 1 thereto (as amended) is amended and replaced by Schedule 3 of this Agreement.

Clause 5. ADDITIONAL PROVISIONS

- 5.1. The parties hereto agree that Clauses 1.2 and 15 through 19 of the Pledge Agreement are included by way of reference into the present Agreement.
- 5.2. The representations, warranties and undertakings set out in Clause 7 of the Pledge Agreement are deemed to be repeated by the new Pledgor on the date hereof.

Clause 6. RIGHTS OF THE COLLATERAL TRUSTEE

The rights, protections and indemnities granted to the Collateral Trustee under the Intercreditor Agreement and the Pledge Agreement shall apply to any action taken hereunder or in connection herewith to the same extent as provided for under the Intercreditor Agreement and the Pledge Agreement.

Clause 7. COUNTERPARTS

This Agreement may be executed in any number of counterparts and by way of facsimile or scanned PDF exchange of executed signature pages, all of which together shall constitute one and the same Agreement.

Schedule 1

The Existing Pledgors

- (1) **Intelsat (Luxembourg) S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.942
- (2) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B149.959;
- (3) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered at the RCS under number RCS Luxembourg B156.669; and
- (4) **Intelsat Corporation**, a corporation incorporated under the laws of Delaware having its registered office at 2711 Centerville Road Suite 400, Wilmington, New Castle County 19808, Delaware State, United States of America registered with the Division of Corporations of the State of Delaware under number 2664446.

Schedule 2

The Companies

- (1) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B149.959;
- (2) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B156.669;
- (3) **Intelsat Align S.à r.l.**, a *société a responsabilité limitée* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B174.892.

Schedule 3

(in replacement of schedule 1 to the Pledge Agreement)

The Pledgors

- (1) **Intelsat (Luxembourg) S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg, and being registered with the RCS under number RCS Luxembourg B149.942
but only until the effectiveness of the release of Intelsat Luxembourg from the Pledge Agreement and Intelsat Luxembourg ceasing to be a party to the Pledge Agreement pursuant to clause 3 of the Agreement for the Adherence by Intelsat Connect Finance S.A. (in replacement of Intelsat Luxembourg) to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011 (as amended from time to time) and for the Amendment of the Pledge Agreement, dated 22 December 2016;
- (2) **Intelsat Connect Finance S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered with the RCS under number RCS Luxembourg B210.760;
- (3) **Intelsat Jackson Holdings S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and registered at the RCS under number RCS Luxembourg B149.959;
- (4) **Intelsat Operations S.A.**, a *société anonyme* under the laws of Luxembourg having its registered office at 4, rue Albert Borschette, L-1246 Luxembourg and being registered at the RCS under number RCS Luxembourg B156.669; and
- (5) **Intelsat Corporation**, a corporation incorporated under the laws of Delaware having its registered office at 2711 Centerville Road Suite 400, Wilmington, New Castle County 19808, Delaware State, United States of America registered with the Division of Corporations of the State of Delaware under number 2664446.

Signature Page – Agreement for the Adherence by Intelsat Connect Finance S.A. (in replacement of Intelsat Luxembourg) to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011 (as amended from time to time) and for the Amendment of the Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Pledgors:

Intelsat (Luxembourg) S.A.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

Intelsat Connect Finance S.A.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

Intelsat Jackson Holdings S.A.

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

Intelsat Operations S.A.

By: /s/ Franz Russ
Name: Franz Russ
Title: Director

Intelsat Corporation

By: /s/ Jacques Kerrest
Name: Jacques Kerrest
Title: Director

Signature Page – Agreement for the Adherence by Intelsat Connect Finance S.A. (in replacement of Intelsat Luxembourg) to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011 (as amended from time to time) and for the Amendment of the Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Pledgee:

Wilmington Trust, National Association, as Collateral Trustee

By: /s/ Joshua G. James
Name: Joshua G. James
Title: Vice President

Signature Page – Agreement for the Adherence by Intelsat Connect Finance S.A. (in replacement of Intelsat Luxembourg) to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement dated 12 January 2011 (as amended from time to time) and for the Amendment of the Pledge Agreement

IN WITNESS THEREOF the parties hereto have executed this Agreement in one or multiple original counterparts, all of which together evidence the same Agreement, on the day and year first written above.

The Companies:

Intelsat Jackson Holdings S.A.

By: /s/ Mirjana Hervy
Name: Mirjana Hervy
Title: Director

Intelsat Operations S.A.

By: /s/ Mirjana Hervy
Name: Mirjana Hervy
Title: Director

Intelsat Align S.à r.l.

By: /s/ Mirjana Hervy
Name: Mirjana Hervy
Title: Manager

LIST OF SIGNIFICANT SUBSIDIARIES

1. Intelsat Africa (Pty) Ltd., a company organized under the laws of South Africa.
2. Intelsat Align S.à r.l., a company organized under the laws of Luxembourg.
3. Intelsat Brasil Ltda., a company organized under the laws of Brazil.
4. Intelsat Brasil Servicos de Telecomunicacao Ltda., a company organized under the laws of Brazil.
5. Intelsat Clearinghouse Corporation, a corporation organized under the laws of Delaware.
6. Intelsat Connect Finance S.A., a company organized under the laws of Luxembourg.
7. Intelsat Corporation, a corporation organized under the laws of Delaware.
8. Intelsat Finance Bermuda Ltd., a company organized under the laws of Bermuda.
9. Intelsat General Corporation, a corporation organized under the laws of Delaware.
10. Intelsat Global Sales & Marketing Ltd., a company organized under the laws of England and Wales.
11. Intelsat Global Service LLC, a limited liability company organized under the laws of Delaware.
12. Intelsat Holdings LLC, a limited liability company organized under the laws of Delaware.
13. Intelsat Holdings S.A., a company organized under the laws of Luxembourg.
14. Intelsat Horizons-3 Corporation, a corporation organized under the laws of Delaware.
15. Intelsat Intermediate LLC, a limited liability company organized under the laws of Delaware.
16. Intelsat International Systems LLC, a limited liability company organized under the laws of Delaware.
17. Intelsat Investment Holdings S.à r.l., a company organized under the laws of Luxembourg.
18. Intelsat Investments S.A., a company organized under the laws of Luxembourg.
19. Intelsat Ireland Operations Unlimited Company, a company organized under the laws of Ireland.
20. Intelsat Jackson Holdings S.A., a company organized under the laws of Luxembourg.
21. Intelsat Kommunikations GmbH, a company organized under the laws of Germany.
22. Intelsat License Holdings LLC, a limited liability company organized under the laws of Delaware.
23. Intelsat License LLC, a limited liability company organized under the laws of Delaware.
24. Intelsat (Luxembourg) S.A., a company organized under the laws of Luxembourg.
25. Intelsat Management LLC, a limited liability company organized under the laws of Delaware.
26. Intelsat Operations S.A., a company organized under the laws of Luxembourg.
27. Intelsat Satellite LLC, a limited liability company organized under the laws of Delaware.
28. Intelsat Subsidiary (Gibraltar) Limited, a company organized under the laws of Gibraltar.
29. Intelsat UK Financial Services Ltd., a company organized under the laws of England and Wales.
30. Intelsat USA License LLC, a limited liability company organized under the laws of Delaware.
31. Intelsat USA Sales LLC, a limited liability company organized under the laws of Delaware.
32. Horizons-3 License LLC, a limited liability company organized under the laws of Delaware.
33. Mountainside Teleport LLC, a limited liability company organized under the laws of Delaware.
34. PanAmSat Europe Corporation, a corporation organized under the laws of Delaware.
35. PanAmSat International Holdings, LLC, a limited liability company organized under the laws of Delaware.
36. PanAmSat Satellite Europe Limited, a company organized under the laws of England and Wales.
37. PanAmSat Sistemas de Comunicacao DTH do Brasil Ltda., a company organized under the laws of Brazil.

CERTIFICATIONS

I, Stephen Spengler, Principal Executive Officer of Intelsat S.A. (the “Company”) certify that:

1. I have reviewed this annual report on Form 20-F of Intelsat S.A.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The company’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company’s internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting; and
5. The company’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company’s auditors and the audit committee of the Company’s board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting.

Date: February 28, 2017

/s/ Stephen Spengler

Stephen Spengler
Principal Executive Officer

CERTIFICATIONS

I, Jacques Kerrest, Principal Financial Officer of Intelsat S.A. (the “Company”) certify that:

1. I have reviewed this annual report on Form 20-F of Intelsat S.A.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The company’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company’s internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting; and
5. The company’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company’s auditors and the audit committee of the Company’s board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting.

Date: February 28, 2017

/s/ Jacques Kerrest

Jacques Kerrest
Principal Financial Officer

**CERTIFICATION BY CHIEF EXECUTIVE OFFICER
Pursuant To 18 U.S.C. Section 1350, As Adopted Pursuant
To Section 906 of the Sarbanes-Oxley Act Of 2002**

Pursuant to 18 U.S.C. § 1350, the undersigned officer of Intelsat S.A. (the “Company”) hereby certifies that to such officer’s knowledge, the Company’s Annual Report on Form 20-F for the year ended December 31, 2016 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2017

/s/ Stephen Spengler

**Stephen Spengler
Chief Executive Officer**

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

**CERTIFICATION BY CHIEF FINANCIAL OFFICER
Pursuant To 18 U.S.C. Section 1350, As Adopted Pursuant
To Section 906 of the Sarbanes-Oxley Act Of 2002**

Pursuant to 18 U.S.C. § 1350, the undersigned officer of Intelsat S.A. (the “Company”) hereby certifies that to such officer’s knowledge, the Company’s Annual Report on Form 20-F for the year ended December 31, 2016 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2017

/s/ Jacques Kerrest

**Jacques Kerrest
Chief Financial Officer**

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Intelsat S.A.:

We consent to the incorporation by reference in the registration statement (No. 333-212417) on Form S-8 of Intelsat S.A. of our reports dated February 28, 2017, with respect to the consolidated balance sheets of Intelsat S.A. as of December 31, 2015 and 2016, and the related consolidated statements of operations, comprehensive income (loss), shareholders' deficit, and cash flows for each of the years in the three-year period ended December 31, 2016, and related financial statement schedule, and the effectiveness of internal control over financial reporting as of December 31, 2016, which reports appear in the December 31, 2016 annual report on Form 20-F of Intelsat S.A.

/s/ KPMG LLP

McLean, Virginia
February 28, 2017