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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2020

OR

☐ **TRANSITION 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)

Grand Duchy of Luxembourg	**98-1009418**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
4 rue Albert Borschette L-1246 Luxembourg	**+352 27 84 1600**
(Address of principal executive offices, including zip code)	**(Registrant's telephone number, including area code)**

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

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Shares, nominal value $0.01 per share	INTEQ[1]	OTC Pink Marketplace[1]

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

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

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

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

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

Large accelerated filer	☐	Accelerated Filer	☐
Non-accelerated filer	☒	Smaller reporting company	☐
		Emerging growth company	☐

[1] On May 20, 2020, the New York Stock Exchange ("NYSE") filed a Form 25 with the U.S. Securities and Exchange Commission to delist the common shares, $0.01 par value, of Intelsat S.A. (the "Registrant") from the NYSE. The delisting became effective 10 days after the Form 25 was filed. The deregistration of the common shares under Section 12(b) of the Act became effective 90 days after the filing date of the Form 25, at which point the common shares were deemed registered under Section 12(g) of the Act. The Registrant's common shares began trading on the OTC Pink Marketplace on May 19, 2020 under the symbol "INTEQ."

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 762(b)) by the registered public accounting firm that prepared or issued its audit report.
Yes ☐ No ☒

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

As of June 30, 2020, the aggregate market value of the registrant's common shares held by non-affiliates of the registrant was approximately $50.2 million.

As of March 26, 2021, 142,184,518 common shares, with a nominal value of $0.01 per share, were outstanding.

Documents incorporated by reference: Specified portions of the registrant's proxy statement with respect to the registrant's 2021 Annual Meeting of Shareholders, which is to be filed pursuant to Regulation 14A within 120 days after the end of the registrant's fiscal year ended December 31, 2020, are incorporated by reference into Part III of this Annual Report on Form 10-K.

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FORWARD-LOOKING STATEMENTS

Some of the statements in this Annual Report on Form 10-K, 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 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 ability to confirm and consummate a plan of reorganization in the Chapter 11 Cases (as defined below); the effects of the Chapter 11 Cases on our liquidity or results of operations or business prospects; other risks related to the Chapter 11 Cases as described further below; our belief that our next generation software-defined satellites ("SDS") will provide differentiated inventory to help offset recent trends of pricing pressure, new capacity from other satellite operators, and improved access to fiber links in our network services business; our outlook that the increased volume of services provided by our high-throughput satellites ("HTS") and SDS over time is expected to stabilize the level of business activity in the network services sector; our expectation that over time incremental demand for capacity to support the new 4K format, also known as ultra-high definition, could offset some of the reductions in demand related to use of compression technologies in our media business; our expectation that our new services and technologies will open new sectors that are much larger and faster growing than those we support today; our belief that supporting our video neighborhoods, employing a disciplined yield management approach across our business units, developing and maintaining strong customer relationships and distribution channels for our primary customer sets, and successfully executing on our business plan to deliver strong operational results will drive stability in our core business; our expectation that scaling our differentiated managed service offerings in targeted growth verticals and leveraging the global footprint, higher performance and better economics of our HTS and SDS platforms, in addition to the flexibility of our innovative terrestrial network, will drive revenue growth; our belief that completing targeted investments and partnerships in differentiated space and ground infrastructure will provide a seamless interface with the broader telecommunications ecosystem; our outlook that seeking partnerships and investments for vertical expansion in the growing mobility sector, for example, through our recent Gogo Transaction (as defined below), and in adjacent space-based businesses, will position us for longer-term growth; our belief that investing in and deploying innovative new technologies and platforms will change the types of applications we can serve and increase our share of the global demand for broadband connectivity; our projection that our government business will benefit over time from our agile satellite fleet serving the increasing demands for mobility services from the U.S. government for aeronautical and ground mobile requirements; our intention to maximize the value of our spectrum rights; our expectations as to our ability to comply with the final U.S. Federal Communications Commission ("FCC") order regarding clearing C-band spectrum in North America, including the availability of adequate resources and funds required to comply and the receipt of accelerated clearing payments set forth in the FCC order; our belief that developing differentiated managed services and investing in related software- and standards-based technology will allow us to unlock opportunities that are essential to providing global broadband connectivity; 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 belief as to the likelihood of the cause of the failure of Intelsat 29e in 2019 occurring on our other satellites; 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 2021 and during the next several years; our belief that 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; our belief that the scale of our fleet can reduce the financial impact of any satellite anomalies or launch failures and protect against service interruptions; 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 1A—Risk Factors, the political, economic, regulatory 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 impact of the novel coronavirus ("COVID-19") pandemic on our business, the economic environment and our expected financial results;
- our expectations as to the benefits and impact on our future financial performance associated with the Company's recent purchase of the equity of Gogo Inc.'s (NASDAQ: GOGO) ("Gogo") commercial aviation business (the "Gogo Transaction");
- our ability to successfully integrate Gogo's commercial aviation business;
- litigation; and
- other risks discussed under Item 1A—Risk Factors.

Further, many of the risks and uncertainties that we face are currently amplified by, and will continue to be amplified by, the risks and uncertainties regarding the Company and certain of its subsidiaries' voluntary commencement of cases under title 11 (the "Chapter 11 Cases") of the United States Code (the "Bankruptcy Code") in the United States Bankruptcy Court for the Eastern District of Virginia (the "Bankruptcy Court"), including but not limited to:

- our ability to improve our liquidity and long-term capital structure and to address our debt service obligations through the restructuring;
- our ability to obtain timely approval by the Bankruptcy Court with respect to the motions that we have filed or will file in the Chapter 11 Cases;
- objections to the Company's restructuring process or other pleadings filed that could protract the Chapter 11 Cases or interfere with the Company's ability to consummate the restructuring;
- our ability to retain the exclusive right to propose a Chapter 11 plan of reorganization and our ability to achieve confirmation of such plan;
- our ability to develop, obtain support for, confirm and consummate a Chapter 11 plan of reorganization, including the proposed plan of reorganization the Company filed in the Bankruptcy Court on February 12, 2021, as may be modified or amended;
- the length of time that the Company will operate under Chapter 11 protection and the continued availability of operating capital during the pendency of the Chapter 11 Cases;
- our substantial level of indebtedness and related debt service obligations and restrictions, including those expected to be imposed by covenants in any exit financing, that may limit our operational and financial flexibility;
- the conditions to which our debtor-in-possession ("DIP") financing is subject and the risk that these conditions may not be satisfied for various reasons, including for reasons outside of our control;
- our ability to develop and execute our business plan during the pendency of the Chapter 11 Cases;
- increased administrative and legal costs related to the Chapter 11 process;
- potential delays in the Chapter 11 process due to the effects of the COVID-19 pandemic; and
- our ability to continue as a going concern and our ability to maintain relationships with regulators, suppliers, customers, employees and other third parties as a result of such going concern, during the restructuring and the pendency of the Chapter 11 Cases.

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 *Euroconsult Satellite Connectivity and Video Markets Survey, 27th Edition (July 2020); NSR Government & Military Satellite Communications, 17th Edition (November 2020); Seradata Spacetrak (January 2021); NSR Global Satellite Capacity Supply and Demand Study, 17th Edition (June 2020); Euroconsult FSS Operators: Benchmarks & Performance Review, 12th Edition (November 2020); GSMA The Mobile Economy 2020 (March 2020); World Bank Group (December 2020); NSR Wireless Backhaul via Satellite, 14th Edition (February 2020); Euroconsult Prospects for In-Flight Entertainment and Connectivity, 8th Edition (September 2020); Prospects for Maritime Satellite Communications, 8th Edition (April 2020); NSR VSAT and Broadband Satellite Markets, 19th Edition (December 2020); NSR Aero Satcom Markets, 8th Edition (May 2020); NSR Maritime SATCOM Markets, 8th Edition (May 2020); Satellite Mobility Perspectives, Tim Farrar (June 2020); Lyngsat Q3 2020 Update (October 2020); GSMA Operator Rankings (January 2021); Valour In-Flight Connectivity Update: Q3 2020 (December 2020); Boeing Market Outlook 2020 (October 2020); and Global Data (January 2020)*. 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 1—Business.

PART I

Item 1. Business

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 term "Intelsat Envision" refers to Intelsat Envision Holdings LLC, Intelsat Luxembourg's direct wholly-owned subsidiary, (6) the terms “Intelsat Connect” and “ICF” refer to Intelsat Connect Finance S.A., Intelsat Envision’s direct wholly-owned subsidiary, (7) the term “Intelsat Jackson” refers to Intelsat Jackson Holdings S.A., Intelsat Connect’s direct wholly-owned subsidiary, and (8) the term “Intelsat” refers to specific Intelsat-satellites. We refer to Intelsat General Communications LLC, one of our subsidiaries, as “Intelsat General.” 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.

Recent Developments

Voluntary Reorganization under Chapter 11

On May 13, 2020, Intelsat S.A. and certain of its subsidiaries (each, a “Debtor” and collectively, the “Debtors”) commenced voluntary cases (the “Chapter 11 Cases”) under title 11 of the United States Code (the “Bankruptcy Code”) in the United States Bankruptcy Court for the Eastern District of Virginia (the “Bankruptcy Court”). Primary factors causing us to file for Chapter 11 protection included the Company’s intention to participate in the accelerated clearing process of C-band spectrum set forth in the U.S. Federal Communications Commission’s (“FCC”) March 3, 2020 final order (the “FCC Final Order”), requiring the Company to incur significant costs related to clearing activities well in advance of receiving reimbursement for such costs and the need for additional financing to fund the C-band clearing process, service our current debt obligations, and meet our operating requirements, as well as the economic slowdown impacting the Company and several of its end markets due to the novel coronavirus (“COVID-19”) pandemic.

On August 14, 2020, the Company filed its final C-band spectrum transition plan with the FCC. The FCC Final Order provides for monetary enticements for fixed satellite services (“FSS”) providers to clear a portion of the C-band spectrum on an accelerated basis (the “Acceleration Payments”). On September 17, 2020, the Company announced it finalized materially all of its required contracts with satellite manufacturers and launch-vehicle providers to move forward and meet the accelerated C-band spectrum clearing timelines established by the FCC. Under the FCC Final Order, the Company is eligible to receive Acceleration Payments of approximately $1.2 billion and $3.7 billion based on the milestone clearing certification dates of December 5, 2021 and December 5, 2023, with the respective payments expected to be received in the first half of each successive year, respectively, subject to the satisfaction of certain deadlines and other conditions set forth therein.

The Chapter 11 process can be unpredictable and involves significant risks and uncertainties. As a result of these risks and uncertainties, the amount and composition of the Company’s assets, liabilities, officers and/or directors could be significantly different following the outcome of the Chapter 11 Cases, and the description of the Company’s operations, properties and liquidity and capital resources included in this Annual Report may not accurately reflect its operations, properties and liquidity and capital resources following the Chapter 11 process.

Pursuant to various orders from the Bankruptcy Court, the Debtors have received approval from the Bankruptcy Court to generally maintain their ordinary course operations and uphold certain commitments to their stakeholders, including employees, customers, and vendors during the restructuring process, subject to the jurisdiction of the Bankruptcy Court and in accordance with the applicable provisions of the Bankruptcy Code. For additional information regarding the Chapter 11 Cases, see Item 7, Management’s Discussion and Analysis of Financial Condition and Results of Operations—Recent Developments—*Voluntary Reorganization under Chapter 11*.

The filing of the Chapter 11 Cases constituted an event of default that accelerated substantially all of our obligations under the documents governing our prepetition existing indebtedness. For additional discussion regarding the impact of the Chapter 11 Cases on our debt obligations, see Item 8, Note 12—Debt.

On June 9, 2020, Intelsat Jackson received approval from the Bankruptcy Court (the “DIP Order”) to enter into a non-amortizing multiple draw superpriority secured debtor-in-possession term loan facility (the “DIP Facility”), in an aggregate principal amount of $1.0 billion on the terms and conditions as set forth in the DIP Facility credit agreement (the “DIP Credit Agreement”), which has since been amended. For additional information regarding the DIP Facility, DIP Credit Agreement, DIP Amendment No. 1 and DIP Amendment No. 2, see Item 7, Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—*Debt*.

On February 11, 2021, the Debtors entered into a plan support agreement (together with all exhibits and schedules thereto, the "PSA"), with certain of the Debtors' prepetition secured and unsecured creditors (the "Consenting Creditors" and together with the Debtors, the "PSA Parties"). The PSA contains certain covenants on the part of the PSA Parties, including but not limited to the Consenting Creditors voting in favor of the *Joint Chapter 11 Plan of Reorganization of Intelsat S.A. and Its Debtor Affiliates* (as proposed, the "Plan"), and provides that the Debtors shall achieve certain milestones (unless extended or waived in writing). On February 12, 2021, the Debtors filed the Plan and the *Disclosure Statement for the Joint Chapter 11 Plan of Reorganization of Intelsat S.A. and Its Debtor Affiliates* (the "Disclosure Statement"), which describes a variety of topics related to the Chapter 11 Cases, including (i) events leading to the Chapter 11 Cases; (ii) significant events that took place during the Chapter 11 Cases; (iii) certain terms of the Plan; and (iv) certain anticipated risk factors associated with, and anticipated consequences of the Plan. The Bankruptcy Court is currently scheduled to determine the adequacy of the Disclosure Statement and whether the Plan meets the requirements of the Bankruptcy Code in the second quarter of 2021.

Business Overview

Overview

We operate one of the world's largest satellite services businesses, providing a critical layer in the global communications infrastructure.

As the foundational architects of satellite technology, Intelsat operates the largest, most advanced satellite fleet and connectivity infrastructure in the world. We apply our unparalleled expertise and global scale to reliably and seamlessly connect people, devices and networks in even the most challenging and remote locations. 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 Internet Service Providers ("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. Our network solutions are a critical component of our customers' infrastructures and business models. Generally, our customers need the specialized connectivity that satellites provide to pursue their mission. In recent years, mobility services providers have contracted for services on our fleet that support broadband connections for passengers on commercial flights, cruise ships and commercial shipping, connectivity that in some cases is only available through our satellite network. Further, in December 2020, through our acquisition of Gogo's commercial aviation business ("Gogo CA"), we became the largest direct provider of in-flight connectivity ("IFC") services to commercial airlines. In addition, our satellite neighborhoods provide our media customers with efficient and reliable broadcast distribution that maximizes audience reach, a technical and economic 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 wireless and enterprise customers access to geographies that they would otherwise be unable to serve.

In the future, we expect our satellite network to be an integral part of machine-to-machine networks, especially those requiring massive software updates best delivered via broadcast. Additionally, our networks will play an instrumental role in delivering reliable and redundant connectivity solutions to autonomous and connected cars, as well as support for unmanned aerial vehicles in commercial applications. As we invest in new constellations, such as our next generation software-defined satellite ("SDS") platform, partner on new earth observation technology, invest in new ground technologies, such as electronic antennas and standards-based modems, and integrate into the 5G network core, 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. Our objective is to transform the customer experience, and we are building a flexible, 5G enabled global network to realize this vision.

Through the Gogo Transaction, we became the global leader in providing IFC and wireless in-flight entertainment ("IFE") solutions to the commercial aviation industry. Services provided by our Gogo CA business include passenger connectivity, which allows passengers to connect to the Internet from their personal Wi-Fi-enabled devices; passenger entertainment, which offers passengers the opportunity to enjoy a broad selection of IFE options on their laptops and personal Wi-Fi enabled devices; and Connected Aircraft Services ("CAS"), which offer airlines connectivity for various operations and currently include, among others, real-time credit card transaction processing, electronic flight bags and real-time weather information.

We hold the largest collection of rights to well-positioned geostationary orbital slots in the most valuable C- and Ku-band spectrums. From these locations, our satellites offer services in the established regions historically using the most satellite capacity, as well as the higher growth oceanic regions, supporting mobility services, and emerging regions, where approximately 74% of our capacity is currently focused.

We believe our global scale, high-performing satellite 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 and developed 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 for consumers, corporations, government and other organizations;
- Increasing deployment of in-flight and on-board broadband access for consumer and business applications in the commercial, aviation 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 featured a fleet of 52 geosynchronous satellites as of December 31, 2020, covering 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 fleet of high-throughput satellites ("HTS") and SDS is designed to reduce cost of service by increasing the flexibility of our service delivery, while optimizing performance and efficiency to the user. With these new assets, we offer existing and prospective commercial customers end-to-end service solutions including broadband connectivity that allow them to innovate, in turn transforming their businesses and expanding the territories and applications that they can profitably serve. Our new fleet is designed to commercial-grade standards. This allows us to offer committed information rates for our service provider customers and guarantee quality of service for direct end-users, as compared to satellite networks designed primarily to provide consumer "best effort"-grade services.

Our satellite capacity is complemented by our IntelsatOne terrestrial network and a growing suite of managed services optimized to the requirements of attractive vertical applications, including the enterprise, maritime and commercial and government aeronautical sectors. Recently we introduced fully-managed services under the Intelsat Flex brand for enterprise and commercial and government mobility applications. Our managed services combine satellite services with network management, access to our terrestrial network comprised of leased fiber optic cable, access to Internet points of presence ("PoPs"), as well as multiplexed video and data platforms. Our satellite-based networking 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 and secure 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 provide near ubiquitous coverage across our service regions;
- Ability to extend beyond terrestrial network end points or 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;
- Maximizing potential distribution of television programming, video neighborhoods, or capacity at orbital locations with a large number of consumer dishes or cable headend dishes pointed to them; 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 that provides a competitive advantage over our peers.

Our network architecture is flexible and, coupled with our global scale, provides strong capital and operating efficiency. In certain circumstances we are able to re-deploy capacity, moving satellites or repositioning beams to capture demand. Demonstrating our ongoing focus on operational efficiency, we pioneered the first successful launch of a mission extension vehicle, extending the useful life of our Intelsat 901 satellite by five years. Our technology has utility across a number of dimensions with minimal customization to address diverse applications driving our capital efficiency.

We have a reputation for operational and engineering excellence, built on our experience of over 50 years in the communications sector. Our network delivered 99.998% network availability to our customers on our operational satellites in 2020. 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 compete effectively.

As of December 31, 2020, our contracted backlog, which is our expected future revenue under existing customer contracts, was approximately $6.1 billion, roughly three and a quarter times our 2020 annual revenue. For the year ended December 31, 2020, we

generated revenue of $1.9 billion and net loss attributable to Intelsat S.A. of $911.7 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 $1.3 billion, or 67% of revenue, for the year ended December 31, 2020.

In 2020, our financial results reflected the adverse economic impact of the COVID-19 pandemic, as well as lower volume of services due to non-renewals of certain contracts. The effect of lower prices in 2020 was muted as compared to prior years. Overall, 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;
- Deployment of our next generation HTS and SDS platforms that were designed to support new services, representing $4.1 billion of potential incremental growth by 2025 from expanded enterprise, wireless infrastructure, mobility, and government applications;
- High operating leverage, which has allowed us to generate strong Adjusted EBITDA margins the past three years;
- Acquisition of the leading provider of IFC services, positioning us as a market leader in the fastest growing segment of satellite mobility; 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.

Our Sector

Satellite services are an integral and growing part of the global communications infrastructure. Through unique capabilities, such as the ability to quickly and effectively blanket service regions, offer point-to-multipoint distribution and provide a flexible architecture, satellite services complement, and for certain applications are preferable to, terrestrial telecommunications services, including fiber and wireless technologies. The FSS sector, excluding all consumer broadband, is expected to generate revenues of approximately $10.7 billion in 2021, and transponder service revenue is expected to grow by a compound annual growth rate ("CAGR") of 2.3% from 2020 to 2025 according to a study issued in 2020 by Northern Sky Research ("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 consumer broadband services on 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 government and military applications is expected to grow at a CAGR of 9.6% from 2020 to 2025.

Our sector is recognized 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 expected growth in demand for satellite-based solutions, 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 are already occupied by operational 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.

A resurgence of interest in low earth orbit ("LEO") and mid-earth orbit constellations is resulting in the potential for new satellite-based solutions that will complement and, in some cases, compete with our services. We believe that the ability of our geostationary orbit ("GEO") satellites to offer highly efficient point-to-multipoint services, and to concentrate throughput over areas of highest demand, provides us with competitive benefits that will be sustained even as new services come to market.

Today, there are only four FSS operators, including us, providing global services, which is important as multinationals and governments seek a turnkey solution for 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 geostationary 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 and regional businesses often turn to satellite-based infrastructure to provide better access, reliability and control of broadband services. Penetration of broadband connectivity in less developed regions has been growing rapidly and is expected to continue. Over the past 10 years, broadband penetration including satellite connectivity in East Asia & the Pacific grew at a 12% CAGR, in Latin America & the Caribbean grew at a 10% CAGR, in the Middle East & North Africa grew at an 18% CAGR, and in Sub-Saharan Africa grew at a 17% CAGR, according to the World Bank.
- *Wireless infrastructure in the global race to 5G* represents a significant opportunity for satellite technology. 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, 4G and 5G networks, which adds content and data to basic voice communications, create incremental demand for satellite bandwidth. We believe that the emergence of 5G networks will result in a new growth vector for satellite connectivity. Satellite technology is uniquely responsive to the 5G requirement of ubiquitous coverage and fast deployments. We believe satellite systems will complement terrestrial networks and enable reliable and consistent global 5G user experience in a cost-effective manner. In 2018, 3GPP, the telecommunications standard development organization ("3GPP"), approved work item studies to incorporate satellite systems in 5G standards to demonstrate key satellite attributes, including broadcasting, multicasting, and ubiquity and global mobile connectivity. According to the Global System for Mobile Communications Association, 4G and 5G mobile connections are expected to increase from 52% to 76% of total connections for the period from 2019 to 2025.
- *Mobility applications*, such as maritime communications and aeronautical broadband services for commercial and government applications, are fueling demand for mobile connectivity. Commercial applications, such as broadband services for consumer flights and cruise ships, as well as broadband requirements from the maritime commercial shipping and oil and gas sectors, provide increased demand for satellite-based services. We entered the IFC market in December 2020 with our Gogo CA business, providing IFC services directly to commercial airlines and their passengers.
- *The increasing demand for global broadband connectivity on commercial airlines* is a key driver of satellite connectivity and services. 69% of North American aircraft provide IFC and IFE services, while about 17% of European, African, Asian-Pacific and South American aircraft were connected in 2020, according to Valour Consultancy and Boeing. Global satellite services revenue related to demand for broadband mobility applications from land, aeronautical and maritime customers is expected to grow at a CAGR of 14% for the period from 2020 to 2025, 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. According to NSR, the highest expected growth in television channels is from developing regions, including the Middle East and North Africa at 1.6%, Sub-Saharan Africa at 3.9%, and Asia-Pacific at 1.9% for the period from 2020 to 2025, respectively.
- *Proliferation of formats and new sources of entertainment content* results in increased bandwidth requirements, as content owners seek to maximize distribution to multiple viewing audiences across multiple technologies. High-definition ("HD") television ("HDTV"), the introduction of ultra-high definition ("UHD") 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 2020 study, NSR forecasted that the number of standard definition ("SD"), HD, and UHD television channels distributed worldwide for cable, broadcast and direct-to-home ("DTH") is expected to grow at a CAGR of 1% for the period from 2020 to 2025.
- *Connected devices and vehicles*, 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 and autonomous cars marketed by the automotive sector or for the operations of connected vehicles, such as in agriculture applications. This represents an important potential source of longer-term demand.

In total, GEO FSS transponder service revenue (excluding consumer broadband) is expected to grow at a CAGR of 2.3% for the period from 2020 to 2025, 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 7—Management's Discussion and Analysis—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 2020 Total Revenue [2]	% of 2020 Total Backlog [1] [2]	Backlog to 2020 Revenue Multiple
Media	AT&T, MultiChoice, The Walt Disney Company, Discovery Communications, 21st Century Fox, Time Warner	2018	$ 938			
		2019	883			
		2020	813	42 %	59 %	4.5x
Network Services	Marlink, KVH Industries, Speedcast, Global Eagle, Verizon, Hughes, Orange, Panasonic Corp, GCI Communications	2018	798			
		2019	770			
		2020	677	35 %	26 %	2.4x
Government	Australian Defence Force, U.S. Department of Defense, U.S. Department of State, Leonardo	2018	392			
		2019	378			
		2020	393	21 %	12 %	1.8x

(1) Dollars in millions; backlog as of December 31, 2020.
(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 primarily three different service types:

On-Network:

- Transponder services
- Managed 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.

Media

Media customers are our largest customer set and accounted for 42% of our revenue for the year ended December 31, 2020 and $3.6 billion of our contracted backlog as of December 31, 2020. Our business generated from the media sector is generally characterized by non-cancellable, long-term contracts with terms of up to 16 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 19% 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 over 300 broadcasters, content providers and DTH platform operators worldwide. Our leadership and reputation have created well-established relationships with our media customers, and in some cases, we have distributed their content on our satellites for over 30 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 improve speed to market and lower 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. As our media customers invest in nascent distribution platforms and adopt new business models, ensuring the reliability and monetization of cable head-end and DTH distribution is paramount; our customers increasingly look to us to provide managed services in these areas.

Our fully integrated satellite, fiber and teleport facilities provide enhanced quality control for programmers. In addition to premium satellite services, we offer managed, 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:

- Our fleet hosts over 35 premium video neighborhoods, offering programmers superior audience penetration, with ten serving North America, nine serving Latin America, nine serving Africa and the Middle East, six serving Asia and five serving Europe;
- 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 services on our network, on average, across three 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 over 390 HD channels; globally, we distribute over 6,000 TV and radio channels, including approximately 1,500 HD channels, reaching over two billion people worldwide;
- We are a leading provider of satellite services for DTH providers, supporting 30 DTH platforms around the world with over 70 million subscribers, including Sky Brazil in Brazil, MultiChoice and Sentech 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 Euroconsult. For instance, we have carried programming on a global basis for every Olympiad since 1968; and
- In its 2020 study, NSR forecasted that the number of SD, HD, and UHD television channels distributed worldwide for cable, broadcast and DTH is expected to grow at a CAGR of 1% for the period from 2020 to 2025. The high growth in television channels is from developing regions: the Middle East and North Africa at 1.6%, Sub-Saharan Africa at 3.9%, and Asia-Pacific at 1.9% for the period from 2020 to 2025, respectively.

In 2020, non-renewals and volume reductions, coupled with a significant decline in occasional use video services as a result of COVID-19, caused our media business to underperform our expectations for the year. In 2021, we expect continuing pressure on our media business. Broadly, our global media customers increasingly seek to economize due to the need to support expanding infrastructure requirements and pressure on their distribution businesses related to expansion of OTT service platforms. We expect customers to use compression technologies, eliminate the distribution of SD feeds, and reduce commitments for contribution and ad hoc requirements, which will result in reduced volume for our business. In the future, we expect some incremental demand for capacity to support the new 4K format, also known as UHD, which could offset some of the reductions in demand related to compression technologies.

Network Services

Network services is our second largest customer set and accounted for 35% of our revenue for the year ended December 31, 2020 and $1.6 billion of our contracted backlog as of December 31, 2020. Our business generated from the network services sector is generally characterized by non-cancellable contracts, up to five years in length, 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 very-small-aperture terminal ("VSAT") services providers to vertical markets including banks, value-added services providers, such as those serving the aeronautical and maritime industries, as well as multinational corporations and other organizations operating globally.

According to Euroconsult, we are one of the world's largest providers of satellite capacity for network services, with a 27% global share of regular FSS capacity. 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 are being used for mobility applications. This includes services ranging from maritime enterprise VSAT data services to consumer broadband connectivity for cruise ships. In addition to maritime applications, Intelsat's satellite solutions are used by service providers to deliver broadband connectivity for IFC and IFE services for the aeronautical industry. In the future, these solutions will be augmented by capacity on our next generation SDS platform, offering greater agility, flexibility and performance to our customers. Further, through our Gogo CA business, we have rights to offer air-to-ground ("ATG") and satellite connectivity, as well as entertainment services, directly to commercial aircraft flying routes within North America operated by Aeromexico, Air Canada, Air Canada Rouge, Alaska Airlines, American Airlines, Delta Air Lines, and United Airlines, and satellite and connectivity and entertainment services directly to commercial aircraft flying routes outside of North America operated by Aeromexico, Air Canada, Air Canada Rouge, Air France, British Airways, Cathay Dragon, Cathay Pacific, Delta Air Lines, GOL, Iberia, Japan Air Lines, JTA, KLM, LATAM Airlines, LEVEL and Virgin Atlantic Airways, in each case pursuant to long-term agreements.

Our managed services provide regional shared data networking platforms at our teleports that are connected to 20 of our satellites, with network transmissions managed by our operations team. In 2018, we introduced new platform as a service (PaaS) cloud-based offerings under the AgileCore brand, combining our satellite services with shared data platforms and our fiber network. As a result, our customers can quickly establish highly reliable services across multiple regions, while operating them on a centralized basis. Our satellite-based solutions allow customers to rapidly expand their service territories, flexibly customize the speed and capabilities for their existing networks and efficiently address new customer and end-user requirements. Since 2017, we have offered fully-managed services, called Flex, which address commercial and government aeronautical, maritime and land mobile applications.

Our leading position in network services has been pressured by additional capacity from other satellite operators and improved access to fiber links, changing the competitive environment in certain regions and resulting in lower prices. Our Intelsat Epic satellites provide differentiated inventory and help offset these recent trends, offering connectivity solutions that target wireless infrastructure, mobility and enterprise applications. In 2018, we successfully added new distribution channels in the maritime, business jet and wireless infrastructure verticals. In 2020, we committed to investments in next generation SDS and ground infrastructure to support capacity and future applications needed to expand our Gogo CA business as more passengers and airlines will likely put greater emphasis on being connected in-flight. As the volume of services sold on our HTS and SDS platforms increases over time, we believe that the level of business activity in this sector will stabilize.

Highlights of our network services business include the following:

- Our largest network services customer type is enterprise networking. We are one of the world's largest providers of satellite capacity for satellite-based private data networks, including VSAT networks, according to Euroconsult;
- The fastest growing customer type in our network services business is mobility services for the aeronautical and maritime sectors;
- The Gogo Transaction positions us as the largest provider of IFC services directly to our airline customers. FSS revenue growth related to capacity demand for broadband aeronautical services is expected to grow from approximately $260 million to just under $1 billion annually for the period from 2020 to 2025 at a CAGR of 29%, according to Euroconsult. In addition, Euroconsult forecasted the growth in FSS aeronautical terminals (excluding mobile satellite services ("MSS") and ATG technology) at a CAGR of 13% for the period from 2020 to 2025;
- We are the leader in the provision of FSS bandwidth for maritime broadband connectivity. 12% of the Company's revenue for the year ended December 31, 2020 was derived from commercial mobility services, the largest segment of which was maritime. The number of FSS VSATs related to capacity demand for maritime broadband services (excluding MSS and non-GEO satellite systems) is expected to grow at a CAGR of 13% for the period from 2020 to 2025, according to Euroconsult. Of the world's largest cruise vessels, Intelsat's services are incorporated in the broadband infrastructure for a majority of ships, in substantially all cases as the exclusive or primary source of satellite services;
- Infrastructure for wireless operator services represents our third largest network services customer type. We believe we are a leading provider of satellite capacity for cellular backhaul applications in emerging regions, connecting cellular towers to the global telecommunications network, a global sector expected to generate over $1.2 billion in revenue in 2021, according to NSR. Over 80 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 six of the top ten mobile groups worldwide, which serve over a fifth of the world's subscribers, excluding China;
- Over 100 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 and commercial aeronautical applications. C-, Ku- and Ka-band and HTS revenue from capacity demand for mobility applications is expected to grow at a CAGR of 13.9% for the period from 2020 to 2025, according to NSR; and

- The fixed enterprise VSAT sector (excluding all non-GEO HTS bandwidth) is expected to generate capacity revenues of approximately $3.1 billion in 2021, and capacity revenues are expected to grow at a CAGR of 7% for the period from 2020 to 2025, according to NSR.

Government

We are the leading provider of commercial satellite services to the government sector, according to NSR, with a 24% share of military and government use of commercial satellite capacity worldwide. With more than 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 21% of our revenue for the year ended December 31, 2020 and $707 million of our contracted backlog as of December 31, 2020.

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 backlog includes some longer-term services, such as hosted payloads, which are characterized by contracts with originally contracted 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 the U.S. government's military and civilian agencies, global government militaries, and commercial customers serving the defense sector. We consider each party within the U.S. Department of Defense and other U.S. government 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, including the high-performance Intelsat Epic fleet, and our IntelsatOne network of teleports and fiber that complement the U.S. government's own communications networks. Our fleet provides flexible, secure and resilient global network capacity, and critical surge capabilities. Our Intelsat Epic satellites provide high-throughput and performance in critical mission areas, such as (i) airborne intelligence, surveillance and reconnaissance ("ISR"), (ii) maritime command, control, communications, computers, cyber and ISR (Maritime C5ISR), (iii) full-motion HD video from unmanned systems and (iv) U.S. homeland security missions. In some instances, we provide our U.S. government customers managed, end-to-end secure 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 generally 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 partner 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:

- Our government business is fully engaged in the Intelsat managed services strategy, simplifying the use of high-throughput services to deliver fully integrated solutions to its customers. In 2019, we introduced FlexGround, a global end-to-end managed service providing cost-effective, high-performance connectivity for small land mobility applications, including airline checkable manpack terminals. This service leverages the Intelsat Epic HTS network, which has high-powered spot beams, enabling high data rate services to small terminals. Operating in the Ku-band, these terminals are designed to be set up and connected in minutes by non-technical users operating in remote environments, enabling communications across a wide spectrum of scenarios;
- 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. The investment that we are making in next-generation software-defined networks ("SDNs"), both in space and on the ground, will offer a new level of flexibility and capability to service the most demanding customers. We are providing significant on-network capacity on our newest satellites, as well as off-network capacity to satisfy additional demand for our services in regions where our capacity is limited, with the express intent of bringing that capacity back on-network when the new fleet is available;
- The U.S. government, specifically the U.S. Department of Defense, continues to push to leverage commercial satellite communications, coupled with military satellite communications, in providing a total integrated satellite communications solution for the warfighter. The U.S. military continues to be one of the largest users of commercial satellites for government and military applications on a global basis. In 2020, we served approximately 80 customers consisting of U.S. government customers, resellers to U.S. government customers or integrators; and

- Global revenue from FSS used for government and military applications is expected to grow at a CAGR of 9.6% for the period from 2020 to 2025, according to NSR.

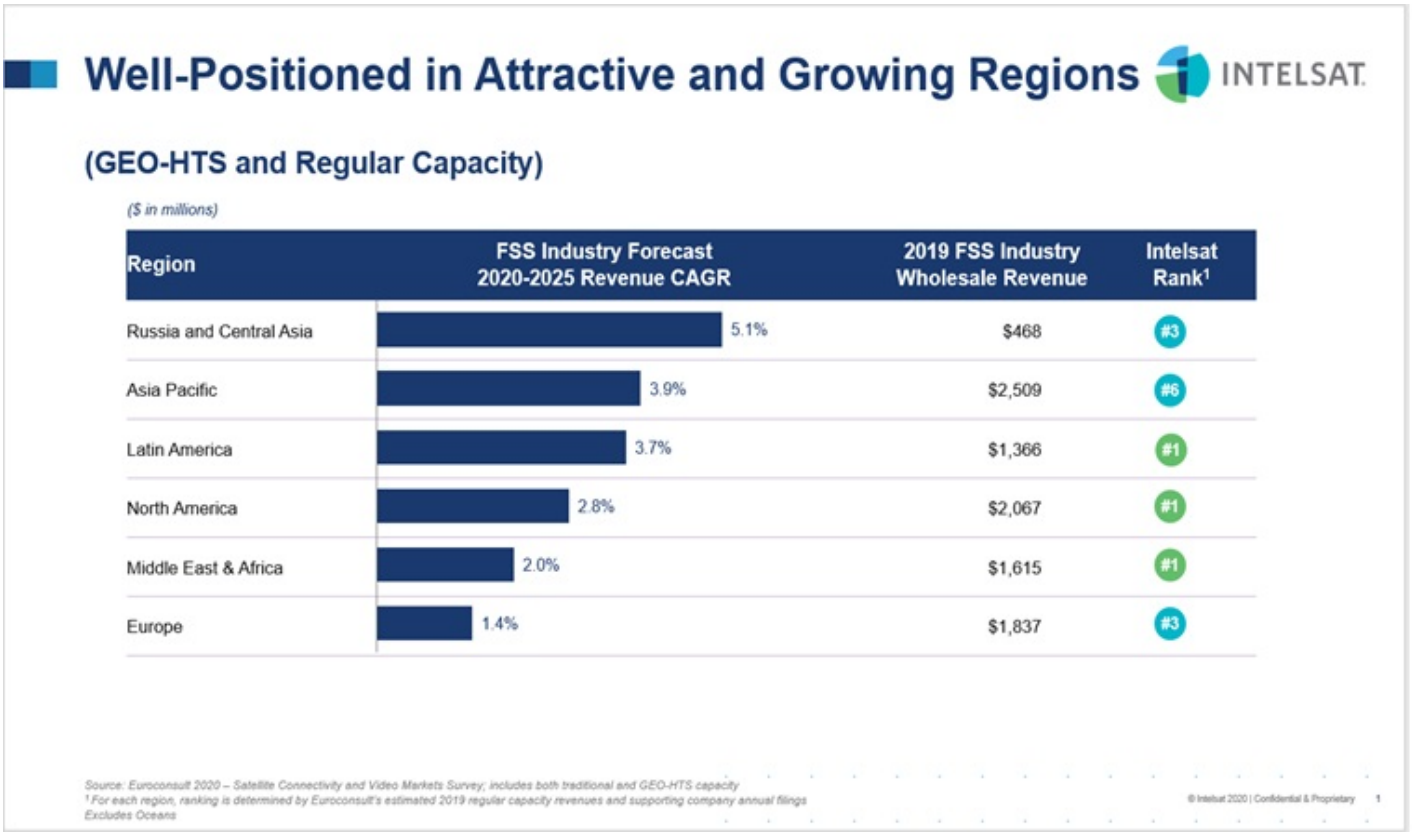
Overall, business activity in this customer set reflects the current tempo of our end-customers' operations and the budgetary constraints of the U.S. government; visibility into the U.S. government's planned contract awards remains low and the pace of new business and subsequent awards remains flat.

Over the mid-term, we believe our reputation as a provider of secure solutions, our global fleet including investments in our next generation SDN platform and affiliated managed services, our well-established customer relationships, our ability to provide turnkey services and our demonstrated willingness to reposition or procure third-party 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 over time from our agile satellite fleet serving the increasing demands for mobility services from the U.S. government for aeronautical and ground mobile requirements.

Our Diverse Business

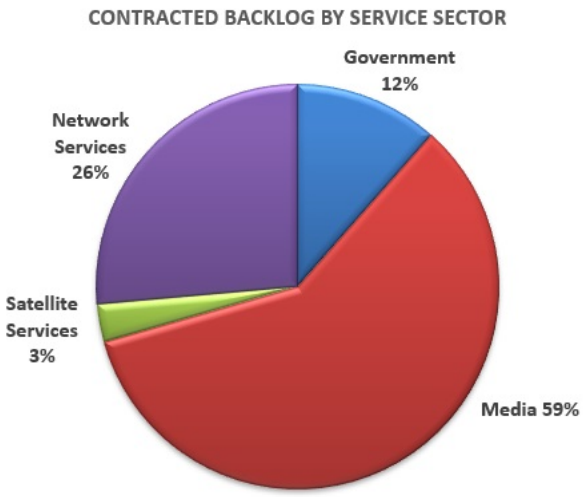
Our revenue and backlog diversity spans multiple customer sets and applications, as discussed above, as well as geographic regions and satellites. We believe our diversity allows us to recognize trends to capture new growth opportunities, and gain experience that can be transferred to customers in different regions. For further details regarding geographic distribution of our revenue, see Item 8, Note 5—Revenue to our consolidated financial statements.

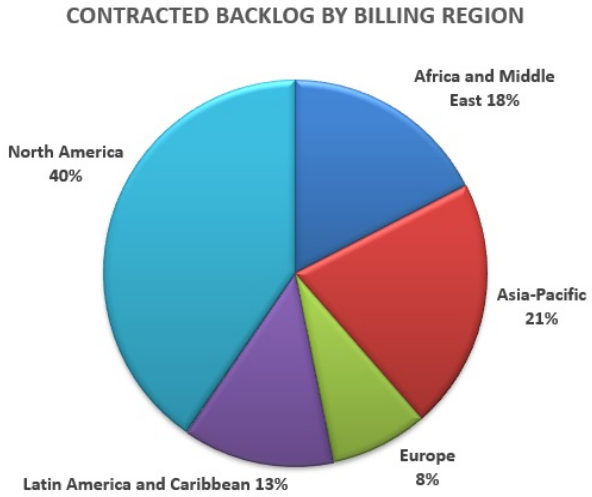
We believe we are the sector leader by transponder share in three of the geographic regions covered by our network. We are generally ranked first or second in the regions identified by industry analysts as those that either purchase the most satellite capacity or are regions with high growth prospects, such as North America and Latin America.



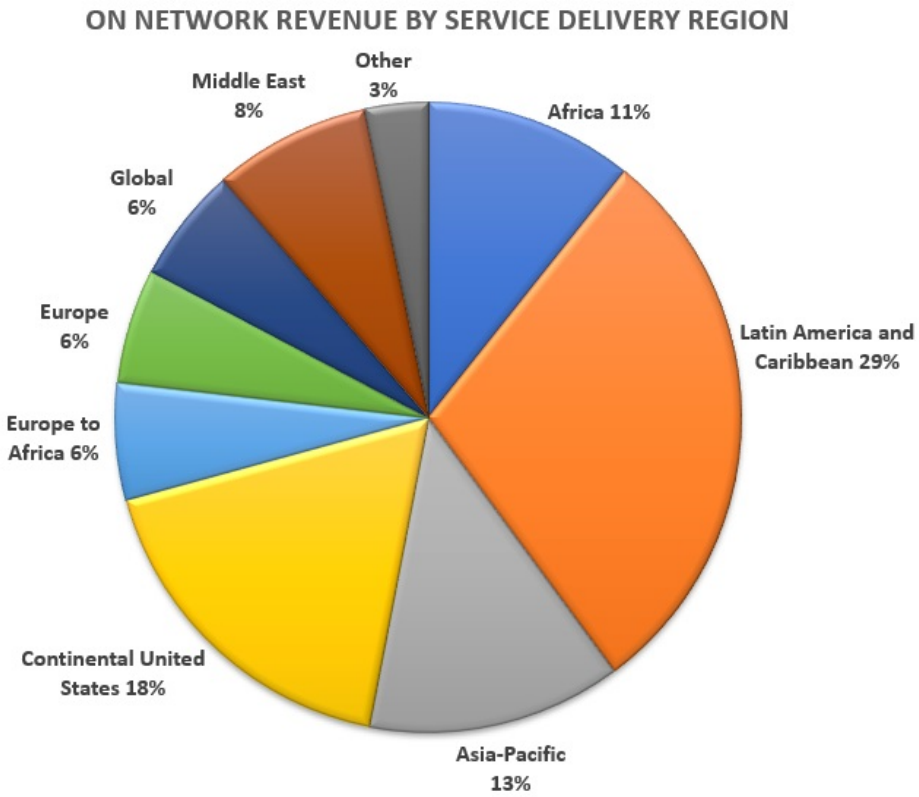
The scale of our fleet can also reduce the financial impact of satellite failures and protect against service interruption. No single satellite generated more than 7% of our revenue and no single customer accounted for more than 15% of our revenue for the year ended December 31, 2020.

The following charts show the geographic diversity of our contracted backlog as of December 31, 2020 by service sector and region, 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 was delivered as of December 31, 2020.



Gogo CA — Commercial Aviation

On December 1, 2020, Intelsat completed its purchase of Gogo's commercial aviation business for $400.0 million in cash, subject to customary adjustments. The Gogo Transaction further propels Intelsat's efforts in the growing commercial IFC market, pairing our high-capacity global satellite and ground network with Gogo CA's installed base of more than 3,000 commercial aircraft to redefine the IFC experience. Gogo CA's mission is to provide ground-like connectivity to every device on every flight around the globe enabling superior passenger experiences. To accomplish our mission, we utilize dedicated satellite and ATG networks, engineer, install and maintain in-flight systems of propriety hardware and software, and deliver customizable connectivity, wireless entertainment services, and global support capabilities to our aviation partners. Our leading global market share supports our continued investment in ongoing research and development and the global operating capabilities required to support our aviation partners' needs. Our technology roadmap includes plans for continued rapid improvement in bandwidth speeds and other performance metrics of our in-flight systems.

We are the leading global commercial aviation provider of IFC and IFE services, with our equipment installed and services provided on approximately 3,000 commercial aircraft as of December 31, 2020. Our next generation 2Ku global satellite system ("2Ku") has been installed on more than 1,495 commercial aircraft, with approximately 475 additional 2Ku commercial aircraft under existing contracts and awards not yet under contract as of December 31, 2020. The 2Ku system is capable of delivering peak speeds of 200 Mbps to the aircraft. We also anticipate using Gogo's 5G ATG network ("Gogo 5G"), expected to be available in 2022, to improve the passenger experience by providing lower latency and higher throughput than the current ATG network on commercial regional jets and smaller mainline jets operating within the continental United States and Canada. Gogo 5G will support licensed, shared and unlicensed spectrum and high, low and middle bands and will allow us to take advantage of new advances in technology as they are developed. We will continue to provide service over the current ATG network in North America to provide redundancy to the Gogo 5G network when needed.

Our Strategy: Transforming Our Business and Our Sector

We are transforming our business and sector, investing in and deploying innovative new technologies and platforms 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 five competitive advantages that support our ability to reach our goals:

- Our operating scale, with over 50 satellites owned and managed, coupled with our long history of experience introducing and managing technology globally, is essential given that the fastest growing applications, such as mobility and upcoming 5G deployments, require ubiquitous, consistent network performance;
- Our global presence, including relationships with governments and operators around the world and service delivery in approximately 200 countries and territories illustrating our global reach, is important to new opportunities, such as connected and autonomous vehicles, machine-to-machine, land mobility and government applications, where service providers will look for global access. We believe the ability to serve these and other applications on a global basis creates new satellite-based communication solutions with multi-billion dollar revenue potential;
- Our innovative technology, especially our high-throughput fleet already in-orbit, and investments in new software-defined space assets and virtualization of our ground platform, balances our focus on flexibly deploying capacity where it is needed and continually advancing technology, allowing us to provide our customers first-to-market advantage and a transformational customer experience. In addition, we believe that completing targeted investments and partnerships in differentiated space and ground infrastructure to develop a standards-based ecosystem will provide a seamless interface with the broader telecommunications ecosystem;
- Our portfolio of spectrum rights provides unmatched flexibility and agility as we look at new opportunities; and
- Our customer reach, including our leading position in the commercial aviation market. We serve a very high-quality customer base around the world and have an extensive and collaborative history of working successfully with those partners. With the acquisition of Gogo CA, we have moved to directly serve the world's leading airlines and are vertically integrating Intelsat's global satellite network with the Gogo CA business that is built upon providing the leading global IFC experience through our leading 2Ku system and utilization of ATG systems, backed by strong mobility network management capability and leading experience in meeting the rigorous demands of the global aviation market. Subsequent to the integration of Gogo CA, we intend to take our learned experiences and continue to invest in managed services capabilities that bring us closer to our customers.

Our strategy is to drive revenue growth with the following actions:

- Stabilize our core business by supporting our video neighborhoods, employing a disciplined yield management approach across our business units, maintaining strong customer relationships and successfully executing on our business plan to deliver strong operational results;
- Scale our differentiated managed service offerings in targeted growth verticals in broadband, mobility, media and government, leveraging the global footprint, higher performance and better economics of our next generation HTS and SDS platforms and the flexibility of our innovative terrestrial network to improve the quality and simplicity of the end-user experience;
- Develop and maintain strong distribution channels to our primary customer sets, including through partnerships and investments, that will improve network reach and service capabilities and enhance our vertical reach to the mobility sector;
- Utilize third-party capacity to cultivate relationships with prospective customers and extend relationships with existing customers in areas where we are capacity constrained or have limited service offerings, with the goal of bringing that capacity back on network when available;
- Seek partnerships and investments for vertical expansion in the growing mobility sector, for example, through the recent Gogo Transaction, and in adjacent space-based businesses to position for longer-term growth; and
- In our Gogo CA business, we intend to seek revenue growth through the following actions, among other things:
    - Increase the number of Gogo CA-connected commercial aircraft from the approximately 3,000 commercial aircraft to which we provided services as of December 31, 2020;
    - Increase the take rates for passenger connectivity, the adoption of additional wireless entertainment services and the use of connected aircraft-related operational applications; and
    - Leverage our installation experience and growing portfolio of supplemental type certificates ("STCs") to reduce our investment per aircraft.

We believe that developing differentiated managed services and investing in related software- and standards-based technology will allow us to improve our position within the broader telecommunications landscape, unlocking opportunities that are essential to providing global broadband connectivity.

Our new services and technologies will also open new sectors that are much larger, and growing much faster, than the sectors we support today by, for example:

- Providing network infrastructure for wireless in developing regions;
- Providing signal ubiquity in support of 5G services globally. By integrating 5G into our core ground network, we will provide a seamless interconnectivity experience with third-party 5G networks;
- Providing flexible broadband services for enterprise networks and for commercial and government-related aeronautical, maritime and other mobile applications, and using our high-throughput platform and global footprint to provide differentiated services;
- Optimizing content distribution networks to support cloud-based media applications, UHD, OTT programming and other multiscreen viewing applications; and
- Providing ubiquitous broadband for global deployment of connected devices, including connected and autonomous vehicles and the continuing formation of the IoT.

Our strategy with respect to capital investment and spectrum is expected to lead to longer-term outcomes, achieving the transformation of our business as we take the following actions:

- Lower overall capital intensity and improve cost effectiveness through innovation with an emphasis on software-defined infrastructure and encourage a standards-based ecosystem built on widely adopted technologies, including the 3GPP standards. We will enhance our space and terrestrial infrastructure with platforms that are software-defined and cloud-based, which are less expensive to manufacture, resulting in faster deployments and mission flexibility. We will leverage third-party capacity to serve customers where it is capital efficient and cost-effective to do so, with the long-term goal of bringing that capacity back on network when available; and
- Maximize the value of our spectrum rights and leverage our sizeable portfolio of spectrum rights in the C-, Ku- and Ka-bands, which provides the foundation of our ability to provide communications services over 99% of the Earth's populated regions. We will continue our ongoing activities to clear a portion of the C-band spectrum in North America pursuant to the FCC's Final Order on the topic and participate in an accelerated clearing process, in order to, among other things, free up C-band spectrum in the U.S. to fuel the adoption of 5G, while also protecting and maintaining the essential services we provide in the band today.

In advancing our spectrum rights strategy, we worked from 2017 with other satellite operators and collaborated with customer groups, associations and other stakeholders to propose a market-based solution to a Notice of Proposed Rule Making ("NPRM") issued by the FCC. The NPRM explored clearing spectrum currently licensed to satellite operators in order to accommodate the deployment of 5G wireless services in the United States. The proposal put forth by Intelsat and certain other satellite operators supported the FCC's stated goals of clearing a large portion of the C-band spectrum quickly, while also protecting incumbent services. On November 18, 2019, the FCC announced a decision to pursue a public auction of the C-band spectrum currently licensed to Intelsat and other satellite operators, a change from the private market solution for which Intelsat had been advocating over the prior two years.

On March 3, 2020, the FCC issued its final order in the C-band proceeding. The FCC Final Order determined that acceleration incentive payments totaling $9.7 billion would be made to certain C-band satellite operators, subject to the achievement of certain milestones, of which Intelsat would receive $4.9 billion payable in two tranches. To qualify to receive the incentive payments in the accelerated clearing process, C-band satellite operators were required to file a written commitment to opt in by May 29, 2020. The FCC Final Order also outlined a cost reimbursement framework that would apply to the various stakeholders in the proceeding, as well as technical specifications and other elements.

On May 26, 2020, in advance of the FCC's filing deadline, Intelsat announced its decision to opt into the FCC accelerated C-band clearing plan, and on August 14, 2020, the Company filed its final C-band transition plan with the FCC. This comprehensive plan was submitted after more than two years of coordinated outreach with customers, vendors and industry stakeholders to ensure that Intelsat is well positioned to achieve the milestones outlined in the FCC Final Order.

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 national, regional and global providers of traditional and high-throughput FSS. We also compete with providers of MSS for broadband services delivered for aeronautical and maritime applications.

In addition, we compete with providers of terrestrial fiber optic cable capacity on certain routes and networks, principally for point-to-point services. 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.

In recent years, increased availability of fiber in metropolitan regions of developing countries, and the oversupply of satellite services in certain regions, have resulted in increased competition in some of the regions we serve. The effect of these two trends has been significant price reductions for both fiber and satellite connectivity, primarily impacting our commercial and government data 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 lower prices.

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
- Hong Kong
- India
- Israel
- Japan
- Kenya
- Netherlands
- Russia
- Senegal
- Singapore
- South Africa
- Switzerland
- United Arab Emirates

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. We will expand our distribution platform as we evolve to a managed-services driven business model that provides turnkey solutions to our customers who require more than just connectivity.

Contracts with Airline Partners

We enter into connectivity agreements with our airline partners under which the airlines commit to have our equipment installed on some or all of the aircraft they operate, and we commit to provide IFC and/or IFE services, and, in some circumstances, CAS, on such aircraft. We currently have definitive agreements to provide service on 20 commercial airlines. We have the exclusive right to provide passenger IFC services on Gogo CA-installed aircraft throughout the term of the agreement in contracts with airline partners. The majority of our contracts with our airline partners have staggered expiration dates occurring on a fleet-by-fleet basis based on installation dates or on a contract basis, depending on the contract. Under our current contracts, the last expiration is expected to occur in 2030 or later, depending on the timing of future installations.

We offer airline partners a variety of business models and work with each airline to tailor the model to meet its needs. Under Gogo CA's turnkey model for passenger IFC services, Gogo CA typically sets passenger pricing and the airline receives a negotiated revenue share from passenger purchases of the services and pays Gogo CA a monthly fee for network monitoring and management or maintenance services. Under some of our agreements, airlines have adopted or have the option to adopt an airline-directed model, whereby the airline partner has flexibility to determine which of the many end-to-end services it wants Gogo CA to provide, which services it wants to provide itself and how it wishes to price the services provided to passengers.

Depending on the contract, installation and maintenance services may be performed by us and/or the airline. When we provide such services, under some agreements, we include charges for installation and maintenance in our equipment pricing package; in other circumstances, the airline pays us directly for such services. Under certain contracts, we provide equipment credits or other incentives based on the number of aircraft installed with our equipment and the timing of such installations. Our contracts with airline partners set forth specified timelines for the installation or delivery of our airborne equipment, as well as service level commitments, and our failure to meet such timelines or service level commitments generally requires us to pay penalties or liquidated damages to the airlines and in certain circumstances may result in our airline partners being permitted to terminate all or a portion of the contract.

Our Satellite Network

Our global satellite network is currently comprised of 52 satellites as well as 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 satellite network and our operational and engineering leadership. Highlights of our satellite network include:

- Prime orbital locations, reflecting a valuable portfolio of coordinated fixed satellite spectrum rights;
- Highly reliable services, including transponder availability of 99.998% on all operational satellites for the year ended December 31, 2020;
- 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 enable us to reconfigure capacity to provide different areas of coverage;
- Resilience, with multiple satellites serving each region, allows for improved restoration alternatives should a satellite anomaly occur; and
- Longevity, leveraging mission extension vehicles, allows us to extend the useful life for certain satellites by up to 5 years.

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, 2020, except where noted.

Satellite	Manufacturer	Orbital Location	Launch Date	Estimated End of Service Life [1]
Station Kept Satellites				
Intelsat 901	Maxar[2]	27.5 °W	Jun-01	2025
Galaxy 3C	Boeing[3]	95.1 °W	Jun-02	2023
Galaxy 23[4]	Maxar	121.0 °W	Aug-03	2023
Galaxy 13[5]	Boeing	127.0 °W	Oct-03	2025
Intelsat 1002[6]	Airbus	1.0 °W	Jun-04	2021
Galaxy 28	Maxar	89.0 °W	Jun-05	2023
Galaxy 14	NG[7]	125.0 °W	Aug-05	2021
Galaxy 15	NG	133.0 °W	Oct-05	2023
Galaxy 16	Maxar	99.0 °W	Jun-06	2027
Galaxy 17	Thales[8]	91.0 °W	May-07	2024
Intelsat 11	NG	43.0 °W	Oct-07	2022
Horizons 2[9]	NG	84.9 °E	Dec-07	2024
Galaxy 18	Maxar	123.0 °W	May-08	2028
Intelsat 25	Maxar	31.5 °W	Jul-08	2024
Galaxy 19	Maxar	97.0 °W	Sep-08	2028
Intelsat 14	Maxar	45.0 °W	Nov-09	2027
Intelsat 15	NG	85.2 °E	Nov-09	2027
Intelsat 16	NG	76.2 °W	Feb-10	2028
Intelsat 17	Maxar	66.0 °E	Nov-10	2027
Intelsat 28[10]	NG	32.8 °E	Apr-11	2025
Intelsat 18	NG	180.0 °E	Oct-11	2028
Intelsat 22[11]	Boeing	72.1 °E	Mar-12	2028
Intelsat 19	Maxar	166.0 °E	Jun-12	2028
Intelsat 20	Maxar	68.5 °E	Aug-12	2030
Intelsat 21	Boeing	58.0 °W	Aug-12	2030
Intelsat 23	NG	53.0 °W	Oct-12	2030
Intelsat 30	Maxar	95.1 °W	Oct-14	2032
Intelsat 34	Maxar	55.5 °W	Aug-15	2033
Intelsat 31	Maxar	95.1 °W	Jun-16	2034
Intelsat 33e	Boeing	60.0 °E	Aug-16	2028
Intelsat 36	Maxar	68.5 °E	Aug-16	2032
Intelsat 35e	Boeing	34.5 °W	Jul-17	2035
Intelsat 37e	Boeing	18.0 °W	Sep-17	2029
Horizons 3e[12]	Boeing	169.0 °E	Sep-18	2036
Intelsat 39	Maxar	62.0 °E	Aug-19	2037
Galaxy 30	NG	DRIFT	Aug-20	2035
Inclined Orbit Satellites				
Intelsat 26	Boeing	63.7 °E	Feb-97	2022
Galaxy 25	Maxar	32.9 °E	May-97	2023
Intelsat 5	Boeing	137.0 °W	Aug-97	2024
Galaxy 11	Boeing	93.1 °W	Dec-99	2024
Intelsat 9	Boeing	50.0 °W	Jul-00	2022
Intelsat 12	Maxar	64.3 °E	Oct-00	2021
Intelsat 1R	Boeing	157.1 °E	Nov-00	2023
Intelsat 10	Boeing	47.5 °E	May-01	2026
Intelsat 902	Maxar	50.1 °W	Aug-01	2024
Intelsat 904	Maxar	29.5 °W	Feb-02	2025
Intelsat 905	Maxar	24.5 °W	Jun-02	2031
Intelsat 906	Maxar	64.2 °E	Sep-02	2027
Galaxy 12	NG	129.0 °W	Apr-03	2025
Payload Hosted on Third-Party Satellites				
Intelsat 1W[13]	Thales	0.9 °W	Oct-09	2025

Satellite	Manufacturer	Orbital Location	Launch Date	Estimated End of Service Life [1]
Intelsat 32e[14]	Airbus	43.2 °W	Feb-17	2032
Intelsat 38[15]	Maxar	45.1 °E	Sep-18	2036

(1) Engineering estimates of the service life as of December 31, 2020 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) Maxar Technologies Inc. ("Maxar"), formerly Space Systems/Loral, LLC ("SSL").
(3) Boeing Satellite Systems, Inc. ("BSS"), formerly Hughes Aircraft Company.
(4) EchoStar Communications Corporation owns all of this satellite's Ku-band transponders and a portion of the common elements of the satellite.
(5) Horizons Satellite Holdings LLC ("Horizons Holdings"), a 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.
(6) Telenor Satellite AS ("Telenor") owns 18 Ku-band transponders (measured in equivalent 36 MHz transponders) on this satellite. EADS Astrium was renamed AIRBUS Defence & Space ("Airbus"). Pending the successful rendezvous and docking of a mission extension vehicle with Intelsat 1002, anticipated to occur in early Q2 2021, the estimated end of service life of this satellite is expected to extend to 2026.
(7) Northrop Grumman ("NG"), formerly Orbital Sciences.
(8) Thales Alenia Space ("Thales").
(9) Horizons Holdings owns the payload on this satellite and we operate the payload for the joint venture.
(10) Intelsat 28 was formerly known as Intelsat New Dawn.
(11) Intelsat 22 includes an ultra high-frequency payload owned by the Australian Defence Force.
(12) Horizons-3 Satellite LLC, a joint venture with JSAT, owns and operates this satellite.
(13) Intelsat 1W refers to a Ku-band payload on Thor 6, a satellite operated by Telenor.
(14) Intelsat 32e refers to a HTS Ku-band payload we operate on a satellite also known as Sky Brasil 1.
(15) Intelsat 38 refers to a Ku-band payload on Azerspace-2, a satellite operated by Azercosmos Open Joint Stock Company.

Satellite Systems

There are three primary types of commercial communications satellite systems: LEO systems, medium-earth orbit systems and GEO 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 technological 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, 2020, 13 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, around-the-clock satellite control and network operations support 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, 2020, we had approximately 1,675 station-kept transponders on our traditional wide beam fleet, for which the average fill rate was 73%. The HTS Intelsat Epic transponder unit count was approximately 1,225, reflecting an immaterial change from 2019.

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 7.6 years as of December 31, 2020, weighted on the basis of nominally available capacity for the station-kept satellites we own.

Satellites on Order

As of December 31, 2020, we had ten satellites under contract for construction and launch.

Satellite	Manufacturer	Role	Earliest Launch Date	Expected Launch Provider
Intelsat 40e	Maxar	Next Generation HTS satellite for North America	2022	SpaceX
Galaxy 31	Maxar	C-band North America satellite	2022	SpaceX
Galaxy 32	Maxar	C-band North America satellite	2022	SpaceX
Galaxy 33	NG	C-band North America satellite	2022	SpaceX
Galaxy 34	NG	C-band North America satellite	2022	SpaceX
Galaxy 35	Maxar	C-band North America satellite	2022	Arianespace
Galaxy 36	Maxar	C-band North America satellite	2022	Arianespace
Galaxy 37	Maxar	C-band North America satellite	2023	Not attributed
Intelsat 42	Airbus	High-Throughput SDS	2023	Not attributed
Intelsat 43	Airbus	High-Throughput SDS	2024	Not attributed

Future Satellites

We 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 planned satellites to guide us in redeploying satellite resources as appropriate. In early 2020, Intelsat selected Maxar to manufacture Intelsat 40e, a next generation geostationary communications satellite that is scheduled to launch in 2022. On December 31, 2020, Intelsat signed an agreement with Airbus to produce two fully-flexible, in-orbit reconfigurable SDS. These satellites will be a catalyst for growth, enabling new revenue opportunities from the fast-growing mobility sector, as well as positioning the Company to capture additional managed services business across other customer sectors.

Satellite Network Operations and Current Satellite 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 14 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 satellite customer service center located in Ellenwood, Georgia includes a Radio Frequency 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 satellite customers and is the first point of contact for customers needing assistance in using our satellite 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 Satellite 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, 2020, two 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.

Gogo CA Portfolio

We maintain a comprehensive portfolio consisting of our in-flight network, in-flight systems, in-flight services, and aviation partner support.

- In-flight Network. Our network solutions are engineered to provide industry-leading cost, capacity, coverage, reliability and aero-performance. We offer aviation partners a variety of network solutions suitable for operation on most of the world's commercial aircraft. Intelsat is a major supplier of satellite capacity for these solutions, but we also purchase capacity from certain other satellite operators in connection with our in-flight network. As of December 31, 2020, we marketed our global satellite network solutions to approximately 21,000 commercial aircraft.
- In-flight Systems. Our in-flight systems are designed for superior performance, future adaptability and ease of certification, installation and maintenance. Each system consists of: (i) an antenna specifically designed for the network and technology

being used to provide the service; (ii) a modular in-cabin Wi-Fi network that includes state-of-the art servers, modems and wireless access points; and (iii) system software designed to reliably support a variety of in-flight services provided by Gogo CA, our aviation partners and third parties. Our 2Ku system employs a modular, open architecture that is adaptable to current and future satellites of multiple types provided by multiple satellite providers, supports different modems and is upgradeable with minimum disruption to the flight schedules and operations of our aviation partners.

- In-flight Services. We provide a wide range of in-flight services for passengers, flight and cabin crews and operational use by our aviation partners. We leverage our increased bandwidth to expand our connectivity and entertainment services.
    - *Passenger Connectivity Services.* Passengers connect to the Internet from their laptops and personal electronic devices, as they would on the ground, to access corporate and personal applications that include streaming services on our higher capacity networks. Our continued increases in bandwidth enable us to serve more passengers per flight. Gogo CA passengers may select from a variety of pricing options tailored to devices, routes, available bandwidth and session durations, in addition to monthly and annual subscriptions. Passenger connectivity services are and will continue to be a significant source of our revenue.
    - *Passenger Entertainment Services.* Using our video-on-demand product accessible from passengers' personal electronic devices, passengers can access a large library of entertainment options, which currently include on-demand movies and television shows. Through IPTV, we deliver live television content to passengers on satellite-equipped flights using our in-cabin network. As of December 31, 2020, our IFE services were available on more than 2,500 aircraft and IPTV was available on more than 680 aircraft.
- Aviation Partner Support. Each Gogo CA airline partner has a dedicated Gogo CA account team that provides assistance during the certification and installation process and throughout the term of our partnership. We also provide a variety of operational support services required to install and maintain our in-flight systems. Our Gogo CA experienced technical engineers assist in the certification and installation of our equipment on commercial aircraft of all major models and work with the Federal Aviation Administration ("FAA") and international regulators to obtain STCs and other required approvals, and work with airline partners or third parties to assist in installation. Further, we have extensive databases, a big data platform and analytical capabilities to evaluate our system and operational performance. Our analytical capabilities are used by us, our aviation partners and our vendors in designing, manufacturing, and operating our systems to maximize performance and minimize disruptions and system downtime.

Satellite Health and Technology

Our satellite fleet is diversified by manufacturer and satellite type, and is generally healthy, with 99.998% transponder availability on all operational satellites during the year ended December 31, 2020. 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 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, 2020, Galaxy 15 continued 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 in October 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. In addition, in February 2017, measurements indicated higher than expected fuel use while performing station-keeping maneuvers. There is no evidence of any impact to the communications payload. A Failure Review Board completed its investigation of the primary thruster failure and the fuel use anomalies and identified several design, build and screening improvements that are being implemented by the satellite manufacturer for future satellites using the same engine. In addition, the manufacturer has adapted its propellant estimation software for both anomalies, which we take into account in making our end of life prediction. We filed a loss claim with our insurers in March 2017 relating to the reduction of life. As of December 31, 2018, we settled with all insurers and received total collection and settlement payments of $70 million in cash.

In April 2019, the Intelsat 29e satellite (in service since 2016) experienced an anomaly that resulted in a total loss of the satellite. A Failure Review Board comprised of the satellite's manufacturer, Boeing Satellite Systems, Inc., the Company and external independent experts was convened to complete a comprehensive analysis of the cause of the anomaly. The board concluded that the anomaly was either caused by a harness flaw in conjunction with an electrostatic discharge event related to solar weather activity, or the impact of a micrometeoroid. As we have other similar spacecraft on-orbit of the same Boeing series, we extended the investigation by conducting a thorough analysis of other Boeing-manufactured satellites in our fleet. Based on our findings, we believe that the Intelsat 29e anomaly is an isolated incident and that other similar spacecraft are at a very low risk of experiencing the same sequence of events. We are also incorporating information gleaned from the investigation into future design and manufacturing plans to mitigate the conditions that may have caused the incident.

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
- 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, 2020, 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. Intelsat 26 is currently planned to be decommissioned in 2022.

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, 2020, 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 thruster 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. 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.

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, will likely result in a shortened operating life of a satellite or the need to reduce the use of the communications payload.

As of December 31, 2020, 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, 2020, 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.

Maxar (formerly SSL) gyroscopes. Some of our satellites use gyroscopes to provide 3-axes attitude information during orbit inclination maneuvers. Certain Maxar satellites use gyroscopes that have been identified as having a higher probability of failing. There are four gyroscopes on each of these Maxar 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, 2020, we operated nine Maxar satellites that use these gyroscopes, of which only two satellites require gyroscopes for station-keeping maneuvers.

Regulation

As an operator of a privately-owned global satellite system and a provider of commercial aviation IFC and IFE services, we are subject to U.S. government regulation, regulation by non-U.S. national telecommunications authorities, the International Telecommunication Union ("ITU") frequency coordination process and regulations, regulation by non-U.S. commercial aviation authorities and certain privacy and data security-related 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 in effect relating to our satellites cover various time periods, and thus the number held at any given time varies. 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 among the International Telecommunications Satellite Organization ("ITSO"), the Company and certain of our subsidiaries (the "Public Services Agreement"). 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. In November 2020, we filed a pending petition with the FCC seeking to replace these conditions in the event of termination of ITSO and the Public Services Agreement with a condition for Intelsat to provide global connectivity and coverage and non-discriminatory access to the Intelsat system. 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 and licenses for terminals. 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.

Intelsat also holds various authorizations to operate mobile earth stations on land vehicles, maritime vessels and planes, including two aeronautical earth station authorizations acquired in December 2020 as part of the Gogo Transaction.

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.

Federal Aviation Administration. The FAA prescribes standards and certification requirements for our Gogo CA business for the manufacturing of aircraft and aircraft components, and certifies repair stations to perform aircraft maintenance, preventive maintenance and alterations, including the installation and maintenance of aircraft components. Each type of aircraft operated in the U.S. under an FAA-issued standard airworthiness certificate must possess an FAA Type Certificate, which constitutes approval of the design of the aircraft type based on applicable airworthiness standards. When a party other than the holder of the FAA Type Certificate develops a major modification to an aircraft already type-certificated, that party must obtain an FAA-issued STC approving the design of the modified aircraft type. We regularly obtain STCs for each aircraft type operated by each airline partner on whose aircraft our equipment will be installed and separate STCs typically are required for different configurations of the same aircraft type, such as when they are configured differently for different airlines. After obtaining an STC, a manufacturer desiring to manufacture components to be used in the modification covered by the STC must apply to the FAA for a Parts Manufacturer Approval ("PMA"), which permits the holder to manufacture and sell components manufactured in conformity with the PMA and its approved design and data package. In general, each initial PMA is an approval of a manufacturing or modification facility's production quality control system. PMA supplements are obtained to authorize the manufacture of a particular part in accordance with the requirements of the pertinent PMA, including its production quality control system. We routinely apply for and receive such PMAs and supplements.

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

The Export Administration Act/International Emergency Economic Powers Act, implemented by the Export Administration Regulations ("EAR") and administered by the U.S. Department of Commerce's Bureau of Industry and Security ("BIS"), regulates exports of dual-use controlled items, which includes commercial communications satellites, associated ground equipment, related software, and technology. The EAR also controls dual-use 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 to facilitate the shipment of this equipment when needed.

The Arms Export Control Act, implemented by the International Traffic in Arms Regulations ("ITAR") and administered by the U.S. Department of State's Directorate of Defense Trade Controls, regulates the export of items on the U.S. Munitions List, including the export of certain satellites and/or payloads with defined military and/or 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). A small portion of Intelsat's controlled technology remains under ITAR. Intelsat does not currently have any active ITAR licenses.

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 technology and/or hardware; currently these exports are regulated under the EAR. We do not currently need any ITAR authorizations to fulfill our obligations under contracts with non-U.S. entities.

Trade sanctions laws and regulations administered by the U.S. Department of Treasury's Office of Foreign Assets Control 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. Satellite operators in the United Kingdom are regulated by the U.K. Office of Communications ("Ofcom") and the U.K. Space Agency ("UKSA"). Additionally, Ofcom regulates the use of certain spectrum and orbital resources associated with some of our satellites. Specifically, Intelsat 33e, Intelsat 37e and Intelsat 1R rely partially on U.K. spectrum rights.

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 some of our satellites. Specifically, the following satellites were operated under the regulation of NICTA for all or part of, the year ended December 31, 2020: Galaxy 23, Intelsat 20, Intelsat 26, Intelsat 30, Intelsat 31, Intelsat 33e, Intelsat 36, and Intelsat 39. We are required to pay annual fees to NICTA in connection with the spectrum and orbital resources utilized by these satellites, as well as for other satellite network filings we have the right to use.

German Regulation. We hold licenses from the Federal Network Agency ("Bundesnetzagentur" or "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 and Intelsat 38 satellites and with future satellites. We are required to pay annual fees to BNetzA in connection with the spectrum and orbital resources utilized by these satellites, as well as for other satellite network filings we have the right to use.

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

Japanese Regulation. We hold licenses from the Ministry of Internal Affairs and Communications for several earth stations in Japan, terminals, as well as carrier registrations. We and JSAT are the sole members of Horizons Holdings, and, in 2002, the Japanese telecommunications ministry authorized Horizons Holdings 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 Holdings 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 and services, we are also subject to the national communications and broadcasting laws and regulations of all 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, operating terminals or providing managed services. We have obtained these licenses or written authorizations, or are in the process of doing so, 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. These requirements vary from country to country and may include authorizations to provide managed services in approved frequency ranges, as well as other requirements such as local presence, lawful intercept, and telecom or ISP licenses. 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

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. We primarily rely upon the United States, the United Kingdom, Germany, and Papua New Guinea to file for orbital slots at the ITU. Our use of

orbital locations is subject to the frequency coordination and recording process of the 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. Rather, the ITU relies on technical rules as a basis for coordination and consultations between member states for matters related to spectrum disputes. Given the lack of enforcement mechanisms within the ITU treaty, neither the ITU specifically, nor international law generally, provide clear remedies if this voluntary process fails.

In the U.S. regulatory process, 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 to file a complete FCC license application for the orbital location within two years, frequencies and polarization proposed in the ITU satellite network filing as well as the bond will be forfeited.

Regulation by non-U.S. Commercial Aviation Authorities

For aircraft registered with a civil aviation authority ("CAA") outside of the U.S., the installation of Intelsat equipment requires airworthiness certification from an airworthiness certification body. Typically, the CAA of the country in which the aircraft is registered is responsible for ensuring the airworthiness of any aircraft modifications under its authority. The FAA holds bilateral agreements with a number of certification authorities around the globe to facilitate the reciprocal airworthiness certification of civil aeronautical products that are imported/exported between two signatory countries. For countries with which the FAA does not have a bilateral agreement, Intelsat must apply for certification approval with the CAA of the country in which the aircraft is registered, and will be required to comply with the airworthiness regulations of the country in which the aircraft is registered.

Privacy and Data Security-Related Regulations

In the ordinary course of our commercial aviation business, we collect personal information, such as name, address, e-mail address and credit card information, directly from passengers when they register to use our service. We also may obtain information about our users from third parties. Our collection and use of such information is intended to comply with our privacy policy, applicable law and our contractual obligations to airlines, customers, and other third parties, in addition to industry standards such as the Payment Card Industry Data Security Standard. We are also subject to other federal and state consumer privacy and data security requirements. For example, Section 5 of the Federal Trade Commission ("FTC") Act prohibits "unfair or deceptive acts or practices in or affecting commerce," and state "mini-FTC Acts" prohibit unfair or deceptive acts or practices, along with data security breach notification laws requiring entities holding certain personal data to provide notices in the event of a data security breach. Further, we are subject to the California Consumer Privacy Act ("CCPA") and the European Union's ("EU") General Data Protection Regulation ("GDPR"). The regulation of data privacy and security in the EU and in other jurisdictions continues to evolve. EU member states also have some flexibility to supplement the GDPR with their own laws and regulations and may apply stricter requirements for certain data processing activities.

Environmental, Health and Safety Matters

Intelsat aims to provide leadership in the identification and promotion of sustainable practices and services that reduce the company's environmental impact, educate and engage staff and create a more environmentally sustainable organization. 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 should it arise. 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 applicable environmental laws and regulations. Moreover, Intelsat's properties generally operate pursuant to a Conditional Use Permit. In order to obtain such a permit, Intelsat must demonstrate compliance with all applicable environmental laws and must maintain programs to prevent or minimize damage to public health, safety and the environment, from, for example, a release or threatened release of hazardous materials, including but not limited to ground water, air, offsets and storage. Intelsat promotes an environmentally friendly and safe culture and complies with applicable laws and regulations in regard to the environment, safety and personal health. Intelsat also complies with community right-to-know laws and has undertaken compliance with certain international organizations, such as the International Civil Aviation Organization, the European

Aviation Safety Agency, the FAA and the International Organization for Standardization 45001:2018, which govern the Company's Safety Management System ("SMS"). The SMS is a formal framework for managing, mitigating and avoiding safety risks. It also allows for adaptability, change and continuous improvement of safety practices by assessing, collecting, reporting and predicting potential or actual safety hazards or risks.

Employees

As of December 31, 2020, we had 1,774 full-time regular employees. These employees consisted of:

- 1,024 employees in engineering, operations and related information systems;
- 372 employees in sales, marketing and strategy;
- 291 employees in finance, legal and other administrative functions; and
- 87 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.

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. The Company is registered with the Luxembourg *Registre de Commerce et des Sociétés* under number B162135.

Our History

Intelsat, Ltd., a Bermuda company, was the successor entity to the International Telecommunications Satellite Organization (the "IGO"). 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 Intelsat, Ltd., which was domiciled as a Bermuda company.

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, the Company 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 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.

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"). In May 2016, all of the outstanding Series A Preferred Shares were converted in accordance with their terms into common shares.

The Gogo Transaction

On December 1, 2020, we completed our acquisition of Gogo's commercial aviation business. As a result of the Gogo Transaction, we became a direct provider of IFC services to commercial airlines and their customers.

Available Information

We file annual, quarterly, and current reports, proxy statements, and other documents with the SEC under the Securities Exchange Act of 1934, as amended. You may obtain any reports, proxy and information statements, and other information that we file electronically with the SEC at www.sec.gov.

You also may view and download copies of our SEC filings free of charge at our website, www.intelsat.com, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The information contained on, or that can be accessed through, our website will not be deemed to be incorporated by reference in, and is not considered part of, this Annual Report on Form 10-K. Investors should also note that we use our website, as well as SEC filings, press releases, and public conference calls, to announce financial information and other material developments regarding our business. We use these channels, as well as social media, to communicate with investors and members of the public about our business. It is possible that the information that we post on our social media channels could be deemed material information. We encourage investors, the media and others interested in our Company to review the information that we post on our social media channels.

Item 1A. 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 Factor Summary

Risk Factors Relating to Our Business

- Significant competition from within the FSS sector could have a material adverse effect on our business and could prevent us from implementing our business strategy and expanding our operations as planned.
- The market for FSS may not grow or may shrink, and we may not be able to attract new customers, retain our existing customers or implement our strategies to grow our business, and pricing pressures may have an adverse impact on FSS sector revenue.
- Our business is capital intensive and requires us to make long-term capital expenditure decisions, and the adequacy of our capital resources is difficult to predict at this time.
- 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 may become subject to unanticipated tax liabilities that may have a material adverse effect on our results of operations.
- We are subject to political, economic, regulatory and other risks due to the international nature of our operations.
- Our satellite business is subject to foreign currency risk.
- Serafina S.A. currently owns a significant amount of our common shares and may have conflicts of interest with us in the future.
- 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.
- Reductions or changes in U.S. government spending, including the U.S. defense budget, could reduce our revenue and adversely affect our business.
- The loss of the services of key personnel could have a material adverse effect on our business.
- The COVID-19 pandemic has and will continue to adversely affect, our employees, suppliers, customers and end consumers, and has and will continue to have an adverse impact, on our business, financial condition and results of operations.
- Intelsat may fail to realize all of the anticipated benefits of the Gogo Transaction or those benefits may take longer to realize than expected. We may also encounter significant difficulties in integrating Gogo's commercial aviation business.
- We or our commercial aviation technology suppliers may be unable to continue to innovate and provide products and services that are useful to consumers and airlines, and the demand for in-flight broadband Internet access service may decrease or develop more slowly than we expect. We cannot predict with certainty the development of the U.S. or international in-flight broadband Internet access market or the market acceptance for our products and services.

- Our Gogo CA business involves possession and use of personal information and use of credit cards by users of our services, which present risks and expenses that could harm our business. Unauthorized disclosure or manipulation of such data, whether through breach of our network security or otherwise, could expose us to costly litigation and damage our reputation.
- Our Gogo CA business is dependent on agreements with airline partners to be able to access passengers and provide IFC services to airlines. We may not be able to timely realize the anticipated benefits from these agreements, renew existing agreements upon expiration or termination, successfully negotiate agreements with new airline partners, or maintain airline and passenger satisfaction with our equipment and services.
- Our business, and especially our Gogo CA business, could be adversely affected if we suffer cyber-attacks or other malicious activities on an aircraft, service interruptions or delays, technology or systems failures, or damage to our equipment. A future act or threat of terrorism or other event could result in reduced demand for our products and services or result in a prohibition on the use of Wi-Fi enabled devices on aircraft.
- Our Gogo CA business depends upon third parties, many of which are single-source providers, to manufacture equipment components, provide service for our network and install and maintain our equipment.
- We may not be able to protect our intellectual property rights, and any assertions by third parties of infringement, misappropriation or other violations by us of their intellectual property rights could result in significant costs.

Risk Factors Relating to Our Satellite Industry

- In-orbit satellite failures or degradations in performance could impair the commercial performance of our satellites.
- A launch failure or other satellite damage or destruction during launch could result in a total or partial satellite loss. A new satellite could also fail to reach its designated orbital location after launch.
- New or proposed satellites are subject to construction and launch delays.
- Our dependence on outside contractors could result in increased costs and delays related to the launch of our new satellites.
- A natural disaster could diminish our ability to provide communications service.

Risk Factors Relating to Regulation

- We are subject to the orbital slot and spectrum access requirements of the ITU and the regulatory and licensing requirements in each of the countries in which we provide services, operate facilities, or license terminals, and our business is sensitive to regulatory changes internationally and in those countries.
- Transparent and publicly available regulatory frameworks on frequency and telecommunication licensing may not be available in some jurisdictions.
- If we do not maintain regulatory authorizations for our existing satellites, associated ground facilities and terminals, services we provide, or obtain authorizations for our future satellites, associated ground facilities and terminals, and services we provide, we may not be able to operate our existing satellites or expand our operations.
- If we do not occupy unused orbital locations or use certain frequencies by specified deadlines, or do not maintain satellites in orbital locations we currently use, our rights and/or priority to use these orbital locations and associated frequencies may lapse or become available for other satellite operators to use.
- Coordination results may adversely affect our ability to use a satellite at a given orbital location in certain frequency bands for our proposed service or coverage area.
- Given the technical and operational challenges to clearing transmissions in the lower 300 MHz of the C-band spectrum in the contiguous U.S. on an accelerated basis, there is risk in our ability to meet the deadlines set forth in the FCC Final Order required to receive Acceleration Payments. If we were ultimately to fail to receive the Acceleration Payments, this could have a material and adverse effect on our financial condition and prospects.
- FCC and FAA regulation may increase our commercial aviation costs of providing service or require us to change our services.
- Our failure to maintain or obtain authorizations under U.S. export control and trade sanctions laws and regulations could have a material adverse effect on our business.
- 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 perform our obligations under U.S. government contracts.

Risk Factors Relating to the Chapter 11 Proceedings

- We are subject to the risks and uncertainties associated with Chapter 11 proceedings.
- Operating under Bankruptcy Court protection for a long period of time may harm our business.

- The Chapter 11 Cases limit the flexibility of our management team in running our business.
- We may not be able to obtain confirmation of a Chapter 11 plan of reorganization, including the proposed Plan.
- Our long-term liquidity requirements and the adequacy of our capital resources are difficult to predict at this time.
- The PSA is subject to significant conditions and milestones that may be difficult for us to satisfy.
- As a result of the Chapter 11 proceedings, our financial results may be volatile and may not reflect historical trends.
- We may be subject to claims that will not be discharged in the Chapter 11 proceedings, which could have a material adverse effect on our financial condition and results of operations.
- The Debtors may be unable to comply with restrictions imposed by the agreements governing the DIP Facility and the Debtors' other financing arrangements.
- We may experience increased levels of employee attrition as a result of the Chapter 11 proceedings.
- In certain instances, a Chapter 11 case may be converted to a case under Chapter 7 of the Bankruptcy Code or dismissed.
- Trading in our common shares during the pendency of the Chapter 11 Cases is highly speculative and poses substantial risks.

Risk Factors Relating to Our Business

We are subject to significant competition from within the 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 introduce next generation HTS and SDS technology on 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, such as our recent acquisition of Gogo's commercial aviation business.

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 DTH platforms, 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.

Our business is capital intensive and requires us to make long-term capital expenditure decisions, and the adequacy of our capital resources is difficult to predict at this time.

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. 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 to use cash on hand, cash flows from operations, borrowings under our DIP Facility (as defined in Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—Recent Developments—*Voluntary Reorganization under Chapter 11*), and exit financing contemplated by the Plan upon our emergence from Chapter 11 to fund our most significant cash outlays, including capital expenditures, in 2021. While we expect to receive Acceleration Payments provided for under the FCC Final Order, our satisfaction of the deadlines and other conditions to receive such payments cannot be guaranteed. 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. In addition, see—Risks Related to Chapter 11 Proceedings below for additional factors that could impact our credit. 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 Debtors may be unable to comply with restrictions imposed by the agreements governing the DIP Facility and the Debtors' other financing arrangements*).

Long-term disruptions in the capital and credit markets as a result of uncertainty due to 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, 2020, two of the 52 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 ongoing 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 satellite business is subject to foreign currency risk.

Almost all of our satellite business customers pay for our services in U.S. dollars, although we are exposed to some risk related to satellite business 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 and Venezuelan customers and others may face difficulties

paying for our services because of recent deterioration in their respective currencies 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.

Serafina S.A. currently owns a significant amount of our common shares and may have conflicts of interest with us in the future.

Serafina S.A. holds in the aggregate approximately 34% of our common shares. We expect, until the conclusion of our Chapter 11 Cases, by virtue of its share ownership, Serafina S.A. may be able to influence decisions to enter into any corporate transaction or other matter that requires the approval of shareholders. Additionally, Serafina S.A. is in the business of making investments in companies and, although it does not currently hold interests in any business that competes directly or indirectly with us, it may from time to time acquire and hold interests in businesses that compete with us. Serafina S.A. 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, 2020, our ten largest customers and their affiliates represented approximately 42% 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 geopolitical uncertainty surrounding the level of U.S. operational presence in Iraq, Afghanistan and potentially the Middle East more generally, there may be 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 other than Jonathan B. Cobin, our Chief Strategy Officer, Bruno Fromont, our Chief Technology Officer and John Wade, our President, Commercial Aviation. We have employment agreements with Stephen Spengler, our Chief Executive Officer, David Tolley, our Chief Financial Officer, Samer Halawi, our Chief Commercial Officer, Michelle Bryan, our General Counsel and Chief Administrative Officer, and Michael DeMarco, our Chief Services Officer, and certain targeted retention mechanisms; however, these agreements and mechanisms do not guarantee that these executives will remain with us. Further, a prolonged period of operating under Bankruptcy Court protection in connection with our Chapter 11 proceedings may also make it more difficult to retain management and other key personnel necessary to the success and growth of our business. 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.

The COVID-19 pandemic has had a material impact on the U.S. and global economies and has adversely affected, and will continue to adversely affect, our employees, suppliers, customers and end consumers, which has had an adverse impact, and will continue to have an adverse impact, on our business, financial condition and results of operations.

The World Health Organization has declared the outbreak of COVID-19 a pandemic and public health emergency of international concern. In March 2020, the President of the United States declared a State of National Emergency due to the pandemic. Other countries affected by the outbreak took similar measures. In addition, many jurisdictions have limited, and are considering to further limit, social mobility and gathering. As the COVID-19 pandemic develops, governments (at national, state and local levels), corporations and other authorities may continue to implement restrictions or policies that have and may continue to adversely impact consumer spending, global capital markets, and the global economy, all of which could have a materially adverse impact on our business, financial condition and results of operations.

A prolonged pandemic and/or economic downturn in the United States or the other markets in which we operate or in which we compete have and may continue to result in:

- significant reductions in demand for our services due to the impact of the pandemic and resulting economic downturn affecting our customers;
- significant decreases in demand for air travel, air travel restrictions and capacity reductions, and the deterioration in economic conditions for our airline partners have had and may continue to have a materially adverse effect on our business prospects and financial condition for our commercial aviation business;
- significant changes in the political conditions in our markets, including quarantines, governmental or regulatory actions, closures or other restrictions that limit or close our facilities, restrict our employees' ability to travel or perform necessary business functions, or otherwise prevent our third-party partners, suppliers, or customers from sufficiently staffing operations, including operations necessary for delivering our services, may adversely impact our results; and
- continued disruptions in the U.S. capital markets.

The ultimate extent of the COVID-19 outbreak and its impact on our business, results of operations and financial condition in the future is highly uncertain and cannot be predicted. In addition, the continuation or resurgence of the COVID-19 pandemic could exacerbate the other risks identified herein.

We may not be able to protect our intellectual property rights, and any assertions by third parties of infringement, misappropriation or other violations by us of their intellectual property rights could result in significant costs and materially adversely affect our business and financial condition.

We regard our intellectual property, trade secrets and proprietary technologies as important to the success of our business. We have developed certain ideas, processes, and methods that contribute to our success and competitive position that we consider to be trade secrets. We protect our trade secrets by keeping them confidential through the use of internal and external controls, including contractual protections with employees, contractors, customers and vendors. Trade secrets can be protected for an indefinite period so long as their secrecy is maintained, but we can provide no assurances that such secrecy will be maintained due to factors outside of the Company's control.

While we have obtained patent protection for certain of our technologies in the U.S. and certain other jurisdictions, we have not yet obtained registrations for our intellectual property in all markets in which we do business or may do business in the future, and we may have difficulty in registering, or enforcing an exclusive right to use, our intellectual property in those jurisdictions. The intellectual property laws and enforcement practices of certain non-U.S. jurisdictions may not protect our intellectual property rights to the same extent as the laws of the United States. In addition, there can be no assurance that the efforts we have taken to protect our intellectual property and proprietary rights will be effective, and if we are unable to protect our intellectual property from unauthorized use, our ability to exploit our proprietary technology or our brand image may be harmed.

Further, our business has faced, is currently facing and may in the future face claims that we or a supplier or customer have violated patent, trademark or other intellectual property rights of third parties. Any infringement, misappropriation or related claims, whether or not meritorious and whether or not they result in litigation, may be costly to resolve or unavailable on terms acceptable to us, and we may have to develop non-infringing technology, pay damages, enter into royalty or licensing agreements, cease providing certain products or services, adjust our merchandizing or marketing and advertising activities or take other actions to resolve the claims, which may materially adversely affect our business and financial condition.

Intelsat may fail to realize all of the anticipated benefits of the Gogo Transaction or those benefits may take longer to realize than expected. We may also encounter significant difficulties in integrating Gogo's commercial aviation business.

Our ability to realize the anticipated benefits of the Gogo Transaction will depend, to a large extent, on our ability to integrate Gogo's commercial aviation business. The combination of two independent businesses is a complex, costly and time-consuming

process, particularly while we are undergoing the Chapter 11 proceedings. Further, the restrictions posed by the agreements governing our DIP Facility may limit our ability to integrate the two businesses. As a result, we will be required to devote significant management attention and resources to integrate the business practices and operations of Intelsat and Gogo's commercial aviation business. The integration process may disrupt the businesses and, if implemented ineffectively, would restrict the realization of the full expected benefits. The failure to meet the challenges involved in integrating the two businesses and to realize the anticipated benefits of the potential transaction could cause an interruption of, or a loss of momentum in, the activities of the combined businesses and could adversely affect the results of operations of the combined businesses.

In addition, the overall integration of the businesses may result in material unanticipated problems, expenses, liabilities, competitive responses, loss of customers and other business relationships, and diversion of management's attention. The difficulties of combining the operations of the companies include, among others:

- the diversion of management's attention to integration matters;
- difficulties in achieving anticipated cost savings, business opportunities and growth prospects from the combination;
- difficulties in the integration of operations and systems;
- conforming standards, controls, procedures and accounting and other policies, business cultures and compensation structures between the two companies;
- difficulties in the assimilation of employees;
- difficulties in managing the expanded operations of a significantly larger and more complex company;
- challenges in keeping existing customers and obtaining new customers;
- challenges in attracting and retaining key personnel; and
- coordinating a geographically dispersed organization, particularly due to the effects of the COVID-19 pandemic.

Many of these factors will be outside of our control and any one of them could result in increased costs, decreases in the amount of expected revenues and diversion of management's time and energy, which could materially impact the business, financial condition and results of operations of the combined company. In addition, even if Gogo's commercial aviation business operations are integrated successfully, the full benefits of the transaction and other pending acquisitions may not be realized, including the cost savings or sales or growth opportunities that are expected. These benefits may not be achieved within the anticipated time frame, or at all. Further, additional unanticipated costs may be incurred in the integration of the businesses. As a result, it cannot be assured that the Gogo Transaction will result in the realization of the full benefits anticipated from such transaction.

We or our commercial aviation technology suppliers may be unable to continue to innovate and provide products and services that are useful to consumers and airlines, and the demand for in-flight broadband Internet access service may decrease or develop more slowly than we expect. We cannot predict with certainty the development of the U.S. or international in-flight broadband Internet access market or the market acceptance for our products and services.

The market for our commercial aviation services is characterized by evolving technology, changes in aviation partner and passenger needs and frequent new service and product introductions. Our success will depend, in part, on our and our suppliers' ability to continue to enhance existing technology and services or develop new technology and services for both passenger and aircraft operational use on a timely and cost-effective basis. If we or our suppliers fail to adapt quickly enough to changing technology, aviation partner and passenger requirements and/or regulatory requirements, the results of operations for our commercial aviation business may be materially adversely affected.

Our future success depends upon growing demand for in-flight broadband Internet access services, which is inherently uncertain. We have invested significant resources in the deployment of new systems and service offerings, which represent a substantial part of our growth strategy. We face the risk that the U.S. and international demand for in-flight broadband Internet access services may decrease or develop more slowly or differently than we currently expect, or that our services, including our new offerings, may not achieve widespread market acceptance. We may be unable to market and sell our services successfully and cost-effectively to a sufficiently large number of aviation partners.

Our Gogo CA business involves the possession and use of personal information and the use of credit cards by users of our services, which present risks and expenses that could harm our business. Unauthorized disclosure or manipulation of such data, whether through breach of our network security or otherwise, could expose us to costly litigation and damage our reputation.

In the ordinary course of our Gogo CA business, we or our third-party providers collect, process and store sensitive data, including personal information of aircraft passengers and our employees and credit card information. The secure processing, maintenance and transmission of this information (and other sensitive data such as our proprietary business information and that of our customers and suppliers) is critical to our operations and business strategy. We depend on the security of our networks and, in part, on the security of the network infrastructures of our third-party providers of telecommunications, cloud computing, customer support and payment processing services, and other vendors. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or compromised due to employee error, malfeasance, hardware or software defects or other disruptions. Further, our in-cabin network operates as an open, unsecured Wi-Fi hotspot, and non-encrypted transmissions users send

over this network may be vulnerable to access by other users on the same plane. Data security threats are constantly evolving and may be difficult to anticipate or to detect for long periods of time. There can be no assurance that any security measures we, or third parties, take will be effective in preventing these activities, given the constantly changing nature of the threats. Any such security incidents could result in legal claims or proceedings and liability under our contracts with airline partners, and may disrupt our operations and the services we provide to customers, damage our reputation, and cause a loss of confidence in our products and services, all of which may have a material adverse effect on our business prospects and results of operations for our Gogo CA business.

Failure to protect confidential user data or to provide users with adequate notice of our privacy policies could also subject us to investigations and regulatory penalties imposed by U.S. federal and state regulatory agencies, non-U.S. regulatory agencies or courts. In addition, we must comply with certain FCC privacy and data security rules promulgated under the Communications Act of 1934, as amended, for our voice services, including certain provisions applicable to customer proprietary network information, and certain U.S. states have also enacted specific privacy laws to which we may be subject, including the CCPA, which took effect in January 2020. Other countries in which we may operate or from which our services may be offered, also have certain privacy and data security requirements that may apply to our business, either now or in the future. For example, the EU's GDPR has imposed restrictive privacy-related requirements.

Despite the substantial preparation and related expenditures that we have undertaken to comply with the GDPR, there can be no assurance that we are or will continue to be in compliance. The regulation of data privacy and security in the EU and in other jurisdictions continues to evolve, and it is not possible to predict the ultimate effect of evolving regulation and implementation over time. Our failure to comply with GDPR, CCPA or other privacy or data security-related laws, rules or regulations imposed by U.S. federal or state governments or agencies or foreign governments or agencies could result in material penalties imposed by regulators or cause us to be in material breach under our airline agreements, which may have a material adverse effect on our business and results of operations for our Gogo CA business.

Our Gogo CA business is dependent on agreements with airline partners to be able to access passengers and provide IFC services to airlines. Our failure to timely realize the anticipated benefits from these agreements, renew existing agreements upon expiration or termination, successfully negotiate agreements with new airline partners, or maintain airline and passenger satisfaction with our equipment and services, may have a material adverse effect on our business prospects and results of operations for our commercial aviation business.

We have no assurance that any of our current airline partners will renew their existing contracts with us upon expiration, or that they will not terminate their contracts prior to expiration upon the occurrence of certain contractually stipulated events. To the extent that our airline partners terminate or fail to renew their contracts with us, our business prospects and results of operations for our Gogo CA business may be materially adversely affected. If our airline partners are not satisfied with our equipment or our IFC services for any reason, they may reduce efforts to co-market our services to their passengers, which together with passenger dissatisfaction, could harm our reputation among passengers and other airlines, and result in lower passenger usage and reduced revenue. In addition, we are currently in negotiations or discussions with certain existing airline partners and potential airline partners to provide our equipment and IFC services on their fleets. Such negotiations require substantial time, effort and resources, and these efforts may not be successful. Failures in our negotiations could harm our results of operations for our Gogo CA business. Further, the terms of any future agreements could be materially different and less favorable to us than the terms included in our existing agreements.

Our Gogo CA business depends upon third parties, many of which are single-source providers, to manufacture equipment components, provide service for our network and install and maintain our equipment.

Our Gogo CA business depends upon third parties, many of which are single-source providers, to manufacture equipment components, provide services for our commercial aviation network and install and maintain our equipment. We rely on third-party suppliers for equipment components and services that we use to provide our in-flight connectivity services. Many suppliers of critical components of our equipment are single-source providers. Components for which we rely on single-source suppliers include, among others, the antennas and modems for all systems, the radomes for our satellite systems and services related to third-party ATG network access. In our Gogo CA business, installation and maintenance of our airborne equipment is performed by employees of third-party service providers with whom we contract, and in some cases, by our airline partners, third-party service providers with whom the airline partners contract, or original equipment manufacturers. If there is an equipment failure, including due to problems with the installation or maintenance processes, our reputation and our relationships with our customers could be harmed.

Our business, and especially our Gogo CA business, could be adversely affected if we suffer cyber-attacks or other malicious activities on an aircraft, service interruptions or delays, technology or systems failures, or damage to our equipment. A future act or threat of terrorism or other event could result in reduced demand for our products and services or result in a prohibition on the use of Wi-Fi enabled devices on aircraft.

Our brand, reputation and ability to attract, retain and serve customers depend upon the performance, reliability and security of our commercial aviation network. Cyber-attacks or other malicious activities on an aircraft, service interruptions or delays, technology

or systems failures, or damage to our equipment may occur due to factors beyond our control and could harm our reputation, brand and ability to attract, retain and serve customers, resulting in lost revenue. Such events could be material breaches of airline contracts resulting in termination rights, penalties or airline claims for damages. In addition, a future act or threat of terrorism or unrelated airline accidents could have an adverse effect on the airline industry and result in significantly reduced passenger demand for air travel. The U.S. or other governments could respond to such events by prohibiting the use of Wi-Fi enabled devices on aircraft, which may eliminate demand for certain of our products and services and have a material adverse effect on our financial condition and results of operations.

Risk Factors Relating to Our Satellite 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, including:
  - failure of components from inadvertent susceptibility to the harshest space weather conditions; and/or
- 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 or other degradation 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 command or telemetry processing units; and/or
  - failure of the primary and/or backup SCP; and/or
  - failure of one or more earth sensors, star trackers, gyroscope and/or associated electronics that are used to provide satellite attitude information; and/or
  - failure of the control wheel actuators; and/or
- problems with the propulsion systems of the satellites, including:
  - failure of the primary and/or backup chemical thrusters; and/or
  - failure of the XIPS used on certain Boeing satellites, which is an electronic propulsion system that maintains the spacecraft's proper in-orbit position; and/or
  - propellant leaks from lines or thrusters; and/or
- problems associated with strikes from micrometeoroids or space orbit debris; and/or
- general failures resulting from operating satellites in the harsh space environment, such as premature component failure or wear out of mechanisms exceeding available redundancy.

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 1—Business—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 single beam or multiple beams, 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.

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 Northrup Grumman Innovation Systems ("NGIS"). 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. As of December 31, 2020, Galaxy 15 continued 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, 2020, we operated 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 NGIS, 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 in October 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, formed by 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 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. In addition, in February 2017, measurements indicated higher than expected fuel use while performing station-keeping maneuvers. There is no evidence of any impact to the communications payload. A Failure Review Board completed its investigation of the primary thruster failure and fuel use anomalies and identified several design, build and screening improvements that are being implemented by the satellite manufacturer for future satellites using the same engine. In addition, the manufacturer has adapted its propellant estimation software for both anomalies, which we take into account in making our end of life prediction.

In April 2019, the Intelsat 29e satellite (in service since 2016) experienced an anomaly that resulted in a total loss of the satellite. A Failure Review Board comprised of the satellite's manufacturer, Boeing Satellite Systems, Inc., the Company and external independent experts was convened to complete a comprehensive analysis of the cause of the anomaly. The board concluded that the

anomaly was either caused by a harness flaw in conjunction with an electrostatic discharge event related to solar weather activity, or the impact of a micrometeoroid.

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. Delays 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 $300 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 125 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.

New or proposed satellites are subject to construction and launch delays, the occurrence of which can materially and adversely affect our business, operating results and financial condition.

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.

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 the orbital slot and spectrum access requirements of the ITU and the regulatory and licensing requirements in each of the countries in which we provide services, operate facilities, or license terminals, 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 or managed 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, operate facilities and terminals, 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.

Transparent and publicly available regulatory frameworks on frequency and telecommunication licensing may not be available in some jurisdictions.

We anticipate that some authorities may be reluctant to issue blanket telecommunication licenses or even individual licenses due to potential frequency interference concerns. Consequently, authorities in such jurisdictions may examine technical information meticulously to ensure compliance of the Company's network with applicable regulatory requirements, and may require additional information from the Company concerning applicable standards and possibly type approval of equipment prior to issuing a frequency license, which may result in additional costs or delays in obtaining licenses.

In some jurisdictions, the issuance of a frequency license may be subject to first obtaining a telecommunication license or having a legal entity in the jurisdiction. Further, we cannot completely exclude the possibility of a requirement to install a teleport in some jurisdictions, which may pose a significant barrier to entry for the Company in those jurisdictions.

If we do not maintain regulatory authorizations for our existing satellites, associated ground facilities and terminals, services we provide, or obtain authorizations for our future satellites, associated ground facilities and terminals, and services we provide, 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 FCC in the U.S., Ofcom and UKSA in the U.K., NICTA in Papua New Guinea, the Ministry of Internal Affairs and Communications of Japan, ACMA in Australia and 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 or using a particular frequency band, to the extent these services cannot be provided by satellites at other orbital locations or with a different frequency band. 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.

Our launch and operation of planned satellites require additional regulatory authorizations from the FCC or a non-U.S. licensing jurisdiction. 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 or use certain frequencies by specified deadlines, or do not maintain satellites in orbital locations we currently use, our rights and/or priority to use these orbital locations and associated frequencies may lapse or 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 associated frequencies, and the locations and frequencies with ITU priority could become available for other satellite operators to use. The loss of one or more of our orbital locations and associated frequencies 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 in certain frequency bands 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 using certain frequencies, 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 or use certain frequencies 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).

Given the technical and operational challenges to clearing transmissions in the lower 300 MHz of the C-band spectrum in the contiguous United States on an accelerated basis, there is risk in our ability to meet the deadlines set forth in the FCC Final Order required to receive Acceleration Payments. If we were ultimately to fail to receive the Acceleration Payments, this could have a material and adverse effect on our financial condition and prospects.

On March 3, 2020, the FCC issued the FCC Final Order regarding the clearing process for the 3.7-4.2 GHz C-band spectrum in the U.S. by FSS operators and terrestrial mobile services providers. The FCC Final Order, among other things, provides for monetary enticements for FSS providers to clear a portion of the C-band spectrum on an accelerated basis (the "Acceleration Payments"). The Company is eligible to receive Acceleration Payments for transmission clearing of approximately $1.2 billion and $3.7 billion based on the milestone clearing certification dates of December 5, 2021 and December 5, 2023, with the respective payments expected to be received in the first half of each successive year, respectively, subject to the satisfaction of certain conditions set forth in the FCC Final Order and accompanying rules. In May 2020, the Company filed a written commitment with the FCC electing to accelerate clearing of the C-band spectrum in the U.S., and in August 2020, the Company filed its final C-band spectrum transition plan with the FCC. However, we can provide no assurances as to the acceptability to the FCC of all the terms of our final transition plan.

There are a number of technical challenges to making C-band spectrum available for terrestrial mobile services. In addition to the procurement and launch of seven new satellites, the technical solutions we are implementing include, without limitation, moving services and customers to another portion of the licensed C-band spectrum, implementing filters at earth station antennas, and relocating earth station antennas, all of which result in significant costs. While the FCC's Final Order addresses reimbursement of such costs, we can provide no assurance that all such costs would actually be reimbursed.

Our ability to meet the deadlines set forth in the FCC Final Order for clearing the C-band spectrum is subject to many factors outside our control, including without limitation, manufacturing and implementation delays resulting from the COVID-19 pandemic. Given the technical challenges and factors outside our control, there is risk as to the Company's ability to meet the FCC conditions and deadlines in order to receive the Acceleration Payments. If the Company were ultimately to fail to receive the reimbursement costs or Acceleration Payments, this could have a material and adverse effect on the Company's financial condition and prospects.

Regulation by the FCC and the FAA, which regulates the commercial aviation industry, including the civil aviation manufacturing and repair industries in the U.S., may increase our commercial aviation costs of providing service or require us to change our services.

The commercial aviation industry, including the civil aviation manufacturing and repair industries, are highly regulated in the United States by the FAA. If we fail to comply with the FAA's many regulations and standards that apply to our activities, we could lose the FAA certifications, authorizations, or other approvals on which our manufacturing, installation, maintenance, preventive

maintenance, and alteration capabilities are based, which could have a material adverse effect on our operating results for our Gogo CA business. In addition, from time to time, the FAA or comparable foreign agencies adopt new regulations or amend existing regulations. The FAA could also change its policies regarding the delegation of inspection and certification responsibilities to private companies, which could adversely affect our Gogo CA business. To the extent that any such new regulations or amendments to existing regulations or policies apply to our activities, our compliance costs would likely increase.

As a broadband Internet provider, the FCC has determined that we must comply with the Communications Assistance for Law Enforcement Act ("CALEA"), which requires communications carriers to ensure that their equipment, facilities and services can accommodate certain technical capabilities in executing authorized wiretapping and other electronic surveillance. Currently, our CALEA solution is fully deployed in our network. However, we could be subject to an enforcement action by the FCC or law enforcement agencies for any delays in complying or failure to comply with, CALEA, or similar obligations. Such enforcement actions could subject us to fines, cease and desist orders, or other penalties, all of which may materially adversely affect our business and financial condition. Further, to the extent the FCC adopts additional capability requirements applicable to broadband Internet providers, its decision may increase the costs we incur to comply with such regulations.

Our failure to maintain or obtain authorizations under 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.

Risk Factors Relating to the Chapter 11 Proceedings

We are subject to the risks and uncertainties associated with Chapter 11 proceedings.

On May 13, 2020, the Debtors commenced the Chapter 11 Cases under the Bankruptcy Code in the Bankruptcy Court. On February 12, 2021, the Debtors filed the *Joint Chapter 11 Plan of Reorganization of Intelsat S.A. and Its Debtor Affiliates* (as proposed, the "Plan"). While certain of our creditors who are party to that certain plan support agreement, dated as of February 11, 2021 (together with all exhibits and schedules thereto, the "PSA"), have currently committed to support the proposed Plan, we cannot be certain that the Debtors will obtain confirmation or consummation of the proposed Plan (or any Chapter 11 plan at all) or when such confirmation or consummation of a Chapter 11 plan may occur. For the duration of our Chapter 11 proceedings, our operations and our ability to develop and execute our business plan, as well as our continuation as a going concern, are subject to the risks and uncertainties associated with bankruptcy. These risks include the following:

- our ability to develop, obtain support for, confirm and consummate the proposed Plan, another Chapter 11 plan or alternative restructuring transaction;
- our ability to obtain court approval with respect to motions filed in Chapter 11 proceedings from time to time;
- our ability to operate within the restrictions and the liquidity limitations of the DIP Facility and any related orders entered by the Bankruptcy Court in connection with the Chapter 11 Cases;
- our ability to obtain sufficient financing to allow us to emerge from bankruptcy and execute our business plan post-emergence;

- our ability to maintain our relationships with our suppliers, service providers, customers, employees and other third parties;
- our ability to maintain contracts that are critical to our operations;
- our ability to execute our business plan, including the accelerated clearing process of C-band spectrum;
- our ability to attract, motivate and retain key employees;
- the high costs of operating our business while in bankruptcy and related fees;
- the ability of third parties to seek and obtain court approval to terminate contracts and other agreements with us;
- the expiration, termination or shortening of the exclusivity period for us to propose and confirm a Chapter 11 plan, whether caused by third parties or otherwise;
- the ability of third parties to seek and obtain court approval to appoint a Chapter 11 trustee or to convert the Chapter 11 proceedings to a Chapter 7 proceeding;
- the actions and decisions of our creditors and other third parties who have interests in our Chapter 11 proceedings that may be inconsistent with our plans; and
- uncertainties and continuing risks associated with our ability to achieve our stated goals and continue as a going concern.

Delays in our Chapter 11 Cases increase the risks of us being unable to reorganize our business and emerge from bankruptcy and increase our costs associated with the bankruptcy process.

These risks and uncertainties could affect our business and operations in various ways. For example, negative events associated with our Chapter 11 proceedings could adversely affect our relationships with our suppliers, service providers, customers, employees, and other third parties, which in turn could adversely affect our operations and financial condition. Also, we need the prior approval of the Bankruptcy Court for transactions outside the ordinary course of business, which may limit our ability to respond timely to certain events or take advantage of certain opportunities. Because of the risks and uncertainties associated with our Chapter 11 proceedings, we cannot accurately predict or quantify the ultimate impact of events that will occur during our Chapter 11 proceedings that may be inconsistent with our plans.

Operating under Bankruptcy Court protection for a long period of time may harm our business.

Our future results are dependent upon the successful confirmation and implementation of a plan of reorganization. A long period of operations under Bankruptcy Court protection could have a material adverse effect on our business, financial condition, results of operations and liquidity. So long as the Chapter 11 proceedings continue, our senior management will be required to spend a significant amount of time and effort dealing with the reorganization instead of focusing exclusively on our business operations. A prolonged period of operating under Bankruptcy Court protection also may make it more difficult to retain management and other key personnel necessary to the success and growth of our business.

Additionally, so long as the Chapter 11 proceedings continue, we will be required to incur significant costs for professional fees and other expenses associated with the administration of the Chapter 11 proceedings. Furthermore, we cannot predict the ultimate amount of all settlement terms for the liabilities that will be subject to a plan of reorganization. Even once a plan of reorganization is approved and implemented, our operating results may be adversely affected by the possible reluctance of prospective lenders and other counterparties to do business with a company that recently emerged from Chapter 11 proceedings.

The Chapter 11 Cases limit the flexibility of our management team in running our business.

While we operate our businesses as debtor-in-possession under supervision by the Bankruptcy Court, we are required to obtain the approval of the Bankruptcy Court and, in some cases, certain lenders prior to engaging in activities or transactions outside the ordinary course of business. Bankruptcy Court approval of non-ordinary course activities entails preparation and filing of appropriate motions with the Bankruptcy Court, negotiation with creditors and other parties-in-interest and one or more hearings. The creditors and other parties-in interest may be heard at any Bankruptcy Court hearing and may raise objections with respect to these motions. This process may delay major transactions and limit our ability to respond quickly to opportunities and events in the marketplace. Furthermore, in the event the Bankruptcy Court does not approve a proposed activity or transaction, we would be prevented from engaging in activities and transactions that we believe are beneficial to us.

We may not be able to obtain confirmation of a Chapter 11 plan of reorganization, including the proposed Plan.

To emerge successfully from Bankruptcy Court protection as a viable entity, we must meet certain statutory requirements with respect to adequacy of disclosure concerning the plan of reorganization, solicit and obtain the requisite acceptances of such a plan and fulfill other statutory conditions for confirmation of such a plan, which have not occurred to date. The confirmation process may be subject to numerous, unanticipated delays, including a delay in the Bankruptcy Court's commencement of the confirmation hearing regarding our proposed Plan (or any Chapter 11 plan).

Though we have entered into the PSA with certain of our creditors to support our recently filed Plan, we may not receive the requisite acceptances of constituencies in the Chapter 11 proceedings to confirm the proposed Plan. For example, on February 5, 2021, an ad hoc group of creditors, consisting primarily of holders of Intelsat S.A. convertible senior notes and equity represented by Stroock & Stroock & Lavan LLP (the "Convert Group"), filed a motion (the "Standing Motion") in the Bankruptcy Court seeking, among other things, (a) standing to prosecute a proposed adversary complaint on behalf of the estate of Intelsat S.A., alleging that Intelsat Jackson is not entitled to receive the Acceleration Payments in connection with our C-band clearing efforts and Intelsat S.A. is entitled to such payments; (b) limited authority to settle claims between the Debtors; and (c) modification of the automatic stay to allow the Convert Group to prosecute the claims in their proposed adversary proceeding. On March 3, 2021, SES Americom, Inc. ("SES") filed a motion to intervene in the litigation and for standing to advocate, on behalf of the estate of Intelsat US LLC, that Intelsat US LLC is entitled to receive the Acceleration Payments in connection with our C-band clearing efforts (the "Intervention Motion"). If the Standing Motion and/or the Intervention Motion is granted, it may affect our ability to obtain sufficient support to confirm the proposed Plan (or any other Chapter 11 plan) and, if the Convert Group or SES is successful in this litigation, it may cause a material impact on the distributions that holders of certain claims, including holders of the Company's equity and various debt instruments, would receive on account of such claims.

Even if the requisite acceptances of the Plan are received, the Bankruptcy Court may not confirm the proposed Plan. The precise requirements and evidentiary showing for confirming a plan, notwithstanding any potential rejection by one or more impaired classes of claims or equity interests, depends upon a number of factors including, without limitation, the status and seniority of the claims or equity interests in such rejecting class (i.e., secured claims or unsecured claims or subordinated or senior claims). If a Chapter 11 plan of reorganization is not confirmed by the Bankruptcy Court, it is unclear whether we would be able to reorganize our business and what, if anything, holders of claims against us would ultimately receive with respect to their claims.

Even if the Plan or another plan of reorganization is confirmed by the Bankruptcy Court, it may not become effective because it is subject to the satisfaction of certain conditions precedent (some of which are beyond our control). There can be no assurance that such conditions will be satisfied and, therefore, that a plan of reorganization will become effective and that we will emerge from the Chapter 11 Cases as contemplated by a plan of reorganization. If emergence is delayed, we may not have sufficient cash available to operate our business. In that case, we may need new or additional post-petition financing, which may increase the cost of consummating a plan of reorganization. There can be no assurance of the terms on which such financing may be available or if such financing will be available. If the transactions contemplated by a plan of reorganization are not completed, it may become necessary to amend the plan of reorganization. The terms of any such amendment are uncertain and could result in material additional expense and result in material delays to the Chapter 11 Cases. If we are unable to successfully reorganize, we may not be able to continue our operations.

Our long-term liquidity requirements and the adequacy of our capital resources are difficult to predict at this time.

We face uncertainty regarding the adequacy of our liquidity and capital resources. In addition to the cash requirements necessary to fund ongoing operations, we have incurred significant professional fees and other costs in connection with our Chapter 11 proceedings and expect that we will continue to incur significant professional fees and costs throughout our Chapter 11 proceedings. In addition, we must comply with the covenants of our DIP Facility and other agreements associated therewith, in order to continue to access our borrowings thereunder. We cannot assure you that cash on hand, cash flow from operations and the DIP Facility will be sufficient to continue to fund our operations and allow us to satisfy our obligations related to the Chapter 11 proceedings until we are able to emerge from the Chapter 11 proceedings.

Our liquidity, including our ability to meet our ongoing operational obligations, is dependent upon, among other things: (i) our ability to comply with the terms and conditions of our DIP Facility and associated agreements, (ii) our ability to comply with the terms and conditions of any cash collateral order that may be entered by the Bankruptcy Court in connection with the Chapter 11 proceedings, (iii) our ability to maintain adequate cash on hand, (iv) our ability to generate cash flow from operations, (v) our ability to develop, confirm and consummate a Chapter 11 plan or other alternative restructuring transaction, and (vi) the cost, duration and outcome of the Chapter 11 proceedings.

The PSA is subject to significant conditions and milestones that may be difficult for us to satisfy.

There are certain material conditions we must satisfy under the PSA, including the timely satisfaction of milestones in the Chapter 11 Cases, which include the confirmation of the Plan and the consummation of the restructuring transactions thereunder. The satisfaction of such conditions is subject to risks and uncertainties, many of which are beyond our control.

As a result of the Chapter 11 proceedings, our financial results may be volatile and may not reflect historical trends.

During the Chapter 11 proceedings, we expect our financial results to continue to be volatile as restructuring activities and expenses, contract terminations and rejections, and claims assessments significantly impact our condensed consolidated financial statements. If we emerge from Chapter 11, the amounts reported in subsequent condensed consolidated financial statements may

materially change relative to historical consolidated financial statements, including as a result of revisions to our operating plans pursuant to a plan of reorganization. We also may be required to adopt fresh start accounting, in which case our assets and liabilities will be recorded at fair value as of the fresh start reporting date, which may differ materially from the recorded values of assets and liabilities on our consolidated balance sheets. Our financial results after the application of fresh start accounting also may be different from historical trends.

We may be subject to claims that will not be discharged in the Chapter 11 proceedings, which could have a material adverse effect on our financial condition and results of operations.

The Bankruptcy Code provides that the confirmation of a plan of reorganization discharges a debtor from substantially all debts arising prior to confirmation. With few exceptions, all claims that arose prior to May 13, 2020, or before confirmation of the plan of reorganization (i) would be subject to compromise and/or treatment under the plan of reorganization and/or (ii) would be discharged in accordance with the terms of the plan of reorganization. Any claims not ultimately discharged through the plan of reorganization could be asserted against the reorganized entities and may have an adverse effect on our financial condition and results of operations on a post-reorganization basis.

The Debtors may be unable to comply with restrictions imposed by the agreements governing the DIP Facility and the Debtors' other financing arrangements.

The agreements governing the DIP Facility impose a number of obligations and restrictions on the Debtors. The Debtors' ability to borrow under the DIP Facility is subject to the satisfaction of certain customary conditions precedent set forth therein. Covenants of the DIP Facility include general affirmative covenants, as well as negative covenants such as prohibiting us from incurring or permitting debt, investments, liens or dispositions unless specifically permitted. Failure to comply with these covenants would result in an event of default under the DIP Facility and permit the lenders thereunder to exercise remedies under the loan documentation for the DIP Facility. The Debtors' ability to comply with these provisions may be affected by events beyond their control and their failure to comply, or obtain a waiver in the event the Debtors cannot comply with a covenant, could result in an event of default under the agreements governing the DIP Facility and the Debtors' other financing arrangements.

We may experience increased levels of employee attrition as a result of the Chapter 11 proceedings.

As a result of the Chapter 11 proceedings, we may experience increased levels of employee attrition, and our employees likely will face considerable distraction and uncertainty. A loss of key personnel or material erosion of employee morale could adversely affect our business and results of operations. Our ability to engage, motivate and retain key employees or take other measures intended to motivate and incentivize key employees to remain with us through the pendency of the Chapter 11 proceedings may be limited by restrictions on implementation of incentive programs under the Bankruptcy Code. The loss of services of members of our senior management team could impair our ability to execute our strategy and implement operational initiatives, which would be likely to have a material adverse effect on our business, financial condition and results of operations.

In certain instances, a Chapter 11 case may be converted to a case under Chapter 7 of the Bankruptcy Code or dismissed.

There can be no assurance as to whether we will successfully reorganize and emerge from the Chapter 11 proceedings or, if we do successfully reorganize, as to when we would emerge from the Chapter 11 proceedings. If the Bankruptcy Court finds that it would be in the best interest of creditors and/or the Debtors, the Bankruptcy Court may convert one or more of our Chapter 11 bankruptcy cases to cases under Chapter 7 of the Bankruptcy Code or dismiss such case or cases. If one or more Chapter 11 cases is dismissed, the applicable Debtors and the Debtors collectively may be unable to confirm the Plan or otherwise reorganize. In a Chapter 7 proceeding, a Chapter 7 trustee would be appointed or elected to liquidate the Debtors' assets for distribution in accordance with the priorities established by the Bankruptcy Code. The Debtors believe that liquidation under Chapter 7 would result in significantly smaller distributions being made to the Debtors' creditors than those provided for in a Chapter 11 plan or reorganization because of (i) the likelihood that the assets would have to be sold or otherwise disposed of in a disorderly fashion over a short period of time rather than reorganizing or selling in a controlled manner the Debtors' businesses as a going concern, (ii) additional administrative expenses involved in the appointment of a Chapter 7 trustee, and (iii) additional expenses and claims, some of which would be entitled to priority, that would be generated during the liquidation and from the rejection of leases and other executory contracts in connection with a cessation of operations.

Trading in our common shares during the pendency of the Chapter 11 proceedings is highly speculative and poses substantial risks.

All of our indebtedness is senior to the Company's existing common shares in our capital structure. As we have a substantial amount of indebtedness, any trading in our common shares during the pendency of the Chapter 11 Cases is highly speculative and poses substantial risks to purchasers of our common shares.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties

We lease approximately 217,650 square feet of office space in McLean, Virginia for our U.S. administrative headquarters and primary satellite operations center. The building also houses the majority of our sales and marketing support staff and other administrative personnel. The lease for the building expires on December 31, 2030.

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 130,000 square feet of office space and operations facilities, which are based in two buildings and multiple antenna shelters and 68 antennas on the property. See Item 1—Business—Our Satellite Network—*Satellite Network Operations and Current Satellite Ground Facilities* for a description of this facility.

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 eight owned and 53 leased earth station and teleport facilities around the world, including 36 teleports that allows us to perform Monitoring and 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 56 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, Bonaire, Brazil, Canada, England, Germany, Greenland, Iceland, India, Italy, Japan, Kazakhstan, Mongolia, Morocco, Myanmar, the Netherlands, New Zealand, Norway, Peru, Singapore, South Africa, Sri Lanka, South Korea, the United Arab Emirates, Uruguay, and the United States. 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, Honolulu, Los Angeles, New York, McLean, Miami, Palo Alto, London, Rio de Janeiro, and Tokyo. 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 Johannesburg, 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 Australia, Brazil, China, France, Germany, India, Israel, Japan, Kenya, Russia, Singapore, South Africa, Senegal and the United Arab Emirates for our local sales and marketing and administrative support offices.

We lease approximately 115,250 square feet of office space in Chicago, Illinois for our Gogo CA business under a lease agreement that expires in 2030. We also lease approximately 25,900 square feet for our Gogo CA manufacturing facility in Bensenville, Illinois under a lease agreement that expires in 2022.

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 3. Legal Proceedings

Chapter 11 Cases

On May 13, 2020, the Debtors filed voluntary petitions for relief under title 11 of the Bankruptcy Code in Bankruptcy Court. The information contained in Item 8, Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters—*Voluntary Reorganization under Chapter 11* is incorporated herein by reference. As a result of such bankruptcy filings, substantially all legal proceedings pending against the Debtors have been stayed. These matters will be subject to resolution in accordance with the Bankruptcy Code and applicable orders of the Bankruptcy Court.

As part of the Chapter 11 Cases, parties believing that they have claims or causes of action against the Debtors could file proofs of claim evidencing such claims. Pursuant to an order entered by the Bankruptcy Court, all proofs of claim were to be filed with the Bankruptcy Court by September 9, 2020, except for claims by governmental units. Governmental units which were to be filed with the Bankruptcy Court by November 16, 2020. The filed claims have been or are being reconciled to amounts recorded in liabilities subject to compromise in our consolidated balance sheet. The Debtors may ask the Bankruptcy Court to disallow claims that the Debtors believe are duplicative, have been later amended or superseded, are without merit, are overstated or should be disallowed for other reasons. In addition, as a result of this process, the Debtors may identify additional liabilities that will need to be recorded or reclassified to liabilities subject to compromise. In light of the substantial number of claims filed, and expected to be filed, the claims resolution process may take considerable time to complete and likely will continue after the Debtors emerge from bankruptcy.

SES Claim

On July 14, 2020, SES Americom, Inc. ("SES") filed a proof of claim in the Bankruptcy Court in the amount of $1.8 billion against each of the Debtors. SES asserts that the Debtors owe money (or will owe money) to SES pursuant to certain contractual and fiduciary obligations made in the context of the consortium agreement between Debtor Intelsat US LLC, SES, and other satellite operators (the "Consortium Agreement"). SES claims that it is entitled to 50% of the combined payments that may eventually be payable to the Debtors and SES pursuant to the FCC Final Order, which provides for Acceleration Payments subject to the satisfaction of certain deadlines and other conditions set forth therein. SES's proof of claim alleges that the Debtors breached the Consortium Agreement by taking the position that the Debtors are not required to split Acceleration Payments with SES and the other members of the consortium. The proof of claim also alleges breach of fiduciary duties and unjust enrichment and seeks monetary and punitive damages. We dispute the allegations in the proof of claim and on October 19, 2020, filed an objection to the claim, which we intend to litigate vigorously. A trial on the SES claim is scheduled to commence on June 28, 2021 in the Bankruptcy Court. To the extent that any portion of SES's claim is allowed, we have asked the Bankruptcy Court to 'equitably subordinate' such claim based on SES's conduct in matters related to the Consortium Agreement. While the ultimate resolution of the claim is not currently predictable, if there is an adverse ruling, the ruling could constitute a material adverse outcome on our future consolidated financial condition.

Other Litigation Matters

In the absence of the automatic stay in our Chapter 11 cases, we are subject to litigation in the ordinary course of business, but management does not believe that the resolution of any of those pending proceedings would have a material adverse effect on our financial position or results of operations.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Information

Since our IPO on April 23, 2013, our common shares have been traded on the New York Stock Exchange ("NYSE") under the symbol "I". However, following the commencement of our Chapter 11 Cases, the NYSE filed a Form 25 with the SEC on May 20, 2020 to delist our common shares from the NYSE. The delisting became effective 10 days after the Form 25 was filed. Our common shares began trading on the OTC Pink Marketplace on May 19, 2020 under the symbol "INTEQ".

Holders

As of March 26, 2021, there were five holders of record of our common shares. The actual number of shareholders is greater than this number of record holders, and includes shareholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. The number of holders of record also does not include shareholders whose shares may be held in trust by other entities.

Securities Authorized for Issuance Under Equity Compensation Plans

The information required by Item 5 of Form 10-K regarding equity compensation plans is incorporated herein by reference to Item 12 of Part III of this Annual Report on Form 10-K.

Recent Sales of Unregistered Securities

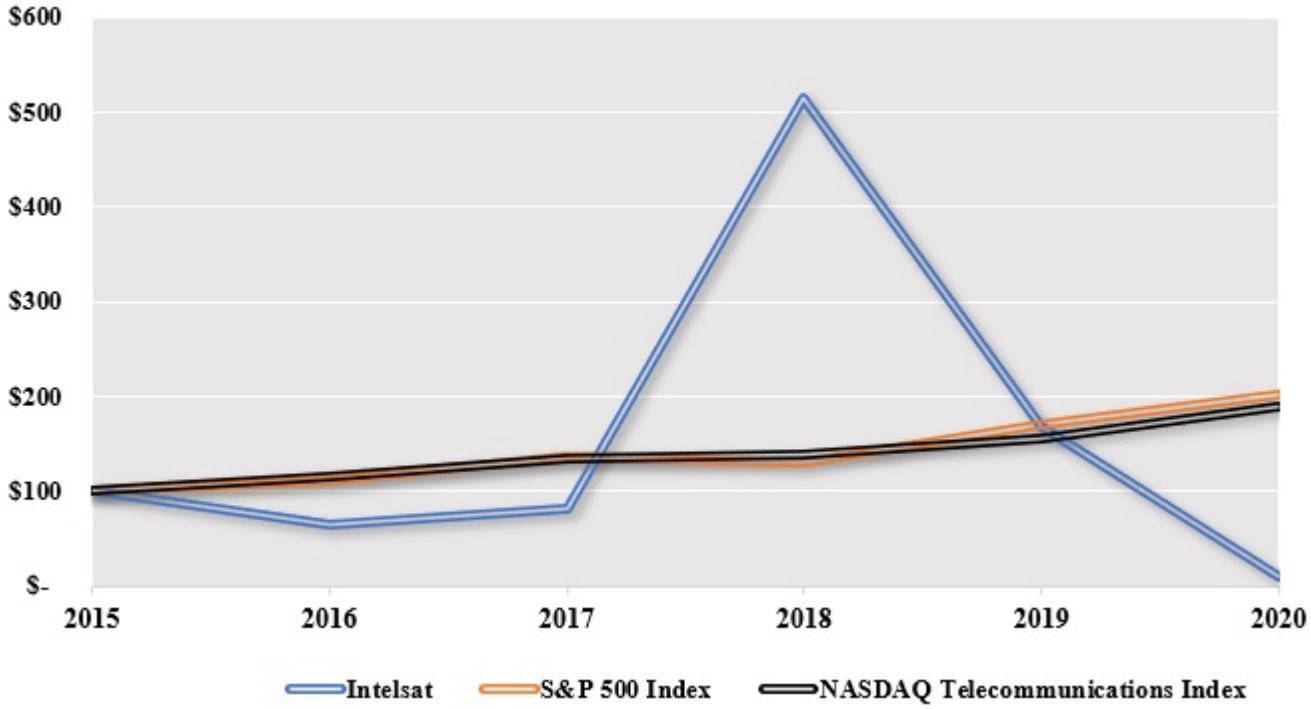
There have not been any sales by the Company of equity securities in the last three fiscal years that have not been registered under the Securities Act of 1933.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

There were no common share repurchases during the quarter ended December 31, 2020.

Performance Graph

Comparison of Five-Year Total Return Among Intelsat, S&P 500 Index and Nasdaq Telecommunications Index



The five-year total return performance graph assumes $100 was invested on December 31, 2015 in Intelsat common shares, the S&P 500 Index and the Nasdaq Telecommunications Index.

Item 6. [Removed and Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with our audited consolidated financial statements and notes thereto included in Item 8—Financial Statements and Supplementary Data of 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 1A—Risk Factors, for a discussion of factors that could cause our future financial condition and results of operations to be materially 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 one of the world's largest satellite services businesses, 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 Internet Service Providers. 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. 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 technical and economic 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.

Through our recent acquisition of Gogo Inc.'s ("Gogo") commercial aviation business ("Gogo CA"), we became the global leader in providing in-flight connectivity ("IFC") and wireless in-flight entertainment ("IFE") solutions to the commercial aviation industry. Services provided by our Gogo CA business include passenger connectivity, which allows passengers to connect to the Internet from their personal Wi-Fi-enabled devices; passenger entertainment, which offers passengers the opportunity to enjoy a broad selection of IFE options on their laptops and personal Wi-Fi enabled devices; and Connected Aircraft Services ("CAS"), which offer airlines connectivity for various operations and currently include, among others, real-time credit card transaction processing, electronic flight bags and real-time weather information.

Recent Developments

Voluntary Reorganization under Chapter 11

On May 13, 2020, Intelsat S.A. and certain of its subsidiaries (each, a "Debtor" and collectively, the "Debtors") commenced voluntary cases (the "Chapter 11 Cases") under title 11 of the United States Code (the "Bankruptcy Code") in the United States Bankruptcy Court for the Eastern District of Virginia (the "Bankruptcy Court"). Primary factors causing us to file for Chapter 11 protection included the Company's intention to participate in the accelerated clearing process of C-band spectrum set forth in the U.S. Federal Communications Commission's ("FCC") March 3, 2020 final order (the "FCC Final Order"), requiring the Company to incur significant costs related to clearing activities well in advance of receiving reimbursement for such costs and the need for additional financing to fund the C-band clearing process, service our current debt obligations, and meet our operating requirements, as well as the economic slowdown impacting the Company and several of its end markets due to the novel coronavirus ("COVID-19") pandemic.

On August 14, 2020, the Company filed its final C-band spectrum transition plan with the FCC. The FCC Final Order provides for monetary enticements for fixed satellite services ("FSS") providers to clear a portion of the C-band spectrum on an accelerated basis (the "Acceleration Payments"). On September 17, 2020, the Company announced it finalized materially all of its required contracts with satellite manufacturers and launch-vehicle providers to move forward and meet the accelerated C-band spectrum

clearing timelines established by the FCC. Under the FCC Final Order, the Company is eligible to receive Acceleration Payments of approximately $1.2 billion and $3.7 billion based on the milestone clearing certification dates of December 5, 2021 and December 5, 2023, with the respective payments expected to be received in the first half of each successive year, respectively, subject to the satisfaction of certain deadlines and other conditions set forth therein.

The Chapter 11 process can be unpredictable and involves significant risks and uncertainties. As a result of these risks and uncertainties, the amount and composition of the Company's assets, liabilities, officers and/or directors could be significantly different following the outcome of the Chapter 11 Cases, and the description of the Company's operations, properties and liquidity and capital resources included in this Annual Report may not accurately reflect its operations, properties and liquidity and capital resources following the Chapter 11 process.

Pursuant to various orders from the Bankruptcy Court, the Debtors have received approval from the Bankruptcy Court to generally maintain their ordinary course operations and uphold certain commitments to their stakeholders, including employees, customers, and vendors during the restructuring process, subject to the jurisdiction of the Bankruptcy Court and in accordance with the applicable provisions of the Bankruptcy Code. While the Chapter 11 Cases are pending, the Debtors do not anticipate making interest payments due under their respective unsecured debt instruments; however, the Debtors expect to make interest payments on a monthly basis to holders of their senior secured debt instruments. For the year ended December 31, 2020, the contractual interest expense pursuant to our unsecured debt instruments that was not recognized in our consolidated statements of operations was $495.2 million.

The filing of the Chapter 11 Cases constituted an event of default that accelerated substantially all of our obligations under the documents governing the prepetition existing indebtedness of Intelsat S.A., Intelsat Luxembourg, Intelsat Connect and Intelsat Jackson. For additional discussion regarding the impact of the Chapter 11 Cases on our debt obligations, see Item 8, Note 12—Debt.

On June 9, 2020, Intelsat Jackson received approval from the Bankruptcy Court (the "DIP Order") to enter into a non-amortizing multiple draw superpriority secured debtor-in-possession term loan facility (the "DIP Facility"), in an aggregate principal amount of $1.0 billion on the terms and conditions as set forth in the DIP Facility credit agreement (the "DIP Credit Agreement") with certain of the Debtors' prepetition secured parties (the "DIP Lenders"), and on June 17, 2020, Intelsat Jackson and certain of its subsidiaries as guarantors (together with Intelsat Jackson, the "DIP Debtors") entered into the DIP Credit Agreement with the DIP Lenders, as amended by an amendment ("DIP Amendment No. 1") to the DIP Credit Agreement, dated as of August 24, 2020, and as further amended by a second amendment ("DIP Amendment No. 2") to the DIP Credit Agreement, dated as of November 25, 2020. For additional information regarding the DIP Facility, DIP Credit Agreement, DIP Amendment No. 1 and DIP Amendment No. 2, see Liquidity and Capital Resources—*Debt* below.

On July 11, 2020, the Debtors filed with the Bankruptcy Court schedules and statements setting forth, among other things, the assets and liabilities of each of the Debtors, subject to the assumptions filed in connection therewith. These schedules and statements may be subject to further amendment or modification after filing.

On February 11, 2021, the Debtors entered into a plan support agreement (together with all exhibits and schedules thereto, the "PSA"), with certain of the Debtors' prepetition secured and unsecured creditors (the "Consenting Creditors" and together with the Debtors, the "PSA Parties"). The PSA contains certain covenants on the part of the PSA Parties, including but not limited to the Consenting Creditors voting in favor of the *Joint Chapter 11 Plan of Reorganization of Intelsat S.A. and Its Debtor Affiliates* (as proposed, the "Plan"), and provides that the Debtors shall achieve certain milestones (unless extended or waived in writing). In connection with the PSA, on February 12, 2021, the Debtors filed the Plan and the *Disclosure Statement for the Joint Chapter 11 Plan of Reorganization of Intelsat S.A. and Its Debtor Affiliates* (the "Disclosure Statement"), which describes a variety of topics related to the Chapter 11 Cases, including (i) events leading to the Chapter 11 Cases; (ii) significant events that took place during the Chapter 11 Cases; (iii) certain terms of the Plan; and (iv) certain anticipated risk factors associated with, and anticipated consequences of the Plan. The Bankruptcy Court is currently scheduled to determine the adequacy of the Disclosure Statement and whether the Plan meets the requirements of the Bankruptcy Code in the second quarter of 2021.

Update on the Impact of COVID-19 on the Company

The COVID-19 pandemic has had an adverse impact on our business, results of operations and financial condition, a trend we expect to continue. Among the impacts of the COVID-19 pandemic were a reduction of revenue and a decreased likelihood of collection from certain mobility customers. We continue to closely monitor the ongoing impact on our employees, customers, business and results of operations.

Gogo Transaction

On August 31, 2020, following approval from the Bankruptcy Court, Intelsat Jackson and Gogo entered into a purchase and sale agreement (the "Purchase and Sale Agreement") with respect to Gogo's commercial aviation business for $400.0 million in cash, subject to customary adjustments (the "Purchase Price"). The transaction further propels the Company's efforts in the growing commercial IFC market, pairing our high-capacity global satellite and ground network with Gogo's installed base of more than 3,000 commercial aircraft to redefine the connectivity experience. In connection with the transactions contemplated by the Purchase and

Sale Agreement, the DIP Debtors and DIP Lenders entered into DIP Amendment No. 1 and DIP Amendment No. 2 to our DIP Credit Agreement (see—*Voluntary Reorganization under Chapter 11* above). We completed the Gogo Transaction on December 1, 2020 and funded the Purchase Price with proceeds from our existing DIP Facility and cash on hand.

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, and other operational fees related to satellite operations provided on behalf of third-party satellites.

Our Gogo CA business generates two types of revenue: service revenue and equipment revenue. Service revenue is primarily derived from connectivity services and, to a lesser extent, from entertainment services, CAS and maintenance services. Connectivity is provided to our customers using both air-to-ground ("ATG") and satellite technologies. Service revenue is earned by services paid for by passengers, airlines and third parties. Equipment revenue primarily consists of the sale of ATG and satellite connectivity equipment and the sale of entertainment equipment. Equipment revenue also includes revenue generated by our installation of connectivity or entertainment equipment on commercial aircraft.

The following table describes our primary service types:

Service Type	Description
On-Network Revenues:	
Transponder Services	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: •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 direct-to-home ("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.
Managed Services	Hybrid services primarily using IntelsatOne, including our Intelsat Flex broadband platform, 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: •Network Services: enterprises, cellular operators and fixed and mobile value-added service providers which deliver end-services such as private data networks, wireless infrastructure and maritime and aeronautical broadband. •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	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.

Service Type	Description
Off-Network and Other Revenues:	
Transponder, Mobile Satellite Services and Other	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, as well as certain fees related to services provided to other satellite operators. These products are primarily marketed as follows: •Government: direct government users, and government contractors working on programs where aggregation of capacity is required.
Satellite-related Services	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 tracking, telemetry and commanding ("TT&C") services and related equipment sales. These services are typically marketed to other satellite operators.
In-Flight Services Revenues:	
Services	•Airline connectivity revenue: Connectivity is provided to our customers using both our ATG and satellite technologies. Under the airline-directed business model, the airline is our customer and we earn service revenue as connectivity services are consumed directly by the airline or indirectly by passengers. Under the turnkey business model, we earn revenue for connectivity services consumed directly by passengers. •Entertainment revenue: Entertainment revenue consists of entertainment services we provide to the airline for use by its passengers. •Connected Aircraft Services: We recognize revenue for real-time credit card transaction processing, electronic flight bags,
Equipment	Equipment revenues primarily consist of the sale of ATG and satellite connectivity equipment as well as the sale of entertainment equipment.

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 and those of our competitors in a given region, and the substitution of competing technologies such as fiber optic cable networks. See Item 1—Business—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;
- Lower overall pricing for satellite-based services, resulting from oversupply of wide beam capacity or due to the introduction of high-throughput technology, which is designed to achieve a lower cost per unit;
- Lower demand for satellite-based solutions, resulting from fiber substitution;
- Satellite capacity needed to provide broadband connectivity for mobile networks on ships, planes and oil and gas platforms;
- Global demand for television content in standard definition, high definition and ultra-high definition television formats, which uses our satellite network and IntelsatOne terrestrial services for distribution, in some regions offset by next generation compression technologies;
- Increased popularity of "Over the Top" or "OTT" content distribution, which will increase the demand for broadband infrastructure in the developing world, but could decrease demand in developed markets over the mid to long-term as niche and ethnic programming transitions from satellite to Internet distribution;
- Use of commercial satellite services by governments for military and other operations, which has partially slowed as a result of the tempo of military operations and recent changes in the U.S. budget;
- 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 upfront 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;

- The pace and extent of adoption of our broadband connectivity and wireless IFE services for use on domestic and international commercial aircraft by our current and new airline partners and customers;
- The number of aircraft in service in our markets, including consolidation of the airline industry or changes in fleet size by one or more of our commercial airline partners; and
- The economic environment and other trends that affect air travel, including the impact of COVID-19-related restrictions on the demand for air travel, as well as disruptions to supply chains and installations.

See Item 1—Business—Our Customer Sets and Growing Applications for a discussion of our customers' uses of our services and see Item 1—Business—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 2020, pricing trends varied by application, but were fairly stable throughout the year overall. Slight declines in network services were fueled by lower pricing on high volume commitments leveraging our global wide beam and Intelsat Epic fleets for large mobile network operators (MNOs). These trends were balanced by relatively stable pricing for mobility customers, in spite of a demand decline resulting from COVID-19. Government applications commanded competitive prices due to lowest price technically acceptable (LPTA) policies in some regions, but continued to command a premium in coverage areas with limited capacity. Media application pricing was down in 2020 as compared to 2019 due to competitive pressure outside of the continental United States, including lower-cost terrestrial alternatives. According to Euroconsult, the annual average price per transponder for regular capacity is forecasted to be on a slight downward trend globally from $1.15 million to $1.01 million per 36MHz transponder over the period from 2020 to 2025, reflecting increasing supply from new satellite entrants, among other factors. High-throughput satellite capacity, which is designed to attain a lower cost point, facilitating market expansion into new applications, is expected to have similar rates of yield decline over time as increased supply enters the market.

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. Direct costs of revenue related to our inflight services include network-related expenses (ATG and satellite network expenses, including costs for transponder capacity and backhaul, as well as data centers, network operations centers and network technical support), aircraft operations, component assembly, portal maintenance, revenue share and transactional costs. Direct costs of revenue for our inflight equipment revenue primarily consists of the purchase costs for component parts used in the manufacture of our equipment and the production, installation, technical support and quality assurance costs associated with equipment sales.

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, 2020.

Operating Results Years Ended December 31, 2019 and 2020

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, 2019	Year Ended December 31, 2020	Increase (Decrease)	Percentage Change
Revenue	$ 2,061,465	$ 1,913,080	$ (148,385)	(7)%
Operating expenses:				
Direct costs of revenue (excluding depreciation and amortization)	406,153	450,823	44,670	11 %
Selling, general and administrative	226,918	314,229	87,311	38 %
Depreciation and amortization	658,233	653,447	(4,786)	(1)%
Satellite impairment loss	381,565	—	(381,565)	NM
Impairment of non-amortizable intangible and other assets	—	191,943	191,943	NM
Other operating expense—C-band	—	33,642	33,642	NM
Total operating expenses	1,672,869	1,644,084	(28,785)	(2)%
Income from operations	388,596	268,996	(119,600)	(31)%
Interest expense, net	1,273,112	813,603	(459,509)	(36)%
Other income (expense), net	(34,078)	14,142	48,220	NM
Reorganization items	—	(385,861)	(385,861)	NM
Loss before income taxes	(918,594)	(916,326)	2,268	— %
Benefit from income taxes	(7,384)	(7,055)	329	(4)%
Net loss	(911,210)	(909,271)	1,939	— %
Net income attributable to noncontrolling interest	(2,385)	(2,393)	(8)	— %
Net loss attributable to Intelsat S.A.	$ (913,595)	$ (911,664)	$ 1,931	— %

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, 2019	Year Ended December 31, 2020	Increase (Decrease)	Percentage Change
On-Network Revenues				
Transponder services	$ 1,468,791	$ 1,372,773	$ (96,018)	(7)%
Managed services	374,026	298,638	(75,388)	(20)%
Channel	2,400	1,394	(1,006)	(42)%
Total on-network revenues	1,845,217	1,672,805	(172,412)	(9)%
Off-Network and Other Revenues				
Transponder, MSS and other off-network services	175,602	182,393	6,791	4 %
Satellite-related services	40,646	42,297	1,651	4 %
Total off-network and other revenues	216,248	224,690	8,442	4 %
Inflight Services Revenues				
Services	—	14,122	14,122	NM
Equipment	—	1,463	1,463	NM
Total inflight services revenue	—	15,585	15,585	NM
Total	$ 2,061,465	$ 1,913,080	$ (148,385)	(7)%

Total revenue for the year ended December 31, 2020 decreased by $148.4 million, or 7%, as compared to the year ended December 31, 2019. By service type, our revenues increased or decreased due to the following:

On-Network Revenues:

- *Transponder services*—an aggregate decrease of $96.0 million, primarily due to a $53.6 million net decrease in revenue from network services customers and a $38.7 million decrease in revenue from media customers. The decrease in revenue from network services customers was primarily due to non-renewals, renewals at lower pricing or lower capacity, and service contractions for enterprise, maritime and aero mobility, and wireless infrastructure applications customers, and lost revenue resulting from the loss of Intelsat 29e in 2019, a portion of which services were restored with off-network services. These losses were partially offset by new business from enterprise and wireless infrastructure application customers and an increase in revenues due to a renegotiated contract with a maritime mobility customer. The decrease in revenue from media customers was primarily due to non-renewals, renewals at lower pricing, service contractions and early terminations largely relating to distribution services, as well as the recognition of deferred revenue in the prior period for certain prepaid capacity and service contracts that terminated in 2019 for which there are no comparable amounts in 2020. This decline was partially offset by new services and new business primarily from DTH solution application customers.
- *Managed services*—an aggregate decrease of $75.4 million, largely due to a $44.9 million decrease in revenue from network services customers and a $31.4 million decrease in revenue from media customers. The decrease in revenue from network services customers was primarily due to a renegotiated contract with a maritime mobility customer. The decrease in revenue from media customers was primarily due to a decrease in revenue from managed video services mainly related to an early termination of a contract in 2019 and a decrease from occasional use video services.

Off-Network and Other Revenues:

- *Transponder, MSS and other off-network services*—an aggregate increase of $6.8 million, primarily due to a $16.2 million increase in revenue from government customers largely driven by the transfer of certain services from on-network to off-network capacity and the sale of customer premises equipment, and a $5.9 million increase in revenue due to the transfer of certain Intelsat 29e network services customers to off-network capacity. These increases were partially offset by a $14.3 million decrease due to revenue recognized during the first quarter of 2019 from a network services customer accounted for as a sales-type lease under Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 842, *Leases* ("ASC 842"), with no comparable amount for the same period in 2020.

Inflight Services Revenues:

- *Services and equipment*—an aggregate increase of $15.6 million attributable to our Gogo CA business as a result of the Gogo Transaction in 2020.

Operating Expenses

Direct Costs of Revenue (Excluding Depreciation and Amortization)

Direct costs of revenue increased by $44.7 million, or 11%, to $450.8 million for the year ended December 31, 2020, as compared to the year ended December 31, 2019. The increase was primarily due to the following:

- an increase of $17.5 million in third-party FSS capacity costs largely incurred in connection with government customers, Intelsat 29e customer restoration on third-party satellites, and the Azercosmos (Intelsat 38) satellite;
- an increase of $16.6 million in staff-related expenses largely relating to our employee retention incentive plans;
- an increase of $12.1 million in costs related to the revenue sharing agreements with JSAT related to services sold on the Horizons 1, Horizons 2 and Horizons 3 satellites; and
- an increase of $11.2 million in costs attributable to our Gogo CA business as a result of the Gogo Transaction in 2020; partially offset by
- a decrease of $9.0 million in third-party managed capacity costs largely related to a government customer; and
- a decrease of $4.5 million in costs related to earth station operations.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased by $87.3 million, or 38%, to $314.2 million for the year ended December 31, 2020, as compared to the year ended December 31, 2019. The increase was primarily due to a $39.8 million increase in bad debt expense, largely relating to a certain customer that filed for Chapter 11 bankruptcy protection and certain customers in the North America, Asia-Pacific and Africa regions, a $22.4 million increase in professional fees driven by costs related to the Gogo Transaction in 2020 and a $17.0 million increase in staff-related expenses largely relating to our employee retention incentive plans.

Depreciation and Amortization

Depreciation and amortization expense decreased by $4.8 million, or 1%, to $653.4 million for the year ended December 31, 2020, as compared to the year ended December 31, 2019. Significant items impacting depreciation and amortization included:

- a decrease of $14.1 million in depreciation expense due to the timing of certain satellites becoming fully depreciated; and
- a decrease of $10.0 million in depreciation expense due to the write-off of Intelsat 29e in 2019; partially offset by
- an increase of $15.7 million in depreciation expense resulting from the impact of satellites placed in service; and
- an increase of $2.0 million in depreciation expense resulting from the impact of certain ground segment assets placed in service.

Satellite Impairment Loss

We recognized an impairment charge of $381.6 million for the year ended December 31, 2019 relating to the loss of Intelsat 29e in 2019 (see Item 8, Note 9—Satellites and Other Property and Equipment). The impairment charge consisted of approximately $377.9 million related to the write-off of the carrying value of the satellite and associated deferred satellite performance incentive obligations, and approximately $3.7 million related to prepaid regulatory fees. No comparable amounts were recognized for the year ended December 31, 2020.

Impairment of Non-Amortizable Intangible and Other Assets

We recognized impairment charges of $137.7 million, $34.0 million and $20.2 million for the year ended December 31, 2020 relating to our rights to operate at certain orbital locations, certain satellite and launch vehicle deposits and the Intelsat trade name, respectively. No comparable amounts were recognized for the year ended December 31, 2019. See Item 8, Note 9—Satellites and Other Property and Equipment and Item 8, Note 11—Goodwill and Other Intangible Assets for further discussion.

Other Operating Expense—C-band

Other operating expense—C-band consists of reimbursable and non-reimbursable costs associated with our C-band spectrum relocation efforts. For the year ended December 31, 2020, we incurred $33.6 million of reimbursable and non-reimbursable C-band clearing related expenses, with no comparable amounts for the year ended December 31, 2019.

Interest Expense, Net

Interest expense, net consists of gross interest expense incurred together with gains and losses on the interest rate cap contracts we hold (which reflect the changes in their fair values), offset by interest income earned and interest capitalized related to assets under construction. As of December 31, 2020, we held interest rate cap contracts with an aggregate notional amount of $2.4 billion to mitigate the risk of interest rate increases on the floating-rate term loans under our senior secured credit facilities. The interest rate cap contracts have not been designated as hedges for accounting purposes.

Interest expense, net decreased by $459.5 million, or 36%, to $813.6 million for the year ended December 31, 2020, as compared to the year ended December 31, 2019. The decrease in interest expense, net was principally due to the following:

- a decrease of $433.2 million in interest expense primarily resulting from Chapter 11 restructuring activities, partially offset by an increase in interest expense recognized on our senior secured credit facilities; and
- a decrease of $22.5 million corresponding to a larger decrease in fair value of the interest rate cap contracts during the year ended December 31, 2019 as compared to the year ended December 31, 2020.

The non-cash portion of total interest expense, net was $179.1 million and $132.4 million for the years ended December 31, 2019 and 2020, respectively, primarily consisting of interest expense related to the significant financing component identified in customer contracts, amortization and accretion of discounts and premiums and amortization of deferred financing fees.

Other Income (Expense), Net

Other income, net was $14.1 million for the year ended December 31, 2020, as compared to other expense, net of $34.1 million for the year ended December 31, 2019. The net increase in other income of $48.2 million was primarily driven by a $43.8 million net loss for the year ended December 31, 2019 due to a change in value of certain investments in third parties with no similar activity in 2020, as well as a $6.0 million gain on sale of assets for the year ended December 31, 2020.

Reorganization Items

Reorganization items reflect direct costs incurred in connection with the Chapter 11 Cases. Reorganization items of $385.9 million for the year ended December 31, 2020 primarily consisted of $197.0 million related to the write-off of debt discount, premium and issuance costs, $129.7 million in professional fees and $59.7 million in financing fees related to the DIP Facility. There were no comparable amounts for the year ended December 31, 2019.

Benefit from Income Taxes

Our income tax benefit decreased by $0.3 million to $7.1 million for the year ended December 31, 2020, as compared to $7.4 million for the year ended December 31, 2019. The benefit for the year ended December 31, 2020 was driven by the Coronavirus Aid, Relief, and Economic Security Act with regards to the relaxed limitations on the deductibility of interest, the use of net operating losses arising in taxable years beginning after 2018 and lower income from our U.S. subsidiaries. The benefit for the year ended December 31, 2019 was driven by a decrease in foreign withholding taxes and a decrease in uncertain tax positions for which the applicable statutes of limitations expired.

Cash paid for income taxes, net of refunds, totaled $33.6 million for the year ended December 31, 2019, as compared to cash received for income taxes, net of payments, of $7.6 million for the year ended December 31, 2020.

Net Loss Attributable to Intelsat S.A.

Net loss attributable to Intelsat S.A. was $911.7 million for the year ended December 31, 2020, as compared to net loss attributable to Intelsat S.A. of $913.6 million for the year ended December 31, 2019. The change reflects the various items discussed above.

Operating Results Years Ended December 31, 2018 and 2019

We have omitted discussion of the earliest of the three years covered by our consolidated financial statements presented in this Annual Report because that disclosure was already included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on February 20, 2020, in Part I, Item 7 under the heading “Operating Results Years Ended December 31, 2018 and 2019.” You are encouraged to reference that disclosure for a discussion of our operating results for the year ended December 31, 2018 compared to the year ended December 31, 2019.

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 loss to EBITDA for the periods shown is as follows (in thousands):

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Net loss	$ (595,690)	$ (911,210)	$ (909,271)
Add (Subtract):			
Interest expense, net	1,212,374	1,273,112	813,603
Loss on early extinguishment of debt	199,658	—	—
Provision for (benefit from) income taxes	130,069	(7,384)	(7,055)
Depreciation and amortization	687,589	658,233	653,447
EBITDA	$ 1,634,000	$ 1,012,751	$ 550,724

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 loss to EBITDA and EBITDA to Adjusted EBITDA is as follows (in thousands):

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Net loss	$ (595,690)	$ (911,210)	$ (909,271)
Add (Subtract):			
Interest expense, net	1,212,374	1,273,112	813,603
Loss on early extinguishment of debt	199,658	—	—
Provision for (benefit from) income taxes	130,069	(7,384)	(7,055)
Depreciation and amortization	687,589	658,233	653,447
EBITDA	1,634,000	1,012,751	550,724
Add:			
Compensation and benefits [1]	6,824	13,189	57,786
Non-recurring and other non-cash items [2]	27,646	58,625	75,913
Satellite impairment loss [3]	—	381,565	—
Impairment of non-amortizable intangible and other assets[4]	—	—	191,943
Reorganization items[5]	—	—	385,861
Proportionate share from unconsolidated joint venture[6]:			
Interest expense, net	—	5,014	3,451
Depreciation and amortization	—	10,320	11,258
Adjusted EBITDA[7][8]	$ 1,668,470	$ 1,481,464	$ 1,276,936

(1) Reflects non-cash expenses incurred relating to our equity compensation plans and, for the year ended December 31, 2020, expenses relating to our employee retention incentive plans in connection with our Chapter 11 proceedings.

(2) Reflects certain non-recurring expenses, gains and losses and non-cash items, including the following: merger and acquisition costs; professional fees related to our liability and tax management initiatives; costs associated with our C-band spectrum relocation efforts; corporate strategy and development costs; certain research and development costs; severance, retention and relocation payments; changes in fair value of certain investments; certain foreign exchange gains and losses; and other various non-recurring expenses. In 2018 and 2019, 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 impairment charge recorded in connection with the Intelsat 29e satellite loss in 2019.

(4) Reflects a non-cash impairment charge recorded in connection with the write-off of certain satellite and launch vehicle deposits (see Item 8, Note 9—Satellites and Other Property and Equipment) and trade name and orbital slots impairments (see Item 8, Note 11—Goodwill and Other Intangible Assets).

(5) Reflects direct costs incurred in connection with our Chapter 11 proceedings. See Item 8, Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters.

(6) Reflects adjustments related to our interest in Horizons-3 Satellite LLC ("Horizons 3"). See Item 8, Note 10(b)—Investments—Horizons-3 Satellite LLC.

(7) Adjusted EBITDA included $100.6 million, $102.2 million and $105.1 million for the years ended December 31, 2018, 2019 and 2020, respectively, of revenue relating to the significant financing component identified in customer contracts in accordance with the adoption of ASC 606, *Revenue from Contracts with Customers*.

(8) Intelsat S.A. Adjusted EBITDA reflected $12.5 million and $17.9 million for the years ended December 31, 2019 and 2020, respectively, of Adjusted EBITDA attributable to Intelsat Horizons-3 LLC, its subsidiaries and its proportionate share of Horizons 3, with a nominal amount for the comparative period in 2018. These entities are considered to be unrestricted subsidiaries under the definitions set forth in our applicable debt agreements.

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, 2020, the aggregate principal amount of our debt outstanding not held by affiliates was $15.7 billion. Our interest expense, net for the year ended December 31, 2020 was $813.6 million, which included $132.4 million of non-cash interest expense. At December 31, 2020, cash, cash equivalents and restricted cash were approximately $1.1 billion.

The commencement of the Chapter 11 Cases accelerated substantially all of our outstanding debt. Any efforts to enforce payment obligations related to the acceleration of our debt have been automatically stayed as a result of the filing of the Chapter 11 Cases, and the creditors' rights of enforcement are subject to the applicable provisions of the Bankruptcy Code.

During the pendency of the Chapter 11 Cases, as discussed above in—Recent Developments, *Voluntary Reorganization under Chapter 11*, the Debtors do not anticipate making interest payments due under their respective unsecured debt instruments. In past years, our cash flows from operations and cash on hand have been sufficient to fund interest obligations ($1.1 billion and $634.7 million for the years ended December 31, 2019 and 2020), and significant capital expenditures ($229.8 million and $606.8 million for the years ended December 31, 2019 and 2020, respectively). However, as discussed above in—Recent Developments, *Voluntary Reorganization under Chapter 11*, our ability to fund operating expenses is now, to some extent, subject to obtaining certain approvals from the Bankruptcy Court in connection with our Chapter 11 proceedings.

A significant factor driving the Company's decision to file for Chapter 11 protection was the Company's desire to participate in the FCC's process for accelerated clearing of the C-band spectrum, for which we need to incur significant upfront expenses for clearing activities well in advance of receiving reimbursement payments. On August 14, 2020, the Company filed its final C-band spectrum transition plan with the FCC.

In addition to the significant capital expenditures we expect to make in 2021 and beyond, we expect total clearing costs will be approximately $1.3 billion over the next three years. Our primary source of liquidity is and will continue to be cash generated from operations, as well as existing cash. We currently expect to use cash on hand and cash flows from operations to fund our most significant cash outlays, including debt service requirements and capital expenditures, in the next twelve months and beyond. We also expect to receive reimbursement payments for certain upfront C-band spectrum clearing expenses incurred and under the FCC Final Order, the Company is eligible to receive Acceleration Payments of approximately $1.2 billion and $3.7 billion based on the milestone clearing certification dates of December 5, 2021 and December 5, 2023, with the respective payments expected to be received in the first half of each successive year, respectively, subject to the satisfaction of certain deadlines and other conditions set forth therein.

Cash Flow Items

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

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Net cash provided by operating activities	$ 344,173	$ 255,539	$ 331,302
Net cash used in investing activities	(283,634)	(292,733)	(976,506)
Net cash provided by (used in) financing activities	(90,323)	362,910	905,087
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(4,450)	(2,009)	(3,200)
Net change in cash, cash equivalents and restricted cash	$ (34,234)	$ 323,707	$ 256,683

Net Cash Provided by Operating Activities

Net cash provided by operating activities increased by $75.8 million to $331.3 million for the year ended December 31, 2020, as compared to the year ended December 31, 2019. The increase was due to a $48.0 million decrease in net loss and changes in non-cash items and a $27.8 million increase from changes in operating assets and liabilities. The increase from changes in operating assets and liabilities was primarily due to lower outflows related to the amount and timing of accounts payable, interest payments and other long-term liabilities, partially offset by higher outflows related to contract liabilities.

Net Cash Used in Investing Activities

Net cash used in investing activities increased by $683.8 million to $976.5 million for the year ended December 31, 2020, as compared to the year ended December 31, 2019. The increase was primarily due to a $371.0 million payment, net of cash acquired, related to the acquisition of Gogo CA, and an increase of $376.9 million in capital expenditures. The increases were partially offset by a net decrease of $69.4 million due to fewer acquisitions of loans held-for-investment.

Net Cash Provided by Financing Activities

Net cash provided by financing activities increased by $542.2 million to $905.1 million for the year ended December 31, 2020, as compared to the year ended December 31, 2019. The increase was primarily due to net proceeds of $940.3 million resulting from our DIP financings completed during 2020, as compared to net proceeds of $395.4 million resulting from our debt offering completed in 2019.

Restricted Cash

As of December 31, 2020, $26.6 million of cash was legally restricted, being held as a compensating balance for certain outstanding letters of credit.

Debt

This section describes the changes to our long-term debt for the years ended December 31, 2019 and 2020. For details regarding our outstanding long-term indebtedness as of December 31, 2020, see Item 8, Note 12—Debt.

The filing of the Chapter 11 Cases constituted an event of default that accelerated substantially all of our obligations under the documents governing the prepetition existing indebtedness of Intelsat S.A., Intelsat Luxembourg, Intelsat Connect and Intelsat Jackson. Any efforts to enforce payment obligations related to the acceleration of our debt have been automatically stayed as a result of the filing of the Chapter 11 Cases, and the creditors' rights of enforcement are subject to the applicable provisions of the Bankruptcy Code. While the Chapter 11 Cases are pending, the Debtors do not anticipate making interest payments due under their respective unsecured debt instruments; however, the Debtors expect to make monthly interest payments on their senior secured debt instruments pursuant to the adequate protection requirements under the DIP Order.

Senior Secured Credit Facilities

Intelsat Jackson Superpriority Secured Debtor-in-Possession Term Loan Facility

On June 17, 2020 (the "Closing Date"), the DIP Debtors and DIP Lenders entered into the DIP Credit Agreement, a non-amortizing multiple draw superpriority secured debtor-in-possession term loan facility, in an aggregate principal amount of $1.0 billion, on the terms and conditions set forth therein. See Item 8, Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters.

Intelsat Jackson borrowed $500.0 million of term loans under the DIP Facility on the Closing Date. Under the DIP Facility, Intelsat Jackson may, at its sole discretion, make incremental draws of the lesser of $250.0 million and the remaining available commitments of the DIP Lenders. Intelsat Jackson made two additional draws of $250.0 million each on November 27, 2020 and December 14, 2020, bringing the total aggregate principal amount outstanding under the DIP Facility to $1.0 billion as of December 31, 2020. Drawn amounts under the DIP Facility bear interest at either (i) 4.50% per annum plus a base rate of the highest of (a) the Federal Funds Effective Rate plus ½ of 1.00%, (b) the Prime Rate as in effect on such day and (c) the London Inter-Bank Offered Rate ("LIBOR Rate") for a one-month interest period on such day (or if such day is not a business day, the immediately preceding business day) plus 1.00% or (ii) 5.50% plus the LIBOR Rate. For purposes of the DIP Facility, the LIBOR Rate has an effective floor rate of 1.0%. Undrawn amounts under the DIP Facility shall be subject to a ticking fee of 3.6% of the amount of commitments of the DIP Lenders from the entry of the DIP Order until such commitments terminate, which ticking fee shall be payable on the last day of each fiscal quarter prior to the date such commitments terminate and on the date of such termination. If an event of default under the DIP Facility occurs, the overdue amounts under the DIP Facility would bear interest at an additional 2.0% per annum above the interest rate otherwise applicable.

The proceeds of the DIP Facility may be used, among other things, to pay for (i) working capital needs of the DIP Debtors in the ordinary course of business, (ii) potential C-band relocation costs, (iii) investment and other general corporate purposes, and (iv) the costs and expenses of administering the Chapter 11 Cases. The maturity date of the DIP Facility is July 13, 2021, subject to certain extensions pursuant to the terms of the DIP Credit Agreement.

The DIP Credit Agreement includes customary negative covenants for debtor-in-possession loan agreements of this type, including covenants limiting the Company's and its subsidiaries' ability to, among other things, incur additional indebtedness, create liens on assets, make investments, loans or advances, engage in mergers, consolidations, sales of assets and acquisitions, pay dividends and distributions and make payments in respect of junior or prepetition indebtedness, in each case subject to customary exceptions for debtor-in-possession loan agreements of this type.

The DIP Credit Agreement also includes certain customary representations and warranties, affirmative covenants and events of default, including, but not limited to, payment defaults, breaches of representations and warranties, covenant defaults, certain events under the Employee Retirement Income Security Act of 1974, as amended, and change of control. Certain bankruptcy-related events are also events of default, including, but not limited to, the dismissal by the Bankruptcy Court of any of the Chapter 11 Cases, the conversion of any of the Chapter 11 Cases to a case under Chapter 7 of the Bankruptcy Code and certain other events related to the impairment of the DIP Lenders' rights or liens granted under the DIP Credit Agreement.

On August 24, 2020, the DIP Debtors and DIP Lenders entered into DIP Amendment No. 1 to the DIP Credit Agreement, and on November 25, 2020, the DIP Debtors and DIP Lenders entered into DIP Amendment No. 2 to the DIP Credit Agreement, each in connection with the Gogo Transaction (see Item 8, Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters for additional information).

The foregoing descriptions of the DIP Credit Agreement, DIP Amendment No. 1 and DIP Amendment No. 2 do not purport to be complete and are qualified in their entirety by reference to the full text of the DIP Credit Agreement, DIP Amendment No. 1 and DIP Amendment No. 2, as applicable.

2019 Debt Transaction

June 2019 Intelsat Jackson Senior Notes Add-On Offering

In June 2019, Intelsat Jackson completed an add-on offering of $400.0 million aggregate principal amount of its 2025 Jackson Notes. The notes are guaranteed by all of Intelsat Jackson's subsidiaries that guarantee its obligations under the Intelsat Jackson Secured Credit Agreement and senior notes.

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 cancelable and non-cancelable contracts. As of December 31, 2020, our contracted backlog was approximately $6.1 billion. As of December 31, 2020, the weighted average remaining customer contract life was approximately 4.0 years. We expect to deliver services associated with approximately $1.5 billion, or approximately 24%, of our December 31, 2020 contracted backlog during the year ending December 31, 2021. 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, 2020 was as follows (in millions):

Period	Contracted Backlog
2021	$ 1,497
2022	988
2023	786
2024	633
2025	545
2026 and thereafter	1,675
Total	$ 6,124

Our contracted backlog by service type as of December 31, 2020 was as follows (in millions, except percentages):

Service Type	Contracted Backlog	Percent
Transponder services	$ 4,793	78%
Managed services	747	12%
Inflight services	303	5%
Off-Network and Other	279	5%
Channel	2	—%
Total	$ 6,124	

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

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. Interest expense is recognized on the deferred financing and the liability is reduced as the payments are made. Our total

satellite performance incentive payment liability as of December 31, 2019 and 2020 was $218.7 million and $185.5 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. Further, following the Company's filing of its final C-band spectrum transition plan with the FCC on August 14, 2020, we expect total clearing costs will be approximately $1.3 billion over the next three years, of which, approximately $800 million is expected to be incurred in 2021. Payments for satellites and other property and equipment during the year ended December 31, 2020 were $606.8 million. However, subject to the satisfaction of certain deadlines and other conditions set forth in the FCC Final Order, the Company is eligible to receive Acceleration Payments in an aggregate total amount of approximately $4.9 billion over the next 2 years.

We intend to fund our capital expenditure requirements from cash on hand and cash provided from operating activities; however, our ability to fund capital expenditures in the ordinary course is, to some extent, subject to obtaining certain approvals from the Bankruptcy Court in connection with our Chapter 11 proceedings.

The following table compares our satellite-related capital expenditures to total capital expenditures from 2016 through 2020 (in thousands).

Year	Satellite-Related Capital Expenditures	Total Capital Expenditures
2016	$ 629,346	$ 714,570
2017	355,675	461,627
2018	165,143	255,696
2019	134,597	229,818
2020	513,802	606,759
Total	$ 1,798,563	$ 2,268,470

Off-Balance Sheet Arrangements

We have revenue sharing agreements with JSAT related to services sold on the Horizons 1, Horizons 2 and Horizons 3 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. Refer to Item 8, Note 10—Investments for disclosures relating to the revenue sharing agreements with JSAT.

Tabular Disclosure of Contractual Obligations

The following table sets forth our contractual obligations and capital and certain other commitments as of December 31, 2020, and the expected year of payments (in thousands):

	Payments due by year							
Contractual Obligations[1]	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 and thereafter**	**Other**	**Total**
Debt obligations								
Secured Debt:								
Intelsat S.A. and subsidiary notes and credit facilities—principal payments[2]	$ 5,934,678	$ —	$ —	$ —	$ —	$ —	$ —	$ 5,934,678
Intelsat S.A. and subsidiary notes and credit facilities—interest payments[3]	448,894	398,663	348,846	14,021	—	—	—	1,210,424
Liabilities Subject to Compromise:								
Intelsat S.A. and subsidiary notes and credit facilities—principal payments[4]	9,782,161	—	—	—	—	—	—	9,782,161
Horizons-3 Satellite LLC capital contributions and purchase obligations[5]	29,849	31,692	32,551	33,924	39,023	154,105	—	321,144
Purchase obligations[6]	1,236,581	559,872	239,034	101,656	96,880	322,080	—	2,556,103
Satellite performance incentive	72,411	37,047	25,594	24,954	23,154	80,961	—	264,121
Operating lease obligations	26,886	36,770	36,256	34,364	22,376	96,546	—	253,198
Sublease rental income	(523)	(260)	(136)	(67)	(17)	(129)	—	(1,132)
Income tax contingencies[8]	—	—	—	—	—	—	51,402	51,402
Total contractual obligations	$ 17,530,937	$ 1,063,784	$ 682,145	$ 208,852	$ 181,416	$ 653,563	$ 51,402	$ 20,372,099

(1) 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 anticipate that our contributions to the defined benefit retirement plan in 2021 will be approximately $5.8 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 2021 will be approximately $2.6 million. See Item 8, Note 8—Retirement Plans and Other Retiree Benefits.

(2) The filing of the Chapter 11 Cases on May 13, 2020 constituted an event of default that accelerated substantially all of our debt obligations.

(3) Represents estimated interest payments to be made on our fixed and variable rate debt. Interest payments for variable rate debt and incentive obligations have been estimated based on the current interest rates. While the Chapter 11 Cases are pending, the Debtors expect to make monthly interest payments on their senior secured debt instruments pursuant to the adequate protection requirements under the DIP Order.

(4) In connection with the Chapter 11 Cases, these balances have been reclassified as liabilities subject to compromise in our consolidated balance sheet as of December 31, 2020. As of April 15, 2020, the Company ceased making principal and interest payments, and as of May 13, 2020 ceased accruing interest expense in relation to this long-term debt that was reclassified as liabilities subject to compromise.

(5) This amount includes commitments to make capital contributions to and purchase satellite capacity from Horizons 3. See Item 8, Note 10(b)—Investments—Horizons-3 Satellite LLC.

(6) Includes obligations under satellite construction and launch contracts, estimated payments to be made on performance incentive obligations related to certain satellites that are currently under construction, Gogo CA satellite commitments and commitments under customer and vendor contracts.

(7) Includes $4.3 million of liabilities subject to compromise.

(8) The timing of future cash flows from income tax contingencies cannot be reasonably estimated and therefore is reflected in the other column. See Item 8, Note 15—Income Taxes for further discussion of income tax contingencies.

Satellite Construction and Launch Obligations

As of December 31, 2020, we had approximately $1.4 billion of expenditures remaining under our existing satellite construction and launch contracts, including expected orbital performance incentive payments for satellites currently in the construction phase. Included in this number is the procurement and launch of seven new satellites in connection with the C-band clearing process. The Company expects to receive reimbursement payments for certain upfront C-band spectrum clearing expenses incurred and under the FCC Final Order.

These contracts typically require that we make progress payments during the period of the satellites' construction, and contain provisions that allow us to cancel the contracts for or without cause. If cancelled without cause, we could be subject to substantial termination penalties, including the forfeiture of progress payments made to-date and additional penalty payments. If cancelled for cause, we are entitled to recover progress payments made to-date and liquidated damages as specified in the contracts. See Item 1—Business—Our Satellite Network—Satellite Systems—*Future Satellites* for details relating to certain of our satellite construction and launch contracts.

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, 2020, we had $264.1 million of satellite performance incentive obligations, including future interest payments, for satellites currently in orbit.

Gogo CA Satellite Commitments

We have agreements with vendors to provide us with transponder and teleport satellite services for our Gogo CA business. These agreements vary in length and amount. As of December 31, 2020, we had approximately $565.5 million of expenditures remaining under our existing commitments.

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, 2020, we had commitments under these customer and vendor contracts that totaled approximately $544.4 million related to the provision of equipment, services and other support.

Operating Leases

We have commitments for operating leases primarily relating to equipment and office facilities. These leases contain escalation provisions for payment increases. As of December 31, 2020, minimum annual rental payments due under all leases (net of sublease income on leased facilities) totaled approximately $252.1 million, exclusive of potential increases in real estate taxes, operating assessments and future sublease income.

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 bankruptcy accounting, business combinations, revenue recognition, the allowance for credit losses, asset impairments, income taxes and pension and other postretirement benefits.

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

Bankruptcy Accounting

Our consolidated financial statements included herein have been prepared as if we are a going concern and reflect the application of ASC 852, *Reorganizations* ("ASC 852"). ASC 852 requires the financial statements, for periods subsequent to the commencement of the Chapter 11 proceedings, to distinguish transactions and events that are directly associated with the reorganization from the

ongoing operations of the business. Accordingly, we classify liabilities and obligations whose treatment and satisfaction are dependent on the outcome of the reorganization under the Chapter 11 proceedings as liabilities subject to compromise on our consolidated balance sheets. In addition, we classify all income, expenses, gains or losses that are incurred or realized as a result of the Chapter 11 proceedings as reorganization items in our consolidated statements of operations (see Item 8, Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters).

Business Combinations

The Company accounts for business combinations under ASC 805, *Business Combinations* ("ASC 805"). ASC 805 uses the acquisition method of accounting, and accordingly, identifiable assets acquired and liabilities assumed are recognized at their estimated fair values at the date of acquisition. The excess of the purchase price over the estimated fair value is recognized as goodwill. All acquisition costs are expensed as incurred. In determining the fair values of assets acquired and liabilities assumed, we make significant estimates and assumptions, particularly with respect to long-lived tangible and intangible assets. Critical estimates used in valuing tangible and intangible assets include, but are not limited to, future expected cash flows, discount rates, market prices and asset lives. For larger or more complex acquisitions, we generally obtain third-party valuations to assist us in estimating fair values. The use of different valuation techniques and assumptions could change the amounts and useful lives assigned to the assets and liabilities acquired and related amortization expense. Upon acquisition, the accounts and results of operations are consolidated as of and subsequent to the acquisition date. See Item 8, Note 3—Acquisition of Gogo Commercial Aviation for more information.

Revenue Recognition, Accounts Receivable and Allowance for Credit Losses

Revenue Recognition. We earn revenue primarily from satellite utilization services and, to a lesser extent, from providing managed services to our customers. The Company's contracts for satellite utilization services often contain multiple service orders for the provision of capacity on or over different beams, satellites, frequencies, geographies or time periods. Under each separate service order, the Company's satellite services, comprised of transponder services, managed services, channel services, and occasional use managed services, are delivered in a series of time periods that are distinct from each other and have the same pattern of transfer to the customer. In each period, the Company's obligation is to make those services available to the customer. Throughout each period of services being provided, the customer simultaneously receives and consumes the benefits, resulting in revenue recognition over time. Our contract assets include unbilled amounts typically resulting from sales under our long-term contracts when the total contract value is recognized on a straight-line basis and the revenue recognized exceeds the amount billed to the customer. Contract liabilities consist of advance payments and collections in excess of revenue recognized and deferred revenue.

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. As a result, significant contract interpretation is sometimes required to determine the appropriate accounting for these transactions, including but not limited to:

- whether contracts with a prepayment contain a significant financing component;
- whether an arrangement should be reported gross as a principal versus net as an agent; and
- whether an arrangement contains a service contract or a lease.

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 Credit Losses. Our allowance for credit losses 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 credit losses.

Asset Impairment Assessments

We account for goodwill and other non-amortizable intangible assets in accordance with ASC 350, *Intangibles—Goodwill and Other*, and have deemed these assets to have indefinite lives. Therefore, these assets 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. We review our long-lived and amortizable intangible assets to assess whether an impairment has occurred in accordance with the guidance provided under ASC 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.

During the first quarter of 2020, the price of our common shares and trading values of our debt securities experienced sustained reductions. We also witnessed certain declines in financial performance as compared to previously prepared internal budget and forecast projections. Among the impacts of the COVID-19 pandemic were a reduction of revenue and a decreased likelihood of

collection from certain mobility customers. Based on our examination of these and other qualitative factors, we concluded that further testing of goodwill and other non-amortizable assets as well as long-lived and amortizable intangible assets was required. During the fourth quarter of 2020, due to additional declines in forecast projections, we concluded that further testing of goodwill and other non-amortizable assets, as well as long-lived and amortizable intangible assets was required.

Goodwill. For the analysis of goodwill, we applied ASU 2017-04, which is further described in Item 8, Note 1—Background and Summary of Significant Accounting Policies. In the first quarter of 2020, Intelsat had only one reporting unit for purposes of the analysis of goodwill, and accordingly, the analysis is undertaken at the enterprise level. As a result of the Gogo Transaction, Intelsat had two reporting units for purposes of the analysis of goodwill as of December 31, 2020: Legacy Intelsat and the Gogo CA business. For the Gogo CA reporting unit, we used a qualitative approach to identify and consider the significance of relevant key factors, events, and circumstances that affect the fair value of the reporting unit. 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. Based on our examination of the qualitative factors as of December 31, 2020, we concluded that there was not a likelihood of more than 50% that the fair value of the Gogo CA reporting unit was less than its carrying value; therefore, no further testing of goodwill was required.

For the Legacy Intelsat reporting unit, we performed a quantitative assessment in the first and fourth quarters of 2020. We determined the estimated fair value of the reporting unit using a discounted cash flow analysis, along with independent source data related to comparative market multiples and, when available, recent transactions, each of which is considered a Level 3 input within the fair value hierarchy under ASC 820, *Fair Value Measurements and Disclosure* ("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, along with the C-band Acceleration Payments expected to be received subject to the satisfaction of certain deadlines and other conditions set forth in the FCC Final Order and the discount rate applied to those cash flows. The conclusion of our analyses in the first and fourth quarters of 2020 was that the fair value of the Legacy Intelsat reporting unit was greater than its carrying value, resulting in no impairment of goodwill. In the fourth quarter analysis, the fair value of the Legacy Intelsat reporting unit was greater than its carrying value by 0.9%. A change in estimated future cash flows or other assumptions could change our estimated fair values and result in future impairments.

Orbital Locations. 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. Under the build-up approach, the amount a reasonable investor would be willing to pay for the right to operate a satellite business using orbital locations is calculated by first estimating the cash flows that typical market participants might assume could be available from the right to operate satellites using the subject location in a similar market. It is assumed that rather than acquiring such a business as a going concern, the buyer would hypothetically start with the right to operate satellites at orbital locations and build a new business with similar attributes from the beginning. Thus, the buyer is assumed to incur the start-up costs and losses typically associated with the going concern value and pay for all other tangible and intangible assets.

The key assumptions used in estimating the fair values of our rights to operate at our orbital locations included the following: (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.

We completed our analysis of the estimated fair value of our rights to operate at certain orbital locations in connection with the analysis of goodwill described above and concluded that the fair value was greater than the carrying value in the first quarter of 2020, resulting in no impairment. Due to additional declines in forecast projections, during the analysis in the fourth quarter of 2020, we determined that the fair value was less than the carrying value, resulting in an impairment charge of $137.7 million, which is included within impairment of non-amortizable intangible and other assets in our consolidated statements of operations.

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, 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 ASC 820.

The key assumptions used in our model to estimate the fair value of the Intelsat trade name included forecasted revenues, the royalty rate, the tax rate and the discount rate. We completed our analysis of the estimated fair value of the Intelsat trade name in connection with the analysis of goodwill described above in the first and fourth quarters of 2020, resulting in impairments of our trade name intangible asset of $12.2 million and $8.0 million, respectively, which is included within impairment of non-amortizable intangible and other assets in our consolidated statements of operations.

Long-Lived and Other Intangible Assets. The Company evaluated the assets for potential impairment using internal projections of undiscounted cash flows expected to result from the use and eventual disposal of the assets. 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 estimated future cash flows or other assumptions could change our estimated undiscounted cash flows and result in future impairments. The conclusion of our analysis was that the undiscounted cash flows of the asset group was greater than its carrying value, resulting in no impairment.

Income Taxes

We account for income taxes in accordance with ASC 740, *Income Taxes*. We are subject to income taxes in Luxembourg, as well as the United States and a number of other foreign jurisdictions. Significant judgment is required in the calculation of our tax provision and the resulting 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 impact. 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.

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 and modified those tables in 2018, 2019 and 2020. Our December 31, 2020 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 Adopted and Recently Issued Accounting Pronouncements

Refer to Item 8, Note 1—Background and Summary of Significant Accounting Policies for further information about recently adopted and recently issued accounting pronouncements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are primarily exposed to the market risk associated with unfavorable movements in interest rates. 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

The satellite communications industry is a capital intensive, technology driven business. 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 risks include the risk of increasing interest rates on short-term debt, for planned new fixed-rate long-term financings, for planned refinancings using long-term fixed-rate debt, and for existing variable-rate debt. The Company utilizes derivative instruments from time to time in order to reduce its exposure to the risk of interest-rate volatility.

As discussed in Item 8, Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters, the filing of the Chapter 11 Cases constituted an event of default that accelerated substantially all of our obligations under the documents governing the prepetition existing indebtedness of Intelsat S.A., Intelsat Luxembourg, Intelsat Connect and Intelsat Jackson. As such, we have reclassified all such debt obligations, other than debt subject to compromise, to current maturities of long-term debt on our consolidated balance sheet as of December 31, 2020. While the Chapter 11 Cases are pending, the Debtors do not anticipate making interest payments due under their respective unsecured debt instruments; however, the Debtors expect to make monthly interest payments on their senior secured debt instruments pursuant to the adequate protection requirements under the DIP Order. Therefore, the below information relates specifically to our senior secured debt only.

Approximately 51% of our senior secured debt, or $2.5 billion principal amount was fixed-rate debt as of December 31, 2019. As of December 31, 2020, our fixed-rate debt decreased to approximately 43% of our senior secured debt, or $2.5 billion principal amount. While our fixed-rate debt does not expose us to earnings risk when market interest rates change, such debt is subject to changes in fair value (see Item 8, Note 12—Debt for fair value disclosures for our long-term debt). Our sensitivity analyses indicate that based on the level of fixed-rate secured debt outstanding as of December 31, 2020, a 100 basis point decrease in market rates would result in an increase in fair value of this senior secured fixed-rate debt of approximately $66.1 million. A 100 basis point increase in market rates would result in a decrease in fair value of this senior secured fixed-rate debt of approximately $64.0 million. While our variable-rate debt may impact earnings and cash flows as interest rates change, it is not subject to changes in fair values.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Intelsat S.A.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Intelsat S.A. (Debtor in Possession) and subsidiaries (the Company) as of December 31, 2019 and 2020, the related consolidated statements of operations, comprehensive loss, changes in shareholders' deficit, and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes and financial statement Schedule II – Valuation and Qualifying Accounts (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

Change in Accounting Principle

As discussed in Note 1(v) to the consolidated financial statements, the Company has changed its method of accounting for leases effective January 1, 2019 due to the adoption of Accounting Standards Codification No. 842, *Leases*.

Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company filed voluntary petitions for reorganization under Chapter 11 of the U.S. Bankruptcy Code which constituted an event of default on substantially all of the Company's debt obligations which raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

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

Evaluation of the sufficiency of audit evidence over income taxes

As discussed in Notes 1(k) and 15 to the consolidated financial statements, the Company is subject to income taxes in Luxembourg, as well as the United States and a number of other foreign jurisdictions. The Company's net deferred tax liabilities as of December 31, 2020 were $39.9 million, consisting of deferred tax assets of $5,073.0 million, deferred tax liabilities of $283.8 million, and a valuation allowance of $4,829.1 million. The Company's benefit from income taxes was $7.1 million for the year ended December 31, 2020.

We identified the evaluation of the sufficiency of audit evidence over income taxes as a critical audit matter. The Company's global tax structure adds complexity, which required subjective auditor judgment to evaluate the sufficiency of audit evidence obtained. This judgment required the involvement of tax professionals with specialized skills and knowledge, in order to assess the nature and extent of procedures performed over certain taxable jurisdictions in relation to the amounts recorded and disclosed in the consolidated financial statements.

The following are the primary procedures we performed to address this critical audit matter. We applied auditor judgment to determine the nature and extent of procedures to be performed over the income tax accounts and disclosures. We selected certain tax jurisdictions and evaluated the Company's related provision for income taxes, income taxes payable or receivable, and deferred tax amounts by agreeing to underlying supporting documentation. We assessed the disclosures included in the consolidated financial statements by comparing the amounts reported for consistency with underlying documentation. We involved tax professionals with specialized skills and knowledge, who assisted in evaluating the Company's interpretation and application of certain tax rules and regulations, including evaluation of the tax attributes. In addition, we evaluated the sufficiency of audit evidence obtained over income taxes by assessing the results of procedures performed, including the appropriateness of the nature and extent of audit effort.

Assessment of the carrying value of goodwill

As discussed in Notes 1(i) and 11 to the consolidated financial statements, the goodwill balance as of December 31, 2020 was $2.7 billion, of which $2.6 billion related to the Legacy Intelsat reporting unit. The Company evaluates its goodwill for impairment on an annual basis, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. The Company performed a quantitative impairment test of goodwill on its Legacy Intelsat reporting unit during its fourth fiscal quarter as part of its annual assessment process.

We identified the assessment of the carrying value of goodwill of the Legacy Intelsat reporting unit as a critical audit matter. The estimated fair value of the Legacy Intelsat reporting unit exceeded its carrying value by 0.9% as of the testing date, indicating a higher risk that the goodwill may be impaired. Specifically, complex auditor judgment was required in evaluating the Company's quantitative evaluation, which was performed using a discounted cash flow model and included assumptions regarding the amount and timing of the C-band accelerated clearing incentive payments to be received from the Federal Communications Commission (FCC), as well as projected revenue amounts to be realized. Changes to these assumptions could have a significant effect on the Company's assessment of the carrying value of goodwill.

The following are the primary procedures performed to address this critical audit matter. We evaluated the design of certain internal controls over the Company's determination of the likelihood and timing of achievement of performance milestones specified within the FCC Order as outlined in the Company's transition plan, and the Company's projected revenue. We evaluated management's judgments relating to the amount and timing of the C-band accelerated clearing incentive payments to be received by inspecting the FCC order, and the Company's related transition plan, including associated contracts executed in accordance with the transition plan. We performed inquiries of key members of operations management and inspected documentation prepared to support management's ability to carry out the clearing requirements on the accelerated timeline and progress towards the various milestones. We evaluated the Company's forecasted revenue growth rates by comparing to those of the Company's peers. We compared the Company's future projected Legacy Intelsat reporting unit revenue amounts to historical actual results. We assessed the Company's ability to accurately project revenues by comparing the Company's historical revenue projections to actual results. We performed sensitivity analyses over the fair value model to assess the impact of potential delays in achieving specific milestones and changes in projected revenue on the Company's determination of the fair value of the related Legacy Intelsat reporting unit.

Assessment of the carrying value of orbital locations

As discussed in Notes 1(i) and 11 to the consolidated financial statements, the non-amortizable intangible assets related to orbital locations as of December 31, 2020 was $2.3 billion. The Company performs impairment testing on an annual basis and whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. The estimated fair value of the Company's rights to operate at orbital locations is determined using a build-up method to determine cash flows for the income approach. As a result of the annual impairment assessment, the Company recorded an impairment of orbital locations of $137.7 million.

We identified the assessment of the carrying value of orbital locations as a critical audit matter. A high degree of auditor judgment was required in evaluating the Company's annual impairment test, which included projected revenue amounts. Changes to the projected revenue amounts could have a significant effect on the Company's assessment of the carrying value of orbital locations and the magnitude of the impairment charge.

The following are the primary procedures performed to address this critical audit matter. We evaluated the design of an internal control over the Company's projected revenue. We evaluated the Company's forecasted revenue growth rates by comparing them to those of the Company's peers. We compared the Company's future projected revenue amounts to historical actual results. We assessed the Company's ability to accurately project revenues by comparing the Company's historical revenue projections to actual results. We performed sensitivity analyses over the fair value model to assess the impact of changes in projected revenue on the Company's determination of the fair value of orbital locations.

/s/ KPMG LLP

We have served as the Company's auditor since 2002.

McLean, Virginia
March 30, 2021

INTELSAT S.A. (DEBTOR-IN-POSSESSION)

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

	December 31, 2019	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 810,626	$ 1,060,917
Restricted cash	20,238	21,130
Receivables, net of allowances of $40,028 in 2019 and $40,785 in 2020	255,722	659,444
Contract assets	47,721	39,774
Inventory	$ 430	$ 147,094
Prepaid expenses and other current assets	38,800	136,611
Total current assets	1,173,537	2,064,970
Satellites and other property and equipment, net	4,702,063	4,757,877
Goodwill	2,620,627	2,698,247
Non-amortizable intangible assets	2,452,900	2,295,000
Amortizable intangible assets, net	276,752	290,569
Contract assets, net of current portion	74,109	86,017
Other assets	504,394	605,001
Total assets	$ 11,804,382	$ 12,797,681
LIABILITIES AND SHAREHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable and accrued liabilities	$ 88,107	$ 252,998
Taxes payable	6,402	7,493
Employee related liabilities	44,648	43,404
Accrued interest payable	308,657	17,747
Current maturities of long-term debt	—	5,903,724
Contract liabilities	137,706	157,320
Deferred satellite performance incentives	42,835	47,377
Other current liabilities	62,446	73,479
Total current liabilities	690,801	6,503,542
Long-term debt	14,465,483	—
Contract liabilities, net of current portion	1,113,450	1,447,891
Deferred satellite performance incentives, net of current portion	175,837	138,116
Deferred income taxes	55,171	61,345
Accrued retirement benefits, net of current portion	125,511	129,837
Other long-term liabilities	166,977	262,900
Liabilities subject to compromise	—	10,168,518
Shareholders' deficit:		
Common shares; nominal value $0.01 per share	1,411	1,421
Paid-in capital	2,565,696	2,573,840
Accumulated deficit	(7,503,830)	(8,416,410)
Accumulated other comprehensive loss	(63,135)	(80,322)
Total Intelsat S.A. shareholders' deficit	(4,999,858)	(5,921,471)
Noncontrolling interest	11,010	7,003
Total liabilities and shareholders' deficit	$ 11,804,382	$ 12,797,681

See accompanying notes to consolidated financial statements.

INTELSAT S.A. (DEBTOR-IN-POSSESSION)

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

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Revenue	$ 2,161,190	$ 2,061,465	$ 1,913,080
Operating expenses:			
Direct costs of revenue (excluding depreciation and amortization)	330,874	406,153	450,823
Selling, general and administrative	200,857	226,918	314,229
Depreciation and amortization	687,589	658,233	653,447
Satellite impairment loss	—	381,565	—
Impairment of non-amortizable intangible and other assets	—	—	191,943
Other operating expense—C-band	—	—	33,642
Total operating expenses	1,219,320	1,672,869	1,644,084
Income from operations	941,870	388,596	268,996
Interest expense, net	1,212,374	1,273,112	813,603
Loss on early extinguishment of debt	(199,658)	—	—
Other income (expense), net	4,541	(34,078)	14,142
Reorganization items	—	—	(385,861)
Loss before income taxes	(465,621)	(918,594)	(916,326)
Provision for (benefit from) income taxes	130,069	(7,384)	(7,055)
Net loss	(595,690)	(911,210)	(909,271)
Net income attributable to noncontrolling interest	(3,915)	(2,385)	(2,393)
Net loss attributable to Intelsat S.A.	$ (599,605)	$ (913,595)	$ (911,664)
Net loss per common share attributable to Intelsat S.A.:			
Basic	$ (4.63)	$ (6.51)	$ (6.42)
Diluted	$ (4.63)	$ (6.51)	$ (6.42)

See accompanying notes to consolidated financial statements.

INTELSAT S.A. (DEBTOR-IN-POSSESSION)

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Net loss	$ (595,690)	$ (911,210)	$ (909,271)
Other comprehensive income (loss), net of tax:			
Defined benefit retirement plans:			
Reclassification adjustment for amortization of unrecognized prior service credits, net of tax included in other income (expense), net of tax	(839)	(2,502)	(2,504)
Reclassification adjustment for amortization of unrecognized actuarial loss, net of tax included in other income (expense), net of tax	4,064	2,943	5,096
Actuarial and other gain (loss) arising during the year, net of tax of $(0.3) million in 2020	2,960	(3,955)	(19,779)
Benefit plan amendment, net of tax of $0.7 million	38,510	—	—
Adoption of ASU 2018-02 (see Note 15—Income Taxes)	—	(16,191)	—
Marketable securities:			
Reclassification adjustment for pension assets' gains, net of tax included in other income (expense), net of tax	(351)	—	—
Other comprehensive income (loss)	44,344	(19,705)	(17,187)
Comprehensive loss	(551,346)	(930,915)	(926,458)
Comprehensive income attributable to noncontrolling interest	(3,915)	(2,385)	(2,393)
Comprehensive loss attributable to Intelsat S.A.	$ (555,261)	$ (933,300)	$ (928,851)

See accompanying notes to consolidated financial statements.

INTELSAT S.A. (DEBTOR-IN-POSSESSION)

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' DEFICIT
(in thousands, except where otherwise noted)

	Common						
	Shares (in millions)	Amount	Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Intelsat S.A. Shareholders' Deficit	Noncontrolling Interest
Balance at December 31, 2017	119.6	$ 1,196	$ 2,173,367	$ (5,894,659)	$ (87,774)	$ (3,807,870)	$ 19,306
Net income (loss)	—	—	—	(599,605)	—	(599,605)	3,915
Dividends paid to noncontrolling interests	—	—	—	—	—	—	(8,825)
Share-based compensation	2.9	29	10,006	—	—	10,035	—
Equity offering and 2025 Convertible Notes offering	15.5	155	368,098	—	—	368,253	—
Postretirement/pension liability adjustment, net of tax of $0.6 million	—	—	—	—	6,185	6,185	—
Benefit plan amendment, net of tax of $0.7 million	—	—	—	—	38,510	38,510	—
Other comprehensive income, net of tax of $(0.2) million	—	—	—	—	(351)	(351)	—
Adoption of ASU 2014-09	—	—	—	(281,741)	—	(281,741)	—
Adoption of ASU 2016-16	—	—	—	169,579	—	169,579	—
Balance at December 31, 2018	138.0	$ 1,380	$ 2,551,471	$ (6,606,426)	$ (43,430)	$ (4,097,005)	$ 14,396
Net income (loss)	—	—	—	(913,595)	—	(913,595)	2,385
Dividends paid to noncontrolling interests	—	—	—	—	—	—	(5,771)
Share-based compensation	3.1	31	14,225	—	—	14,256	—
Postretirement/pension liability adjustment, net of tax	—	—	—	—	(3,514)	(3,514)	—
Adoption of ASU 2018-02 (see Note 15—Income Taxes)	—	—	—	16,191	(16,191)	—	—
Balance at December 31, 2019	141.1	$ 1,411	$ 2,565,696	$ (7,503,830)	$ (63,135)	$ (4,999,858)	$ 11,010
Net income (loss)	—	—	—	(911,664)	—	(911,664)	2,393
Dividends paid to noncontrolling interests	—	—	—	—	—	—	(6,400)
Share-based compensation	1.0	10	8,144	—	—	8,154	—
Postretirement/pension liability and other adjustments, net of tax of $(0.3) million	—	—	—	—	(17,187)	(17,187)	—
Adoption of ASU 2016-13 (see Note 1—Background and Summary of Significant Accounting Policies)	—	—	—	(916)	—	(916)	—
Balance at December 31, 2020	142.1	$ 1,421	$ 2,573,840	$ (8,416,410)	$ (80,322)	$ (5,921,471)	$ 7,003

See accompanying notes to consolidated financial statements.

INTELSAT S.A. (DEBTOR-IN-POSSESSION)

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Cash flows from operating activities:			
Net loss	$ (595,690)	$ (911,210)	$ (909,271)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation and amortization	687,589	658,233	653,447
Provision for (benefit from) expected credit losses	(836)	17,190	56,940
Foreign currency transaction loss	6,736	2,128	4,255
Loss on disposal of assets	46	402	14
Satellite impairment loss	—	381,565	—
Impairment of non-amortizable intangible and other assets	—	—	191,943
Share-based compensation	6,824	13,189	12,648
Deferred income taxes	79,160	(27,707)	2,979
Amortization of discount, premium, issuance costs and related costs	48,495	41,943	22,136
Non-cash reorganization items	—	—	196,974
Debtor-in-possession financing fees	—	—	59,682
Loss on early extinguishment of debt	199,658	—	—
Amortization of actuarial loss (gain) and prior service credits for retirement benefits	3,823	(3,572)	2,635
Unrealized (gains) losses on derivative financial instruments	(15,093)	27,018	372
Unrealized (gains) losses on investments and loans held-for-investment	408	39,695	(3,041)
Amortization of STC costs	—	—	1,315
Sales-type lease	—	7,064	—
Other non-cash items	1,178	(205)	729
Changes in operating assets and liabilities:			
Receivables	(63,814)	(1,307)	(15,835)
Prepaid expenses, contract and other assets	3,708	15,664	(137)
Accounts payable and accrued liabilities	7,291	10,908	79,337
Accrued interest payable	21,442	24,008	52,623
Contract liabilities	(39,763)	(18,368)	(63,242)
Accrued retirement benefits	(15,902)	(8,224)	(15,857)
Other long-term liabilities	8,913	(12,875)	656
Net cash provided by operating activities	344,173	255,539	331,302
Cash flows from investing activities:			
Capital expenditures (including capitalized interest)	(255,696)	(229,818)	(606,759)
Acquisition of business, net of cash acquired	—	—	(371,009)
Acquisition of loans held-for-investment	(19,000)	(70,751)	(2,300)
Proceeds from principal repayments on loans held-for-investment	—	—	973
Capital contributions to unconsolidated affiliate (including capitalized interest)	(48,097)	(5,289)	(2,692)
Proceeds from insurance settlements	20,409	—	—
Acquisition of intangible assets	—	—	(344)
Other proceeds from satellites	18,750	13,125	5,625
Net cash used in investing activities	(283,634)	(292,733)	(976,506)
Cash flows from financing activities:			
Proceeds from debtor-in-possession financing	—	—	1,000,000
Debtor-in-possession financing fees	—	—	(59,682)
Proceeds from issuance of long-term debt	4,585,875	400,000	—
Repayments of long-term debt	(4,782,451)	—	—
Debt issuance costs	(49,436)	(4,650)	—
Debt modification fees	(3,954)	—	—
Proceeds from stock issuance, net of issuance costs	224,250	—	—
Payment of debt extinguishment costs	(33,890)	—	—
Principal payments on deferred satellite performance incentives	(25,488)	(28,034)	(28,831)
Dividends paid to noncontrolling interest	(8,825)	(5,771)	(6,400)
Proceeds from exercise of employee stock options	3,211	1,067	—
Other financing activities	385	298	—
Net cash provided by (used in) financing activities	(90,323)	362,910	905,087
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(4,450)	(2,009)	(3,200)
Net change in cash, cash equivalents and restricted cash	(34,234)	323,707	256,683
Cash, cash equivalents, and restricted cash, beginning of period	541,391	507,157	830,864
Cash, cash equivalents, and restricted cash, end of period	$ 507,157	$ 830,864	$ 1,087,547

Supplemental cash flow information:			
Cash paid for reorganization items included in cash flows from operating activities	$ —	$ —	$ 93,211
Interest paid, net of amounts capitalized	1,052,885	1,099,874	634,704
Income taxes paid (received), net of refunds	57,085	33,584	(7,566)
Supplemental disclosure of non-cash investing activities:			
Accrued capital expenditures	$ 28,203	$ 8,123	$ 49,249
Capitalization of deferred satellite performance incentives	28,161	29,382	—
Conversion of loans held-for-investment to equity securities	—	—	4,802
Fair value of contract settled as consideration in business acquisition	—	—	21,304
Conversion of payment-in-kind interest on loans held-for-investment	—	—	3,424

See accompanying notes to consolidated financial statements.

Note 1—Background and Summary of Significant Accounting Policies

Intelsat S.A. and its subsidiaries ("Intelsat S.A.," "we," "us," "our" or the "Company") provides satellite communications services worldwide through a global communications network of 52 satellites and ground facilities related to the satellite operations and control, and teleport services.

Gogo Transaction

On August 31, 2020, following approval from the U.S. Bankruptcy Court for the Eastern District of Virginia (the "Bankruptcy Court"), Intelsat Jackson and Gogo Inc. (NASDAQ: GOGO), a Delaware corporation ("Gogo"), entered into a purchase and sale agreement (the "Purchase and Sale Agreement") with respect to Gogo's commercial aviation business ("Gogo CA") (as further described in Note 3—Acquisition of Gogo Commercial Aviation) for $400.0 million in cash, subject to customary adjustments (the "Purchase Price"). On December 1, 2020, Intelsat Jackson completed the acquisition pursuant to the terms of the Purchase and Sale Agreement.

Upon completion of the acquisition, the entities comprising the Gogo CA business became wholly-owned subsidiaries of Intelsat S.A. Gogo CA's operating results for the period from December 1, 2020 through December 31, 2020 have been included in our consolidated statement of operations for the year ended December 31, 2020 with no comparable amounts for 2018 or 2019. In accordance with the accounting guidance on business combinations, Gogo CA's net assets acquired and liabilities assumed in the acquisition have been included in our consolidated balance sheet beginning on December 1, 2020. See Note 3—Acquisition of Gogo Commercial Aviation.

C-band Spectrum Clearing

On March 3, 2020, the U.S. Federal Communications Commission ("FCC") issued its final order in the C-band proceeding (the "FCC Final Order"), which, among other things, provides for monetary incentives for fixed satellite services ("FSS") providers to clear a portion of the C-band spectrum on an accelerated basis (the "Acceleration Payments"). On August 14, 2020, the Company filed its final C-band spectrum transition plan with the FCC. On September 17, 2020, the Company announced it finalized materially all of its required contracts with satellite manufacturers and launch-vehicle providers to move forward and meet the accelerated C-band spectrum clearing timelines established by the FCC. Under the FCC Final Order, the Company is eligible to receive Acceleration Payments of approximately $1.2 billion and $3.7 billion based on the milestone clearing certification dates of December 5, 2021 and December 5, 2023, with the respective payments expected to be received in the first half of each successive year, respectively, subject to the satisfaction of certain deadlines and other conditions. In addition, under the FCC Final Order, we are also entitled to receive reimbursement payments for certain C-band spectrum clearing expenses incurred, subject to the satisfaction of certain conditions set forth in the FCC Final Order.

Impact of COVID-19 on the Company

As a result of the novel coronavirus ("COVID-19") pandemic in 2020, in an effort to safeguard public health, governments around the world, including United States ("U.S.") federal, state and local governments, implemented a number of orders and restrictions on travel and businesses, among other things. Some of these measures remain in effect and have negatively impacted the U.S. and other economies around the world in the short-term, while the long-term economic impact of COVID-19 remains unknown.

The COVID-19 pandemic has had an adverse impact on our business, results of operations and financial condition, a trend we expect to continue. Among the impacts of the COVID-19 pandemic were a reduction of revenue and a decreased likelihood of collection from certain mobility customers. We continue to closely monitor the ongoing impact on our employees, customers, business and results of operations.

(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, and are prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP"). References to U.S. GAAP issued by the Financial Accounting Standards Board ("FASB") in these footnotes are to the FASB Accounting Standards Codification ("ASC"). 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 these consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of these consolidated 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 primarily by providing services over satellite transponder capacity to our customers. Our customers generally obtain satellite services from us by placing an order pursuant to one of several master customer service agreements and related service orders. See Note 5—Revenue for further discussion regarding revenue recognition policies.

(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.

ASC 820, *Fair Value Measurements and Disclosure* ("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. 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. 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 and Restricted Cash

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 fair value. Restricted cash represents legally restricted amounts being held as a compensating balance for certain outstanding letters of credit.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within our consolidated balance sheets to the total sum of these amounts reported in our consolidated statements of cash flows (in thousands):

	As of December 31, 2019	As of December 31, 2020
Cash and cash equivalents	$ 810,626	$ 1,060,917
Restricted cash, current	20,238	21,130
Restricted cash included in other assets	—	5,500
Cash, cash equivalents and restricted cash	$ 830,864	$ 1,087,547

(f) Receivables and Allowance for Credit Losses

We provide satellite services and extend credit to numerous customers in the satellite communication, telecommunications and video markets, as well as the airline industry. We monitor our exposure to credit losses and maintain allowances for credit losses and anticipated losses. The Company's methodology to measure the provision for credit losses considers all relevant information to include information about historical collectability, current conditions and reasonable and supportable forecasts of future economic conditions. We believe we have adequate customer collateral and reserves to cover our exposure. As of December 31, 2020, we have incurred $405.2 million related to expected reimbursable costs associated with the FCC Final Order, which are included within the receivables line item on our consolidated balance sheets. Fulfillment costs incurred as a result of the FCC Final Order, which include costs to pay personnel or third parties to assist with customer reconfiguration and relocation, installation of filters, and program management costs, are expensed as incurred and are included within other operating expense—C-band on our consolidated statements of operations.

(g) Satellites and Other Property and Equipment

Satellites and other property and equipment are stated at historical cost, except for satellites that have been impaired. Satellites and other property and equipment acquired as part of an acquisition are stated based on their 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:

	Years
Buildings and improvements	10 - 40
Satellites and related costs	10 - 17
Ground segment equipment and software	4 - 15
Furniture and fixtures and computer hardware	3 - 12
Leasehold improvements[(1)]	2 - 13
Network equipment	5 - 25

(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 primarily consist of investments in certain equity securities, equity method investments, loan receivables, right-of-use ("ROU") assets, long-term deposits and other miscellaneous deferred charges and long-term assets. See Note 10—Investments for additional discussion regarding equity securities, equity method investments and loan receivable accounting policies. See Note 14—Leases and—*(v) Leases* below for additional discussion regarding ROU asset accounting policies.

(i) Goodwill and Other Intangible Assets

We account for goodwill and other intangible assets in accordance with ASC 350, *Intangibles—Goodwill and Other* ("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 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 ASC 740, *Income Taxes* ("ASC 740"). We are subject to income taxes in Luxembourg, as well as the United States and a number of other foreign jurisdictions. Significant judgment is required in the calculation of our tax provision and the resulting 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 impact. 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 statements of operations.

(m) Comprehensive Loss

Comprehensive loss consists of net loss and other gains and losses affecting shareholders' deficit that, under U.S. GAAP, are excluded from net loss. Such items consist primarily of the change in the market value of pension liability adjustments.

(n) Share-Based Compensation

We account for share-based compensation expense in accordance with ASC 718, *Compensation—Stock Compensation*, which requires us to measure and recognize compensation expense in our financial statements based on the fair value at the date of grant for our share-based awards, which include restricted share units ("RSUs") and stock options granted to certain employees and RSUs granted to certain eligible directors. We recognize compensation expense for these equity-classified awards over their requisite service period and adjust for forfeitures as they occur. Share based compensation expense was $6.8 million, $13.2 million, and $10.9 million for the years ended December 31, 2018, 2019 and 2020, respectively. As a result of our Chapter 11 proceedings, the exercise prices of our stock options are significantly in excess of the current market price of our common shares. In addition, all of our share-based compensation awards currently outstanding are expected to be canceled as part of our reorganization proceedings.

(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 enter into derivative transactions primarily to manage our exposure to fluctuations in foreign exchange rates and interest rates. We employ risk management strategies, which may include the use of foreign currency swaps, interest rate swaps and interest rate caps. We measure all derivatives at fair value and recognize them as either assets or liabilities on our consolidated balance sheets. Changes in the fair value of derivative instruments not qualifying as hedges are recognized in earnings in the current period. We do not have any derivative instruments that qualify for hedge accounting.

(q) Bankruptcy Accounting

Our consolidated financial statements included herein have been prepared as if we are a going concern and reflect the application of ASC 852, *Reorganizations* ("ASC 852"). ASC 852 requires the financial statements, for periods subsequent to the commencement of our Chapter 11 proceedings, to distinguish transactions and events that are directly associated with the reorganization from the ongoing operations of the business. Accordingly, we classify liabilities and obligations whose treatment and satisfaction are dependent on the outcome of the reorganization under the Chapter 11 proceedings as liabilities subject to compromise on our consolidated balance sheets. In addition, we classify all income, expenses, gains or losses that are incurred or realized as a result of the Chapter 11 proceedings as reorganization items in our consolidated statements of operations. See Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters.

(r) Inventory

Inventories consist primarily of telecommunications systems and parts associated with our Gogo CA business and are recorded at the lower of average cost or market. We evaluate the need for write-downs associated with obsolete, slow-moving and nonsalable inventory by reviewing net realizable inventory values on a periodic basis.

(s) Business Combinations

The Company accounts for business combinations under ASC 805, *Business Combinations* ("ASC 805"). ASC 805 uses the acquisition method of accounting, and accordingly, the assets and liabilities of the acquired business are recorded at their fair values at the date of acquisition. The excess of the purchase price over the estimated fair value is recorded as goodwill. All acquisition costs are expensed as incurred. Upon acquisition, the accounts and results of operations are consolidated as of and subsequent to the acquisition date. See Note 3—Acquisition of Gogo Commercial Aviation for more information.

(t) Warranty

We provide warranties on parts and labor related to our products for Gogo CA. Our warranty terms range from two to ten years. Warranty reserves are established for costs that are estimated to be incurred after the sale, delivery and installation of the products under warranty. The warranty reserves are determined based on known product failures, historical experience and other available evidence, and are included in other current liabilities in our consolidated balance sheets. As of December 31, 2020, the balance of our warranty reserve was $19.6 million.

(u) Software Development Costs

For software sold as part of our equipment sales in connection with Gogo CA, we capitalize software development costs once technological feasibility has been established. Such capitalized software costs are amortized on a product-by-product basis over the remaining estimated economic life of the product, based on the greater of the ratio that current gross revenues for a product bear to the total of current and anticipated future gross revenues for that product or the straight-line method. These costs are included in amortizable intangible assets, net in our consolidated balance sheets.

(v) Leases

We adopted ASC 842, *Leases* ("ASC 842") effective January 1, 2019 using the effective date method and applied the package of practical expedients included therein. We determine if a contract is or contains a lease at inception or modification of a contract. A contract is or contains a lease if the contract conveys the right to control the use of an identified asset for a period in exchange for consideration. Control over the use of the identified asset means the lessee has both (a) the right to obtain substantially all of the economic benefits from the use of the asset and (b) the right to direct the use of the asset.

Operating and finance lease ROU assets and lease liabilities are recognized based on the present value of future minimum lease payments over the expected lease term, at the commencement date. For leases in which the implicit rate is not readily determinable, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of future payments. The expected lease terms include options to extend or terminate the lease when it is reasonably certain the Company

will exercise such option. ROU assets include unpaid lease payments and exclude lease incentives and initial direct costs incurred. For our operating leases, we recognize lease expense for minimum lease payments on a straight-line basis over the lease term, and for our finance leases, we recognize interest expense on the lease liability using the effective interest method and amortization of the ROU assets on a straight-line basis over the lease term.

We have lease agreements with lease and non-lease components, which are generally combined, consistent with our election of the practical expedient. For lease agreements entered into or reassessed after the adoption of ASC 842 in which the Company is the lessee, the Company accounts for the lease components (e.g. fixed payments including rent, real estate taxes and insurance costs) and non-lease components (e.g. common-area maintenance costs and managed service contracts) as a single lease component for all classes of underlying assets. Leases in which the Company is the lessor are also evaluated for lease and non-lease components. In the event a sales-type lease is identified, this component is accounted for separately from lease and non-lease components that meet the practical expedient to be combined. Judgment is required in determining the allocation between lease components and also between the lease and non-lease components, as the non-lease components are the predominant components of the combined components of our sales-type leases. ASC 606, *Revenue from Contracts with Customers* ("ASC 606") is applied to the combined lease and non-lease components. Leases with an expected term of 12 months or less are not accounted for on the balance sheet and the related lease expense is recognized on a straight-line basis over the expected lease term. See Note 14—Leases for further details.

(w) Recently Adopted Accounting Pronouncements

In June 2016, the FASB issued Accounting Standards Update ("ASU") ASU 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which changes how companies measure and recognize credit impairment for any financial assets. The standard requires 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. We adopted ASU 2016-13 and its amendments in the first quarter of 2020, on a modified retrospective basis. The adoption of ASU 2016-13 and its amendments increased our reserve for credit losses by $0.9 million as of January 1, 2020.

In January 2017, the FASB issued ASU 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"), 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. We adopted ASU 2017-04 in the first quarter of 2020, on a prospective basis. As a result, we will measure impairment using the difference between the carrying amount and the fair value of the reporting unit, if required. See Note 11—Goodwill and Other Intangible Assets for further information.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820)—Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), as part of its disclosure framework project to improve the effectiveness of disclosures in the notes to financial statements. Changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements, and the narrative description of measurement uncertainty were applied prospectively for only the most recent interim period presented. All other amendments were applied retrospectively for all periods presented. ASU 2018-13 and its amendments were adopted by the Company in the first quarter of 2020.

In August 2018, the FASB issued ASU 2018-14, *Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20)—Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans* ("ASU 2018-14"), as part of its disclosure framework project to improve the effectiveness of disclosures in the notes to financial statements. ASU 2018-14 modifies and clarifies disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. The amendments remove certain disclosure requirements and require additional disclosures. ASU 2018-14 was adopted by the Company in the fourth quarter of 2020 on a retrospective basis to all periods presented.

In August 2018, the FASB issued ASU 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40)—Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* ("ASU 2018-15"), which requires an entity in a hosting arrangement that is a service contract to follow the guidance in Subtopic 350-40 to determine which implementation costs to capitalize as an asset related to the service contract and which costs to expense. ASU 2018-15 was adopted by the Company in the first quarter of 2020. The adoption did not have a significant impact on the Company.

(x) Recently Issued Accounting Pronouncements

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting For Income Taxes* ("ASU 2019-12"). The standard removes certain exceptions for recognizing deferred taxes for investments, performing intra-period allocation and calculating income taxes in interim periods. It also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. ASU 2019-12 will be effective

for the Company for annual periods in fiscal years beginning after December 15, 2020. The impact of the adoption of ASU 2019-12 on our consolidated financial statements and associated disclosures is not expected to be material.

In August 2020, the FASB issued ASU 2020-06, *Accounting for Convertible Instruments and Contracts in an Entity's Own Equity* ("ASU 2020-06"). The standard simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts regarding an entity's own equity. ASU 2020-06 is part of the FASB's simplification initiative, which aims to reduce unnecessary complexity in U.S. GAAP. ASU 2020-06 will be effective for the Company for interim and annual periods in fiscal years beginning after December 15, 2021. We are in the process of evaluating the impact that ASU 2020-06 will have on our consolidated financial statements and associated disclosures.

Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters

Voluntary Reorganization under Chapter 11

On May 13, 2020, Intelsat S.A. and certain of its subsidiaries (each, a "Debtor" and collectively, the "Debtors") commenced voluntary cases (the "Chapter 11 Cases") under title 11 of the United States Code (the "Bankruptcy Code") in the United States Bankruptcy Court for the Eastern District of Virginia (the "Bankruptcy Court"). Primary factors causing us to file for Chapter 11 protection included the Company's intention to participate in the accelerated clearing process of C-band spectrum set forth in the FCC Final Order, requiring the Company to incur significant costs related to clearing activities well in advance of receiving reimbursement for such costs and the need for additional financing to fund the C-band clearing process, service our current debt obligations, and meet our operating requirements, as well as the economic slowdown impacting the Company and several of its end markets due to the COVID-19 pandemic. On August 14, 2020, the Company filed its final C-band spectrum transition plan with the FCC. On September 17, 2020, the Company announced it finalized materially all of its required contracts with satellite manufacturers and launch-vehicle providers to move forward and meet the accelerated C-band spectrum clearing timelines established by the FCC.

The Chapter 11 process can be unpredictable and involves significant risks and uncertainties. Pursuant to various orders from the Bankruptcy Court, the Debtors have received approval from the Bankruptcy Court to generally maintain their ordinary operations and uphold certain commitments to their stakeholders, including employees, customers, and vendors, during the restructuring process, subject to the jurisdiction of the Bankruptcy Court and in accordance with the applicable provisions of the Bankruptcy Code. Our ability to fund operating expenses may be subject to obtaining further approvals from the Bankruptcy Court in connection with the Chapter 11 Cases.

On June 9, 2020, Intelsat Jackson received approval from the Bankruptcy Court (the "DIP Order") to enter into a non-amortizing multiple draw superpriority secured debtor-in-possession term loan facility (the "DIP Facility"), in an aggregate principal amount of $1.0 billion on the terms and conditions as set forth in the DIP Facility credit agreement (the "DIP Credit Agreement") with certain of the Debtors' prepetition secured parties (the "DIP Lenders"), and on June 17, 2020, Intelsat Jackson and certain of its subsidiaries as guarantors (together with Intelsat Jackson, the "DIP Debtors") entered into the DIP Credit Agreement with the DIP Lenders, as amended by an amendment ("DIP Amendment No. 1") to the DIP Credit Agreement, dated as of August 24, 2020, and as further amended by a second amendment ("DIP Amendment No. 2") to the DIP Credit Agreement, dated as of November 25, 2020. For additional information regarding the DIP Facility, DIP Credit Agreement, DIP Amendment No. 1 and DIP Amendment No. 2, see Note 12—Debt.

On July 11, 2020, the Debtors filed with the Bankruptcy Court schedules and statements setting forth, among other things, the assets and liabilities of each of the Debtors, subject to the assumptions filed in connection therewith. These schedules and statements may be subject to further amendment or modification after filing.

On February 11, 2021, the Debtors entered into a plan support agreement (together with all exhibits and schedules thereto, the "PSA"), with certain of the Debtors' prepetition secured and unsecured creditors (the "Consenting Creditors" and together with the Debtors, the "PSA Parties"). The PSA contains certain covenants on the part of the PSA Parties, including but not limited to the Consenting Creditors voting in favor of the *Joint Chapter 11 Plan of Reorganization of Intelsat S.A. and Its Debtor Affiliates* (as proposed, the "Plan"), and provides that the Debtors shall achieve certain milestones (unless extended or waived in writing). In connection with the PSA, on February 12, 2021, the Debtors filed the Plan and the *Disclosure Statement for the Joint Chapter 11 Plan of Reorganization of Intelsat S.A. and Its Debtor Affiliates* (the "Disclosure Statement"), which describes a variety of topics related to the Chapter 11 Cases, including (i) events leading to the Chapter 11 Cases; (ii) significant events that took place during the Chapter 11 Cases; (iii) certain terms of the Plan; and (iv) certain anticipated risk factors associated with, and anticipated consequences of the Plan. The Bankruptcy Court is currently scheduled to determine the adequacy of the Disclosure Statement and whether the Plan meets the requirements of the Bankruptcy Code in the second quarter of 2021.

The filing of the Chapter 11 Cases constituted an event of default that accelerated substantially all of our obligations under the documents governing the prepetition existing indebtedness of Intelsat S.A., Intelsat Luxembourg, Intelsat Connect and Intelsat Jackson. For additional discussion regarding the impact of the Chapter 11 Cases on our debt obligations, see Note 12—Debt.

While the Chapter 11 Cases are pending, the Debtors do not anticipate making interest payments due under their respective unsecured debt instruments; however, the Debtors expect to make monthly interest payments on their senior secured debt instruments pursuant to the adequate protection requirements under the DIP Order. For the year ended December 31, 2020, the contractual interest expense pursuant to our unsecured debt instruments that was not recognized in our consolidated statements of operations was $495.2 million.

Delisting of Intelsat S.A. Common Shares

On May 20, 2020, the New York Stock Exchange ("NYSE") filed a Form 25 with the SEC to delist the Company's common shares, $0.01 par value from the NYSE. The delisting became effective 10 days after the Form 25 was filed. The deregistration of the common shares under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") became effective 90 days after the filing date of the Form 25. The common shares remain registered under Section 12(g) of the Exchange Act. The Company's common shares began trading on the OTC Pink Marketplace on May 19, 2020 under the symbol "INTEQ."

Liabilities Subject to Compromise

Prepetition unsecured liabilities of the Debtors subject to compromise under the Chapter 11 proceedings have been distinguished from secured liabilities that are not expected to be compromised and post-petition liabilities in our consolidated balance sheets. Liabilities subject to compromise have been recorded at the amounts expected to be allowed by the Bankruptcy Court. The ultimate settlement amounts of these liabilities remain at the discretion of the Bankruptcy Court and may vary from the expected allowed amounts.

Liabilities subject to compromise consisted of the following (in thousands):

	As of December 31, 2020
Accounts payable	$ 9,545
Debt subject to comprise	9,782,161
Accrued interest on debt subject to compromise	341,676
Other long-term liabilities subject to compromise	35,136
Total liabilities subject to compromise	$ 10,168,518

Reorganization Items

The expenses, gains and losses directly and incrementally resulting from the Chapter 11 Cases are separately reported as reorganization items in our consolidated statements of operations.

Reorganization items consisted of the following (in thousands):

	Year Ended December 31, 2020
Adjustment of debt discount, premium and issuance costs	$ 196,974
Debtor-in-possession financing fees	59,682
Professional fees	129,659
Other reorganization income	(454)
Total reorganization items	$ 385,861

Going Concern

Our consolidated financial statements have been prepared assuming that we will continue as a going concern, which contemplates continuity of operations, realization of assets, and satisfaction of liabilities in the normal course of business. In connection with the preparation of our consolidated financial statements, we conducted an evaluation as to whether there were conditions and events, considered in the aggregate, that raised substantial doubt as to the Company's ability to continue as a going concern. As reflected in our consolidated financial statements, the Company had cash and cash equivalents of $1.1 billion and an accumulated deficit of $8.4 billion as of December 31, 2020. The Company generated income from operations of $269.0 million and a net loss of $909.3 million for the year ended December 31, 2020.

In light of the Company's Chapter 11 proceedings, our ability to continue as a going concern is contingent upon, among other things, our ability to, subject to the Bankruptcy Court's approval, implement a business plan of reorganization, emerge from the Chapter 11 proceedings and generate sufficient liquidity following the reorganization to meet our contractual obligations and operating needs. As a result of risks and uncertainties related to, among other things, (i) the Company's ability to obtain requisite support for the business plan of reorganization from various stakeholders, and (ii) the disruptive effects of the Chapter 11 proceedings on our business making it potentially more difficult to maintain business, financing and operational relationships, substantial doubt exists regarding our ability to continue as a going concern.

The filing of the Chapter 11 Cases constituted an event of default that accelerated substantially all of our obligations under the documents governing the prepetition existing indebtedness of Intelsat S.A., Intelsat Luxembourg, Intelsat Connect and Intelsat Jackson. As such, we have reclassified all such debt obligations, other than debt subject to compromise, to current maturities of long-term debt on our consolidated balance sheet as of December 31, 2020. For additional discussion regarding the impact of the Chapter 11 Cases on our debt obligations, see Note 12—Debt.

Our consolidated financial statements do not include any adjustments related to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should we be unable to continue as a going concern.

Note 3—Acquisition of Gogo Commercial Aviation

On December 1, 2020, we acquired all of the equity interests of Gogo LLC and Gogo International Holdings LLC (collectively known as "Gogo CA"), according to the terms and conditions of the Purchase and Sale Agreement (the "Gogo Transaction"). Gogo CA is one of the largest global providers of in-flight broadband connectivity. The acquisition of Gogo CA brings together two complementary enterprises – one of the world's largest satellite operators with a leading provider of commercial in-flight broadband and entertainment services, to deliver innovation and long-term value to commercial airlines. The acquisition was not significant to the overall consolidated results for the year ended December 31, 2020 as it did not have a material impact to revenue, net loss or net loss per common share attributable to Intelsat S.A.

The Company accounted for the business combination in accordance with ASC 805. The Company recorded the acquisition using the acquisition method of accounting and recognized assets and liabilities at their fair value as of the date of acquisition. The Company based the preliminary allocation of the purchase price on estimates and assumptions known at the date of acquisition that are subject to change within the purchase price allocation period, which is generally one year from the acquisition date.

The net payment associated with the transaction was $386.4 million, which represents total cash consideration of $400.0 million, adjusted for estimated closing cash, indebtedness, working capital excess and any transaction expenses. The primary difference between the net payment and purchase consideration of $409.1 million is the settlement of a pre-existing relationship that was favorable to Intelsat S.A.

The preliminary allocation of the purchase consideration to tangible and intangible assets acquired and liabilities assumed on the acquisition date is based on estimated fair values and is as follows (in thousands):

	Estimated Fair Value
Assets acquired	
Cash and cash equivalents	$ 9,867
Receivables, net of allowances	52,849
Inventory	144,014
Prepaid expenses and other current assets	36,140
Property and equipment	41,328
Amortizable intangible assets	
Software	45,464
Trade name	1,000
Goodwill	77,620
Other assets	
Supplemental type certificates	24,253
Line fit certificates	21,776
Other assets	100,566
Total assets acquired	554,877
Liabilities assumed	
Current liabilities	
Accounts payable and accrued liabilities	(63,300)
Contract liabilities	(13,527)
Other current liabilities	(25,472)
Noncurrent liabilities	(43,522)
Total liabilities assumed	(145,821)
Total purchase consideration	$ 409,056

The fair value estimates of the net assets acquired are based upon calculations and valuations, and estimates and assumptions regarding certain tangible and identifiable intangible assets acquired and liabilities assumed. The excess of the total consideration over the tangible assets, identifiable intangible assets, and assumed liabilities is recorded as goodwill. Goodwill represents expected synergies in mobility services and connectivity, $66.9 million of which is deductible for tax purposes.

Gogo CA contributed $15.6 million of revenue and $12.9 million of net loss for the period December 1, 2020 through December 31, 2020, which is included in the consolidated statements of operations. If the acquisition had occurred on January 1, 2019, our unaudited pro forma revenue and net loss would have been $2.6 billion and $971.1 million, respectively, for the year ended December 31, 2019, and $2.1 billion and $1.2 billion, respectively, for the year ended December 31, 2020. The unaudited pro forma combined financial information is disclosed for illustrative purposes and does not purport to represent what the results of operations would actually have been if the business combination occurred as of the dates indicated or what the results would be for any future periods. Acquisition-related costs amounted to $15.9 million, which are included within selling, general and administrative expenses in our consolidated statements of operations.

Note 4—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, 2020, there were 142.1 million common shares issued and outstanding.

Note 5—Revenue

(a) Revenue Recognition

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. Our Gogo CA revenue is primarily earned from providing connectivity and entertainment services and through sales of equipment.

For each service type, the price per unit in our contracts is generally fixed for each defined time period. While the number of units or price per unit in our multi-year contracts may be different by year or another time period, the number of units and price per unit are fixed for each defined time period and the total contract price is fixed. To determine the proper revenue recognition method for contracts, we evaluate whether two or more services should be combined and accounted for as a single performance obligation.

Certain Gogo CA contracts may be based on a fixed monthly fee per aircraft or a variable fee based on the volume of connectivity activity, or a combination of both. Examples of variable consideration within our contracts include megabyte overages and pay-per-use sessions. We constrain our estimates to reduce the probability of a significant revenue reversal in future periods, allocate such variable consideration to the identified performance obligations and recognize revenue in the period the services are provided. Our estimates are based on historical experience, anticipated future performance, market conditions and our best judgment at the time.

A significant change in one or more of these estimates could affect our estimated contract value, and we regularly review and update our estimates and recognize adjustments under the cumulative catch-up model. Any adjustment under this method is recorded as a cumulative adjustment in the period identified and revenue for future periods is recognized using the new adjusted estimate.

Our specific revenue recognition policies are as follows:

Satellite Utilization Charges

The Company's contracts for satellite utilization services often contain multiple service orders for the provision of capacity on or over different beams, satellites, frequencies, geographies or time periods. Under each separate service order, the Company's satellite services, comprised of transponder services, managed services, channel services, and occasional use managed services, are delivered in a series of time periods that are distinct from each other and have the same pattern of transfer to the customer. In each period, the Company's obligation is to make those services available to the customer. Throughout each service period, the Company provides services that are able to be used continuously, and the customer simultaneously receives and consumes the benefits provided by the Company. We believe that, given that our services are stand-ready obligations that are available continuously, the passage of time most faithfully reflects our satisfaction of the performance obligation. We also have certain obligations, including providing spare or substitute capacity if available, in the event of satellite service failure under certain long-term agreements. While we are generally not obligated to refund satellite utilization payments previously made, credits may be granted for sustained service outages in certain limited circumstances.

Similar to satellite utilization charges, we have determined that the customer simultaneously receives and consumes benefits provided by the Company for satellite related consulting and technical services, tracking, telemetry and commanding services ("TT&C") and in-orbit backup services, as detailed below. Therefore, we believe that the passage of time most faithfully reflects our satisfaction of the performance obligation for these services:

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 performance obligations, such as transfer orbit support services or training programs over the service period.

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 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 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 principal versus agent considerations.

Airline connectivity revenue. Connectivity is provided to our customers using both our ATG and satellite technologies. Under the airline-directed business model, the airline is our customer and we earn service revenue as connectivity services are consumed directly by the airline or indirectly by passengers. Under the turnkey business model, we earn revenue for connectivity services consumed directly by passengers.

Entertainment revenue. Entertainment revenue consists of entertainment services we provide to the airline for use by its passengers. Revenue is recognized as the services are provided to the airline.

Connected Aircraft Services. We recognize revenue for real-time credit card transaction processing, electronic flight bags, and real-time weather information as the service is provided.

Equipment Revenue. Equipment revenue primarily consists of the sale of air-to-ground and satellite connectivity equipment and the sale of entertainment equipment. Equipment revenue is recognized when we transfer control of the equipment to our customers, which generally occurs upon shipment.

We occasionally sell products or services individually or in some combination to our customers. When products or services are sold together, we allocate revenue for each performance obligation based on each obligation's relative selling price. In these arrangements, revenue for products is recognized when the transfer of control passes to the customer, while service revenue is recognized over the service term.

Contract Assets

Contract assets include unbilled amounts typically resulting from sales under our long-term contracts when the total contract value is recognized on a straight-line basis and the revenue recognized exceeds the amount billed to the customer. Contract assets also result from revenue contracts with multiple performance obligations when the allocated revenue recognized from satisfied performance obligations exceeds the amount billed to the customer.

Contract Liabilities

Contract liabilities consist of advance payments and collections in excess of revenue recognized and deferred revenue. Our contracts at times contain prepayment terms that range from one month to one year in advance of providing the service. As a practical expedient, we do not need to adjust the promised amount of consideration for the effects of a significant financing component if we expect, at contract inception, that the period of time between when the Company transfers a promised good or service to a customer and when the customer pays for that good or service will be one year or less. For a small subset of contracts with advance payments that contain prepayment terms greater than one year and up to fifteen years, we assess whether a significant financing component exists by considering the difference between the amount of promised consideration and the cash selling price of the promised services. The prepayment amount is generally based on a standard methodology that discounts the total of the standard monthly charges over the service term to determine the prepayment amount, resulting in a difference between the amount of promised consideration and the cash selling price of the promised services. The Company considers the timing difference between payment and the promised transfer of services, combined with the Company's incremental borrowing rates, to determine whether a significant financing component exists. When a significant financing component exists, the amount of revenue recognized exceeds the amount of cash received from the customer. After receiving cash from the customer but prior to the Company providing services, the Company records additional contract liabilities as well as offsetting interest expense to reflect the upfront financing the Company is effectively receiving from the customer. Once the Company begins providing services, additional interest expense is recorded each period using the effective interest method, as well as corresponding additional revenue, which is recognized ratably over the service period. As of December 31, 2020, $405.2 million related to reimbursable costs associated with the FCC Final Order were included within contract liabilities, net of current portion on our consolidated balance sheets.

For the years ended December 31, 2019 and 2020, we recognized revenue of $249.5 million and $237.4 million, respectively, that were included in the contract liability balances as of January 1, 2019 and 2020, respectively. In addition, the total amount of consideration included in contract assets as of January 1, 2019 and 2020 that became unconditional for each of the years ended December 31, 2019 and 2020 was $9.1 million and $15.1 million, respectively.

Assets Recognized from the Costs to Obtain a Customer Contract

We recognize an asset for the incremental costs of obtaining a contract with a customer if we expect the benefit of those costs to be longer than one year. We have determined that our sales incentive program meets the requirements to be capitalized due to the incremental nature of the costs and the expectation that the Company will recover such costs. The assets recognized from the costs to obtain a customer contract are amortized over a period that is consistent with the transfer to the customer of the services to which the asset relates. Additionally, we recognize an asset for the costs to obtain Supplemental Type Certificates ("STCs") and Line Fit Certificates ("LFCs"), which is a regulatory requirement that must be satisfied prior to installation of equipment on the aircraft and remains an operational requirement throughout the duration of the contract. We capitalize all costs to obtain STCs and LFCs to the extent recoverable by contract revenue as costs to fulfill a customer contract. All STCs and LFCs will be amortized over the contract term (including anticipated renewals) and periodically tested for impairment. We capitalized $7.9 million and $5.9 million for costs to obtain a customer contract and amortized $5.9 million and $5.0 million for the years ended December 31, 2019 and 2020, respectively. As of December 31, 2019 and 2020, capitalized costs to obtain a customer contract amounted to $9.4 million and $10.4 million, respectively, and were included within other assets in our consolidated balance sheets.

Contract Modifications

Contracts are often modified to account for changes in contract specifications or requirements. We consider contract modifications to exist when the modification either creates new rights or obligations or changes the existing enforceable rights and obligations of either party. Most of our contract modifications are for goods and services that are distinct from the existing contract, as they consist of additional months of service priced at the Company's standalone selling prices of the additional services and are therefore treated as separate contracts. For contract modifications that do not result in additional distinct goods or services, the effect of a contract modification on the transaction price and our measure of progress for the performance obligation to which it relates, is recognized as an adjustment to revenue.

Significant Judgments

We occasionally enter into certain contracts in which the customer makes payments in advance of services to be delivered, which may be years in the future. The reasons for the prepayments in these contracts vary, but generally can be either for the customer's benefit or for the Company's benefit (such as the ability to use the cash received from the customer to pay for the construction of a satellite asset). The determination of whether contracts with a prepayment provision contain a significant financing component requires judgment. The Company makes this determination based on various factors, including the differences between the amount of promised consideration and cash selling prices, the length of time between payment and the transfer of services and prevailing interest rates in the market.

While most satellite utilization contracts contain multiple performance obligations for each transponder service on different satellites, the service period for the different satellite utilization performance obligations is generally the same time period. In the event that the time period for multiple performance obligations is not the same, we allocate the total transaction price to each performance obligation in an amount based on the estimated relative standalone selling price of the promised good or service underlying such performance obligation. Judgment is required to determine the standalone selling price for each distinct performance obligation. In order to estimate standalone selling prices, we use an adjusted market assessment approach which involves an evaluation of the market and an estimate of the price that our customers are willing to pay, or an expected cost plus a margin approach.

When more than one party is involved in providing goods or services to a customer, we generally recognize the transaction on a gross basis due to the level of control that we have prior to the transfer of the good or service. These arrangements include instances where we procure equipment from vendors and sell to third-party customers, when we enter into revenue sharing arrangements with other parties and when we purchase 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. Our third-party capacity arrangements (off-network) are more significant and, in determining whether we are the principal or the agent in these arrangements, we consider whether or not we control the service before it is transferred to the customer. In this determination, we consider the definition of control as set forth in ASC 606-10-25-25. When we purchase satellite transponder capacity from a third party, we have the ability to direct the use of and obtain substantially all of the remaining benefits from the purchased capacity. We obtain the right to the service to be performed by the third party, which gives the Company the ability to direct that party to provide the service to the customer on the Company's behalf. No other third party can direct the use of or obtain any benefits from the capacity.

We also considered the factors in ASC 606-10-55-39 in the Company's determination of control. In the vast majority of cases, when we resell capacity to third party customers, we are primarily responsible for the fulfillment of the services and acceptability of the service. Additionally, the Company has full discretion in establishing the pricing for transponder services with the customer and assumes the credit risk associated with capacity purchased from the third party. In the event the service is not acceptable to the customer, we are required to identify an alternative solution. Based on these considerations, we have concluded that we are the principal in the transaction for these arrangements. When these factors are not met, the Company recognizes revenue for third-party capacity arrangements on a net basis.

Judgment is required in determining whether we are the principal or the agent in transactions involving third parties.

Remaining Performance Obligations

Our remaining performance obligation is our expected future revenue under existing customer contracts and includes both cancelable and non-cancelable contracts. Our remaining performance obligation was approximately $6.0 billion as of December 31, 2020. We assess the contract term of our cancelable contracts as the full stated term of the contract assuming each contract is not canceled since the termination penalty upon cancellation is substantive. As of December 31, 2020, the weighted average remaining customer contract life was approximately 4.0 years. Approximately 41%, 23%, and 36% of our total remaining performance obligation as of December 31, 2020 is expected to be recognized as revenue during 2021 and 2022, 2023 and 2024, and 2025 and thereafter, respectively. The amount included in the remaining performance obligation 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 remaining performance obligation amount, is generally calculated as a percentage of the remaining performance obligation 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 remaining performance obligation includes 100% of the remaining performance obligation of our consolidated ownership interests, which is consistent with the accounting for our ownership interest in these entities.

(b) 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. Our revenues are disaggregated by billing region, service type and customer set. 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. Gogo CA revenues are allocated to the geographic location where the airline is domiciled.

The following table disaggregates revenue by billing region (in thousands, except percentages):

	Year Ended December 31, 2018		Year Ended December 31, 2019		Year Ended December 31, 2020	
North America	$1,112,774	51 %	$1,078,100	52 %	$1,019,248	53 %
Europe	257,747	12 %	243,967	12 %	214,573	11 %
Latin America and Caribbean	284,948	13 %	239,856	12 %	210,510	11 %
Africa and Middle East	274,853	13 %	250,935	12 %	238,305	12 %
Asia-Pacific	230,868	11 %	248,607	12 %	230,444	12 %
Total	$2,161,190		$2,061,465		$1,913,080	

The following table disaggregates revenue by type of service (in thousands, except percentages):

	Year Ended December 31, 2018		Year Ended December 31, 2019		Year Ended December 31, 2020	
On-Network Revenues						
Transponder services	$1,570,278	73 %	$1,468,791	71 %	$1,372,773	72 %
Managed services	393,264	18 %	374,026	18 %	298,638	15 %
Channel	4,250	— %	2,400	— %	1,394	— %
Total on-network revenues	1,967,792	91 %	1,845,217	89 %	1,672,805	87 %
Off-Network and Other Revenues						
Transponder, MSS and other off-network services	150,186	7 %	175,602	9 %	182,393	10 %
Satellite-related services	43,212	2 %	40,646	2 %	42,297	2 %
Total off-network and other revenues	193,398	9 %	216,248	11 %	224,690	12 %
In-Flight Services Revenues						
Services	—	— %	—	— %	14,122	1%
Equipment	—	— %	—	— %	1,463	—%
Total in-flight services revenue	—	— %	—	— %	15,585	1%
Total	$2,161,190		$2,061,465		$1,913,080	

By customer application, our revenues from network services, media, government and satellite-related services were $798.1 million, $937.7 million, $392.0 million and $33.4 million, respectively, for the year ended December 31, 2018; $770.4 million, $883.0 million, $378.3 million and $29.8 million, respectively, for the year ended December 31, 2019; and $677.4 million, $812.5 million, $392.6 million and $30.6 million, respectively, for the year ended December 31, 2020.

Our largest customer accounted for approximately 11%, 14% and 14% of our revenue for the years ended December 31, 2018, 2019 and 2020, respectively. Our ten largest customers accounted for approximately 37%, 41% and 42% of our revenue for the years ended December 31, 2018, 2019 and 2020, respectively.

Note 6—Net Loss per Share

Basic net loss per common share attributable to Intelsat S.A. ("EPS") is computed by dividing net loss attributable to Intelsat S.A.'s common shareholders by the weighted average number of common shares outstanding during the periods. Diluted EPS assumes the issuance of common shares pursuant to share-based compensation plans and conversion of the Intelsat S.A. 4.5% Convertible Senior Notes due 2025 (the "2025 Convertible Notes"), unless the effect of such issuances would be anti-dilutive.

The following table sets forth the computation of basic and diluted EPS (in thousands, except per share data or where otherwise noted):

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Numerator:			
Net loss attributable to Intelsat S.A.	$ (599,605)	$ (913,595)	$ (911,664)
Denominator:			
Basic weighted average shares outstanding (in millions)	129.6	140.4	142.0
Diluted weighted average shares outstanding (in millions):	129.6	140.4	142.0
Basic EPS	$ (4.63)	$ (6.51)	$ (6.42)
Diluted EPS	$ (4.63)	$ (6.51)	$ (6.42)

In June 2018, Intelsat S.A. completed an offering of $402.5 million aggregate principal amount of its 2025 Convertible Notes. We do not expect to settle the principal amount of the 2025 Convertible Notes in cash, and therefore use the if-converted method for calculating any potential dilutive effect of the conversion on diluted EPS, if applicable. Under the indenture governing the 2025 Convertible Notes (the "2025 Indenture"), the 2025 Convertible Notes are eligible for conversion depending upon the trading price of our common shares and under other conditions set forth in the indenture until December 15, 2024, and thereafter without regard to any conditions. The commencement of the Chapter 11 Cases constituted an event of default under the 2025 Indenture. See Note 12—Debt for additional information on the impact of the Chapter 11 Cases on our debt obligations.

Due to a net loss in the years ended December 31, 2018, 2019 and 2020, 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 12.5 million, 26.0 million and 22.2 million for the years ended December 31, 2018, 2019 and 2020, respectively.

Note 7—Fair Value Measurements

Recurring Fair Value Measurements

The tables below present assets measured and recorded at fair value in our consolidated balance sheets on a recurring basis and their corresponding level within the fair value hierarchy (in thousands). No transfers between Level 1, Level 2 and Level 3 fair value measurements occurred for the years ended December 31, 2019 and 2020.

		Fair Value Measurements at December 31, 2019		
	As of December 31, 2019	(Level 1)	(Level 2)	(Level 3)
Assets				
Marketable securities[1]	$ 5,145	$ 5,145	$ —	$ —
Undesignated interest rate cap contracts[2]	372	—	372	—
Common stock warrant[3]	3,239	—	—	3,239
Total assets	$ 8,756	$ 5,145	$ 372	$ 3,239

		Fair Value Measurements at December 31, 2020		
	As of December 31, 2020	(Level 1)	(Level 2)	(Level 3)
Assets				
Marketable securities[1]	$ 5,205	$ 5,205	$ —	$ —
Common stock warrant[3]	3,239	—	—	3,239
Total assets	$ 8,444	$ 5,205	$ —	$ 3,239

(1) The valuation measurement inputs of these marketable securities represent unadjusted quoted prices in active markets and, accordingly, we have classified such investments as Level 1 within the fair value hierarchy. The cost basis of our marketable securities was $4.3 million and $4.0 million as of December 31, 2019 and 2020, respectively. We sold marketable securities with a cost basis of $0.7 million and $0.6 million for the years ended December 31, 2019 and 2020, respectively, resulting in a gain of $0.2 million for each of the years ended December 31, 2019 and 2020, which is included within other income (expense), net in our consolidated statements of operations.

(2) The valuation of our interest rate derivative instruments reflects the fair value of premiums paid, taking into account observable inputs including current interest rates, the market expectation for future interest rate volatility and current

creditworthiness of the counterparties. As a result, we have determined that the valuation in its entirety is classified as Level 2 within the fair value hierarchy.

(3) We valued the common stock warrant using a valuation technique that reflects the risk-free interest rate, time to maturity and volatility of comparable companies. We identified the inputs used to calculate the fair value as Level 3 inputs and concluded that the valuation in its entirety is classified as Level 3 within the fair value hierarchy.

The following table presents a reconciliation of the preferred and common stock warrants which are measured and recorded at fair value on a recurring basis using Level 3 inputs (in thousands):

	Year Ended December 31, 2019	Year Ended December 31, 2020
Balance as of beginning of period	$ 4,100	$ 3,239
Purchase of investments	3,239	—
Unrealized loss included in other income (expense), net	(4,100)	—
Balance as of end of period	$ 3,239	$ 3,239

Nonrecurring Fair Value Measurements

The carrying values of certain assets may be adjusted to fair value in subsequent periods on a nonrecurring basis if an event occurs or circumstances change that indicate that the asset is impaired or, for investments in equity securities without readily determinable fair values, observable transactions for identical or similar investments of the same issuer support a change in the investment fair value. For the year ended December 31, 2019, we recorded net impairment charges on certain investments in equity securities without readily determinable fair values. See Note 10—Investments for additional information related to these fair value measurements. For the year ended December 31, 2020, as a result of our interim and annual impairment assessments, we recognized impairments of non-amortizable intangible assets of $157.9 million. This fair value measurement is classified as Level 3 within the fair value hierarchy due to the use of significant unobservable inputs. See Note 11—Goodwill and Other Intangible Assets for additional information.

Other Fair Value Disclosures

See Note 10—Investments, Note 11—Goodwill and Other Intangible Assets and Note 12—Debt for fair value disclosures related to our loan receivables, impairment analysis and debt, respectively. The carrying amounts of the Company's other financial instruments are reasonable estimates of their related fair values due to their short-term nature.

Note 8—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 2015, we amended the defined benefit retirement plan to end the accrual of additional benefits for the remaining active participants. We have received authorization from the Bankruptcy Court to continue making contributions in the ordinary course during our Chapter 11 Cases.

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 years. 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 2021 will be approximately $5.8 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 2021 will be approximately $2.6 million.

Prior service credits and actuarial losses are reclassified from accumulated other comprehensive loss to net periodic pension benefit costs, which are included in other income (expense), net on our consolidated statements of operations. All amounts recorded in accumulated other comprehensive loss are being recognized as net periodic benefit cost or benefit over the average remaining life expectancy of plan participants.

Reconciliation of Funded Status and Accumulated Benefit Obligation. Intelsat uses December 31 as the measurement date for its defined benefit retirement plan. The following table 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, 2019		Year Ended December 31, 2020	
	Pension Benefits	Other Post-retirement Benefits	Pension Benefits	Other Post-retirement Benefits
Change in benefit obligation				
Benefit obligation at beginning of year	$ 394,082	$ 40,526	$ 423,536	$ 39,875
Interest cost	15,390	1,532	11,850	1,064
Employee contributions	—	181	—	157
Plan amendments	—	—	—	—
Benefits paid	(24,875)	(1,787)	(26,350)	(1,920)
Actuarial net (gain) loss[(1)]	38,939	(577)	42,917	(2,343)
Benefit obligation at end of year	$ 423,536	$ 39,875	$ 451,953	$ 36,833
Change in plan assets				
Plan assets at beginning of year	$ 297,631	$ —	$ 334,821	$ —
Employer contributions	4,232	1,606	3,971	1,763
Employee contributions	—	181	—	157
Actual return on plan assets	57,833	—	43,633	—
Benefits paid	(24,875)	(1,787)	(26,350)	(1,920)
Plan assets at fair value at end of year	$ 334,821	$ —	$ 356,075	$ —
Accrued benefit costs and funded status of the plans	$ (88,715)	$ (39,875)	$ (95,878)	$ (36,833)
Accumulated benefit obligation	$ 423,536		$ 451,953	
Weighted average assumptions used to determine accumulated benefit obligation and accrued benefit costs				
Discount rate	3.29 %	3.19 %	2.41 %	2.28 %
Weighted average assumptions used to determine net periodic benefit costs				
Discount rate	4.35 %	4.27 %	3.29 %	3.19 %
Expected rate of return on plan assets	7.60 %	—	7.60 %	—
Amounts in accumulated other comprehensive loss recognized in net periodic benefit cost				
Actuarial net (gain) loss, net of tax	$ 4,151	$ (1,208)	$ 6,295	$ (1,200)
Prior service credits, net of tax	—	(2,502)	—	(2,504)
Total	$ 4,151	$ (3,710)	$ 6,295	$ (3,704)
Amounts in accumulated other comprehensive loss not yet recognized in net periodic benefit cost				
Actuarial net (gain) loss, net of tax	$ 111,637	$ (16,646)	$ 127,497	$ (17,746)
Prior service credits, net of tax	—	(30,011)	—	(27,508)
Total	$ 111,637	$ (46,657)	$ 127,497	$ (45,254)

(1) For 2020, the actuarial loss impacting the pension benefit obligation was primarily due to lower discount rates at the end of 2020 compared to the end of 2019. The gain impacting the postretirement plan was mainly due to a previously assumed inflation adjustment to Health Reimbursement Accounts ("HRAs") that is not to be provided in 2021, as well as favorable claims experience. The gain was partially offset by lower discount rates. For 2019, the actuarial loss impacting the pension benefit obligation was primarily due to lower discount rates at the end of 2019 compared to the end of 2018. The gain impacting the postretirement plan was mainly due to a lower assumption of claims and HRA stipends to be paid to beneficiaries, and favorable claims experience due to lower enrollment. The gain was partially offset by lower discount rates.

Our benefit obligations are determined by discounting each future year's expected benefit cash flow using the corresponding spot rates 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 (starting in 2020, we include bonds that are callable at par within 6 months of maturity, where the time to maturity is 10 years or greater), sinkable and puttable as well as those for which the quoted yield-to-maturity is zero. For bonds in this universe that have a yield higher than the regression mean yield curve for the full universe, 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 smoothed continuously along its entire length and represents an unbiased average of the observed market data.

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") published mortality tables for private retirement plans ("Pri-2012") and a mortality improvement scale in each of 2019 ("MP-2019") and 2020 ("MP-2020"). The most significant element of MP-2020 is an update to the long-term mortality improvement assumption bringing it closer to the assumption that we had previously used for our December 31, 2019 valuation based on our actuary's mortality scales. Accordingly, our December 31, 2020 valuation is based on Pri-2012 and MP-2019, 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, as discussed below.

Plan Assets. The investment policy of the plan includes target allocation percentages of approximately 49% for investments in equity securities (29% U.S. equities and 20% 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 long duration bond fund, 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 50 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, 2019		As of December 31, 2020	
	Target Allocation	Actual Allocation	Target Allocation	Actual Allocation
Equity securities	49 %	48 %	49 %	48 %
Debt securities	36 %	34 %	36 %	35 %
Other securities	15 %	18 %	15 %	17 %
Total	100 %	100 %	100 %	100 %

The fair values of our pension plan assets by asset category were as follows (in thousands):

	Fair Value Measurements at December 31, 2019	Level 1	Level 2	Level 3
Equity Securities				
U.S. Large-Cap[1]	$ 75,380	$ 75,380	$ —	$ —
U.S. Small/Mid-Cap[2]	19,566	19,566	—	—
World Equity Ex-U.S.[3]	65,882	65,882	—	—
Fixed Income Securities				
Long Duration Bonds[4]	95,327	95,327	—	—
High Yield Bonds[5]	9,610	9,610	—	—
Emerging Market Fixed Income (Non-U.S.)[6]	9,720	9,720	—	—
Other Securities		$ 275,485	$ —	$ —
Hedge Funds[7]	18,803			
Core Property Fund[8]	40,205			
Income earned but not yet received	328			
Total	$ 334,821			

	Fair Value Measurements at December 31, 2020	Level 1	Level 2	Level 3
Equity Securities				
U.S. Large-Cap[1]	$ 79,619	$ 79,619	$ —	$ —
U.S. Small/Mid-Cap[2]	20,569	20,569	—	—
World Equity Ex-U.S.[3]	69,736	69,736	—	—
Fixed Income Securities				
Long Duration Bonds[4]	103,827	103,827	—	—
High Yield Bonds[5]	10,352	10,352	—	—
Emerging Market Fixed Income (Non-U.S.)[6]	10,376	10,376	—	—
Other Securities		$ 294,479	**$ —**	**$ —**
Hedge Funds[7]	20,263			
Core Property Fund[8]	41,036			
Cash and income earned but not yet received	297			
Total	$ 356,075			

(1) U.S. Large-Cap Equity includes investments in funds that invest 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) U.S. Small/Mid-Cap includes investments in funds that (1) invest primarily in U.S. small- and mid-cap stocks with market capitalization ranges similar to those found in the FTSE Russell 2500 Index, or (2) aim to produce investment results that correspond to the performance of the FTSE/Russell Small Cap Completeness Index.

(3) World Equity Ex-U.S. includes an investment in a fund that invests primarily in common stocks and other equity securities whose issuers comprise a broad range of capitalizations and that are located outside of the U.S. The fund invests primarily in developed countries but may also invest in emerging markets.

(4) Long Duration Bonds includes an investment in a fund that invests primarily in long-duration government and corporate fixed income securities and uses derivative instruments (including interest rate swaps and U.S. Treasury futures contracts) for the purpose of managing the overall duration and yield curve exposure of the fund's portfolio.

(5) High Yield Bonds includes an investment in a fund that 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 Fixed Income (Non-U.S.) includes an investment in a fund that seeks to maximize return by 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 Funds includes an investment in a collective trust fund that 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. The fund has semi-annual redemptions in June and December with a pre-notification period of 95 days, and a two year lock-up on all purchases which have expired.

(8) The Core Property Fund is a collective trust fund 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. The fund has quarterly redemptions with a pre-notification period of 95 days, and no lock-up period.

Our plan assets are measured at fair value. ASC 820 prioritizes the inputs used in valuation techniques including Level 1, Level 2 and Level 3 (see Note 1(d)—Background and Summary of 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 as Level 1 within 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 income included the following components (in thousands):

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Interest cost	$ 14,428	$ 15,390	$ 11,850
Expected return on plan assets	(24,482)	(23,490)	(23,242)
Amortization of unrecognized net loss	5,307	4,221	6,399
Total income	$ (4,747)	$ (3,879)	$ (4,993)

We had accrued benefit costs at December 31, 2019 and 2020 of $88.7 million and $95.9 million, respectively, related to the pension benefits, of which $0.6 million and $0.7 million were recorded within other current liabilities for the years ended December 31, 2019 and 2020, respectively, and $88.1 million and $95.2 million were recorded in other long-term liabilities, respectively.

Net periodic other postretirement benefit costs (income) included the following components (in thousands):

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Interest cost	$ 2,314	$ 1,532	$ 1,064
Amortization of prior service credit	(854)	(2,544)	(2,545)
Amortization of unrecognized net gain	(630)	(1,229)	(1,220)
Total costs (income)	$ 830	$ (2,241)	$ (2,701)

We had accrued benefit costs at December 31, 2019 and 2020 related to the other postretirement benefits of $39.9 million and $36.8 million, respectively, of which $2.9 million and $2.6 million were recorded in other current liabilities, respectively, and $37.0 million and $34.2 million were recorded in other long-term liabilities, respectively.

Depending on our actual future health care claims, our actual costs may vary significantly from those projected above. As of December 31, 2019 and 2020, the assumed health care cost trend rates for retirees who are not eligible for Medicare were 6.0% and 5.7%, respectively. These rates are expected to decrease annually to an ultimate rate of 4.5% by December 31, 2038.

Effective January 1, 2019, Medicare eligible retirees and spouses receive an annual stipend in the form of a contribution to a HRA to be used as a reimbursement for qualified health care costs. Therefore, the value of the benefits provided to these participants is not affected by the assumed health care cost trend rate. While the terms of the plan do not guarantee increases to the stipend, the Company intends to evaluate the stipend annually. When valuing the benefit obligation as of December 31, 2020, we assumed no increase to the subsidy in fiscal year 2021 and 3.0% annual increases to the subsidy beginning in fiscal year 2022. When valuing the benefit obligation as of December 31, 2019, we assumed no increase to the subsidy in fiscal year 2020 and 3.0% annual increases beginning in fiscal year 2021.

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
2021	$ 42,185	$ 2,605
2022	28,969	2,609
2023	28,509	2,546
2024	27,146	2,492
2025	26,457	2,411
2026 to 2030	123,572	11,029
Total	$ 276,838	$ 23,692

(b) Other Retirement Plans

We maintain a defined contribution retirement plan, 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 this plan of $7.9 million, $8.1 million and $8.9 million for the years ended December 31, 2018, 2019 and 2020, 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 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):

	As of December 31, 2019	As of December 31, 2020
Satellites and launch vehicles	$ 10,407,690	$ 10,500,021
Information systems and ground segment	968,482	1,062,216
Buildings and other	280,109	322,093
Total cost	11,656,281	11,884,330
Less: accumulated depreciation	(6,954,218)	(7,126,453)
Total	$ 4,702,063	$ 4,757,877

Satellites and other property and equipment are stated at historical cost, except for satellites that have been impaired. Satellites and other property and equipment acquired as part of an acquisition are stated based on their fair value at the date of acquisition.

During the first quarter of 2020, the price of our common shares and trading values of our debt securities experienced sustained reductions. We also witnessed certain declines in financial performance as compared to previously prepared internal budget and forecast projections. Among the impacts of the COVID-19 pandemic were a reduction of revenue and a decreased likelihood of collection from certain mobility customers. Based on our examination of these and other qualitative factors, we concluded that further testing of satellites and other property and equipment was required. During the fourth quarter of 2020, due to additional declines in forecast projections, we concluded that further testing of satellites and other property and equipment was required.

The Company evaluated the assets for potential impairment using internal projections of undiscounted cash flows expected to result from the use and eventual disposal of the assets. If the carrying amount of the assets exceeds the undiscounted cash flows expected to result from its use, an impairment expense is recognized for the amount by which the carrying amount of the asset group exceeds its fair value. The impairment expense cannot exceed the carrying amount of the long-lived assets (unless the carrying amount is not being reduced below fair value for any individual long-lived asset that is determinable without undue cost and effort).

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 estimated future cash flows or other assumptions could change our estimated fair values and result in future impairments. The conclusion of both of our analyses was that the undiscounted cash flows of the asset group were greater than its carrying value, resulting in no impairment.

Satellites and other property and equipment, net of accumulated depreciation as of December 31, 2019 and 2020 included construction-in-progress of $191.5 million and $768.6 million, respectively. These amounts relate primarily to satellites under construction and related launch services. As of December 31, 2020, we incurred C-band clearing related costs and expenses of $505.3 million, of which $471.7 million is capitalized. Of this capitalized amount, $432.5 million and $39.2 million is capitalized as satellites and other property and equipment, net of accumulated depreciation, and other current assets, respectively, in the consolidated balance sheets. An estimated $466.9 million of the capitalized costs is expected to be reimbursable under the FCC Final Order.

Interest costs of $31.5 million and $35.0 million were capitalized for the years ended December 31, 2019 and 2020, respectively. Additionally, depreciation expense was $649.1 million, $623.3 million and $618.5 million for the years ended December 31, 2018, 2019 and 2020, respectively.

We have entered into launch contracts for the launch of both specified and unspecified future satellites. Each of these launch contracts 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.

During the second quarter of 2020, the Company deemed it unlikely that it will be able to utilize certain satellite and launch vehicle deposits prior to their respective expiration dates. As a result, the Company recorded a non-cash impairment charge of $34.0 million related to the impairment of the carrying values of the deposits, which is included within impairment of non-amortizable intangible and other assets in the consolidated statements of operations.

(b) Satellite Launches

Galaxy 30, the first satellite in Intelsat's Galaxy fleet refresh plan, was successfully launched on August 15, 2020. Galaxy 30 replaced Galaxy 14 at 125ºW serving media customers in the North America region. Galaxy 30 is the first four-frequency Intelsat

satellite with C-, Ku-, Ka- and L-band capabilities. In addition, Galaxy 30 offers broadband, mobility and network services to mobile network, enterprise and government customers in the North America region. The satellite will also play an important role in the Company's U.S. C-band spectrum transition plan. Galaxy 30 entered into service in February 2021.

Intelsat 39 was successfully launched on August 6, 2019. Intelsat 39 replaced Intelsat 902 at the 62ºE location and delivers connectivity services in both the C- and Ku-bands to mobile network operators, enterprises and government customers, as well as aeronautical and maritime mobility service providers operating in the Europe, Africa, Middle East and Asia-Pacific regions. Intelsat 39 entered into service in October 2019.

(c) Significant Anomalies

In April 2019, the Intelsat 29e satellite (in service since 2016) experienced an anomaly that resulted in a total loss of the satellite. In accordance with our existing satellite anomaly contingency plans, we restored service for most Intelsat 29e customers on other satellites in our network, as well as on third-party satellites. We recorded a non-cash impairment charge of $381.6 million in the second quarter of 2019, of which $377.9 million related to the write off of the carrying value of the satellite and associated deferred performance incentive obligations and $3.7 million related to prepaid regulatory fees.

A Failure Review Board comprised of the satellite's manufacturer, Boeing Satellite Systems, Inc., the Company and external independent experts was convened to complete a comprehensive analysis of the cause of the anomaly. The board concluded that the anomaly was caused by either a harness flaw in conjunction with an electrostatic discharge event related to solar weather activity, or the impact of a micrometeoroid.

(d) 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.

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"), which are discussed in further detail below, including our analyses of the primary beneficiary determination as required under ASC 810, *Consolidation* ("ASC 810"). We also own noncontrolling investments in equity securities and loan receivables as discussed further below.

(a) Horizons Holdings

Horizons Holdings is a joint venture with JSAT International Inc. ("JSAT") that consists of two investments: Horizons-1 Satellite LLC and Horizons-2 Satellite LLC. 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 in return utilize capacity from the joint venture.

We have determined that this joint venture meets the criteria of a VIE under 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 ASC 810, as the primary beneficiary, we consolidate Horizons Holdings within our consolidated financial statements. Total assets of Horizons Holdings were $22.2 million and $14.2 million as of December 31, 2019 and 2020, respectively. Total liabilities were nominal as of December 31, 2019 and 2020.

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 $1.6 million and $1.8 million as of December 31, 2019 and 2020, respectively.

(b) Horizons-3 Satellite LLC

On November 4, 2015, we entered into an additional joint venture agreement with JSAT. The joint venture, Horizons 3, was formed for the purpose of developing, launching, managing, operating and owning a high-performance satellite located at the 169ºE 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 3e 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. Amounts payable to JSAT related to the revenue sharing agreement, net of applicable fees and commissions, from the Horizons 3e satellite were $3.3 million and $5.0 million as of December 31, 2019 and 2020, respectively.

We have determined that this joint venture meets the criteria of a VIE under ASC 810, however 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. The investment balance, which is equivalent to our maximum exposure to loss, was $110.2 million and $103.8 million as of December 31, 2019 and 2020, respectively. The investment balance exceeded our equity in the net assets of Horizons 3 by $11.6 million and $10.9 million as of December 31, 2019 and 2020, respectively. This basis difference represents the capitalized interest that we incurred in relation to financing our investment and we recognize it as a reduction of our equity in earnings of Horizons 3 on a straight-line basis over the life of the satellite. We recognized a nominal amount of equity in earnings or losses of Horizons 3 in other income (expense), net for each of the years ended December 31, 2018, 2019 and 2020.

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 $41.2 million, $5.0 million and $2.7 million for the years ended December 31, 2018, 2019 and 2020, respectively. We received distributions of $5.0 million and $9.0 million for the years ended December 31, 2019 and 2020, respectively, with no comparative amounts in 2018. The Company utilizes the cumulative earnings approach to determine whether distributions received from equity method investees are returns on investment or returns of investment. 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 interest 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 holds the FCC license required for the joint venture's operations.

The Horizons 3e satellite entered into service in January 2019. The Company purchases satellite capacity and related services from the Horizons 3 joint venture, and then sells that capacity to its customers. We incurred direct costs of revenue related to these purchases of $19.9 million and $19.0 million for the years ended December 31, 2019 and 2020, respectively, with no comparative amounts in 2018. The Company also sells managed ground network services to the Horizons 3 joint venture and provides program management services for a fee. We recorded an offset to direct costs of revenue of $5.6 million and $7.0 million related to the provision of these services for the years ended December 31, 2019 and 2020, respectively, with no comparative amounts in 2018. On the consolidated balance sheet as of December 31, 2019, $0.5 million due from Horizons 3 was included in receivables with no comparable amount in 2020, and $1.7 million and $1.5 million due to Horizons 3 was included in accounts payable and accrued liabilities as of December 31, 2019 and 2020, respectively.

(c) Investments in Equity Securities

The Company holds noncontrolling equity investments in six separate privately held companies, including investments in equity securities without readily determinable fair values and common stock warrants.

In accordance with ASC 321, *Investments—Equity Securities,* we use the measurement alternative to measure the fair value of our investments in equity securities without readily determinable fair values. Accordingly, these investments are measured at cost, less any impairment, and are adjusted for changes in fair value resulting from observable transactions for identical or similar investments of the same issuer. These investments are recorded in other assets in our consolidated balance sheets and had a total carrying value of $27.2 million and $31.9 million as of December 31, 2019 and 2020, respectively. We recognized impairment losses related to these investments of $36.8 million and $0.1 million for the years ended December 31, 2019 and 2020, respectively, with no comparative amounts in 2018. We recognized an increase in fair value relating to investments of $1.7 million for the year ended December 31, 2019, with no comparative amounts in 2020 or 2018. These changes, which are recognized in other income (expense), net in our consolidated statements of operations, were determined using Level 3 inputs including third-party valuations, private transactions and internal projections of future profitability.

We measure our stock warrants at fair value (See Note 7—Fair Value Measurements and Note 13—Derivative Instruments and Hedging Activities for additional information). The warrants are recorded in other assets in our consolidated balance sheets and had a cumulative fair value of $3.2 million as of both of December 31, 2019 and 2020.

(d) Loan Receivables

The Company has loan receivables from three privately held companies that it is holding for long-term investment. These loan receivables are reported at amortized cost, net of the allowance for credit losses. Amortized cost is the outstanding principal, adjusted for unamortized discounts and deferred transaction costs. The Company recognizes interest income on loan receivables using the effective-interest method applied on a loan-by-loan basis. Direct costs associated with originating loans are offset against any related fees received and the balance, along with any premium or discount, is deferred and amortized as an adjustment to interest income over the term of the related loan receivable using the effective interest method.

Loan receivables are recorded in other assets in our consolidated balance sheets at an amortized cost basis, net of allowance of credit losses, of $70.4 million and $71.2 million as of December 31, 2019 and 2020, respectively. These amounts were net of an allowance for loan losses of $4.6 million as of December 31, 2019 with no comparative amount as of December 31, 2020, unamortized discount of $3.0 million and $0.7 million as of December 31, 2019 and 2020, respectively, and unamortized deferred transaction costs of $1.0 million and $0.2 million as of December 31, 2019 and 2020, respectively. As of December 31, 2019 and 2020, $1.5 million and $1.9 million, respectively, of accrued interest related to our loan receivables was recorded in prepaid expenses and other current assets in our consolidated balance sheets. We recognized interest income related to our loan receivables of $1.5 million and $3.9 million for the years ended December 31, 2019 and 2020, respectively, with no comparative amounts in 2018.

A loan is determined to be impaired and placed on non-accrual status when, in management's judgment based on current information and events, it is probable that the Company will be unable to collect all amounts due under the contractual terms of the applicable loan agreement. We recognized impairment losses related to loan receivables of $4.6 million and $0.6 million for the years ended December 31, 2019 and 2020, respectively, with no comparable amounts in 2018.

The fair value of loan receivables is evaluated on a loan-by-loan basis, and is determined based on assessments of discounted cash flows that are considered probable of collection. We consider these inputs to be Level 3 within the fair value hierarchy. The cumulative fair value of our loan receivables as of December 31, 2019 and 2020 was $69.3 million and $72.9 million, respectively.

Note 11—Goodwill and Other Intangible Assets

We account for goodwill and other non-amortizable intangible assets in accordance with ASC 350 and have deemed these assets to have indefinite lives. Therefore, these assets 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.

During 2020, the price of our common shares and trading values of our debt securities experienced sustained reductions. We also witnessed certain declines in financial performance as compared to previously prepared internal budget and forecast projections. Among the impacts of the COVID-19 pandemic were a reduction of revenue and a decreased likelihood of collection from certain mobility customers. Based on our examination of these and other qualitative factors, we concluded that further testing of goodwill and other non-amortizable and amortizable intangible assets was required during the first and fourth quarters of 2020.

Determining the fair value of a reporting unit and other intangible assets often involves the use of estimates and assumptions that require significant judgment, and that could have a substantial impact on whether or not an impairment charge is recognized and the magnitude of any such charge. Estimates of fair value are primarily determined using discounted cash flows and market transactions. These estimates involve making significant estimates and assumptions, including projected future cash flows (including timing), discount rates reflecting the risks inherent in future cash flows, perpetual growth rates, and the determination of appropriate market comparisons.

(a) Goodwill

For the analysis of goodwill, we applied ASU 2017-04, which is further described in Note 1—Background and Summary of Significant Accounting Policies. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. After recognizing the impairment loss, the loss establishes a new corresponding basis in the goodwill. Subsequent reversals of goodwill impairment losses are not permitted under applicable accounting standards.

In the first quarter of 2020, Intelsat had only one reporting unit for purposes of the analysis of goodwill, and accordingly, the analysis was undertaken at the enterprise level. As a result of the Gogo Transaction, Intelsat had two reporting units for purposes of the analysis of goodwill as of December 31, 2020: Legacy Intelsat and the Gogo CA business. For the Gogo CA reporting unit, we used a qualitative approach to identify and consider the significance of relevant key factors, events, and circumstances that affect the fair value of the reporting unit. 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. Based on our examination of the qualitative factors as of December 31, 2020, we concluded that there was not a likelihood of more than 50% that the fair value of the Gogo CA reporting unit was less than its carrying value; therefore, no further testing of goodwill was required.

For the Legacy Intelsat reporting unit, we performed a quantitative assessment in the first and fourth quarters of 2020. We determined the estimated fair value of the reporting unit using a discounted cash flow analysis, along with independent source data related to comparative market multiples and, when available, recent transactions, each of which is considered a Level 3 input within the fair value hierarchy under ASC 820. The discounted cash flows were derived from a 6-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, along with the C-band spectrum Acceleration Payments as provided under the FCC Final Order, which we expect to receive subject to the satisfaction of certain deadlines and other conditions set forth therein, and the discount rate applied to those cash flows. The conclusion of our analyses in the first and fourth quarters of 2020 was that the fair value of the Legacy Intelsat reporting unit was greater than its carrying value, resulting in no impairment of goodwill. In the fourth quarter analysis, the fair value of the Legacy Intelsat reporting unit was greater than its carrying value by 0.9%. A change in estimated future cash flows or other assumptions could change our estimated fair values and result in future impairments.

As a result of the Gogo Transaction, we recognized goodwill of $77.6 million. See Note 3—Acquisition of Gogo Commercial Aviation for additional discussion.

The carrying amounts of goodwill consisted of the following (in thousands):

	As of December 31, 2019	As of December 31, 2020
Goodwill	$ 6,780,827	$ 6,858,447
Accumulated impairment losses	(4,160,200)	(4,160,200)
Net carrying amount	$ 2,620,627	$ 2,698,247

(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 International Telecommunication Union, 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.

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. Under the build-up approach, the amount a reasonable investor would be willing to pay for the right to operate a satellite business using orbital locations is calculated by first estimating the cash flows that typical market participants might assume could be available from the right to operate satellites using the subject location in a similar market. It is assumed that rather than acquiring such a business as a going concern, the buyer would hypothetically start with the right to operate satellites at orbital locations and build a new business with similar attributes from the beginning. Thus, the buyer is assumed to incur the start-up costs and losses typically associated with the going concern value and pay for all other tangible and intangible assets.

The key assumptions used in estimating the fair values of our rights to operate at our orbital locations included the following: (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.

We completed our analysis of the estimated fair value of our rights to operate at certain orbital locations in connection with the analysis of goodwill described above in the first quarter of 2020 and concluded that the fair value was greater than the carrying value, resulting in no impairment. Due to additional declines in forecast projections, during the analysis in the fourth quarter of 2020, we

determined that the fair value was less than the carrying value, resulting in an impairment charge of $137.7 million, which is included within impairment of non-amortizable intangible and other assets in the consolidated statements of operations.

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, 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 ASC 820.

The key assumptions used in our model to estimate the fair value of the Intelsat trade name included forecasted revenues, the royalty rate, the tax rate and the discount rate. We completed our analysis of the estimated fair value of the Intelsat trade name in connection with the analysis of goodwill described above in the first and fourth quarters of 2020, resulting in impairments of our trade name intangible asset of $12.2 million and $8.0 million, respectively, which is included within impairment of non-amortizable intangible and other assets in the consolidated statements of operations.

The carrying amounts of acquired intangible assets not subject to amortization consisted of the following (in thousands):

	As of December 31, 2019	As of December 31, 2020
Orbital locations	$ 2,387,700	$ 2,250,000
Trade name	65,200	45,000
Total non-amortizable intangible assets	$ 2,452,900	$ 2,295,000

Other Intangible Assets. The Company evaluated acquired intangible assets subject to amortization for potential impairment using internal projections of undiscounted cash flows expected to result from the use and eventual disposal of the assets. 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 estimated future cash flows or other assumptions could change our estimated fair values and result in future impairments. The conclusion of our analysis was that the undiscounted cash flows of the asset group were greater than its carrying value, resulting in no impairment.

The following table sets forth the components of identifiable intangible assets acquired as part of the Gogo Transaction and their weighted average amortization periods as of the date of acquisition, (in thousands):

	Estimated Fair Value	Weighted Average Amortization Period (in years)
Software	$ 45,464	3.6
Trade name	1,000	2.0
Total	$ 46,464	

The carrying amount and accumulated amortization of acquired intangible assets subject to amortization consisted of the following (in thousands):

	As of December 31, 2019			As of December 31, 2020		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Backlog and other	$ 743,760	$ (713,205)	$ 30,555	$ 744,760	$ (722,697)	$ 22,063
Customer relationships	534,030	(287,833)	246,197	534,030	(309,486)	224,544
Software	—	—	—	45,808	(1,846)	43,962
Total	$ 1,277,790	$ (1,001,038)	$ 276,752	$ 1,324,598	$ (1,034,029)	$ 290,569

Intangible assets are amortized based on the expected pattern of consumption. Amortization expense was $38.5 million, $34.4 million and $33.0 million for the years ended December 31, 2018, 2019 and 2020, respectively.

Scheduled amortization charges for intangible assets over the next five years are as follows (in thousands):

Year	Amount
2021	$ 41,193
2022	36,199
2023	28,476
2024	22,612
2025	15,945

Our policy is to expense all costs incurred to renew or extend the terms of our intangible assets.

Note 12—Debt

As discussed in Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters, the filing of the Chapter 11 Cases constituted an event of default that accelerated substantially all of our obligations under the documents governing the prepetition existing indebtedness of Intelsat S.A., Intelsat Luxembourg, Intelsat Connect and Intelsat Jackson. As such, we have reclassified all such debt obligations, other than debt subject to compromise, to current maturities of long-term debt on our consolidated balance sheet as of December 31, 2020. Any efforts to enforce payment obligations related to the acceleration of our debt have been automatically stayed as a result of the filing of the Chapter 11 Cases, and the creditors' rights of enforcement are subject to the applicable provisions of the Bankruptcy Code. While the Chapter 11 Cases are pending, the Debtors do not anticipate making interest payments due under their respective unsecured debt instruments; however, the Debtors expect to make monthly interest payments on their senior secured debt instruments pursuant to the adequate protection requirements under the DIP Order.

The carrying values and fair values of our notes payable and long-term debt were as follows (in thousands):

	As of December 31, 2019		As of December 31, 2020	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Intelsat S.A.:				
4.5% Convertible Senior Notes due June 2025 [1]	$ 402,500	$ 265,231	$ 402,500	$ 130,813
Unamortized prepaid debt issuance costs and discount on 4.5% Convertible Senior Notes	(133,310)	—	—	—
Total Intelsat S.A. obligations	269,190	265,231	402,500	130,813
Intelsat Luxembourg:				
7.75% Senior Notes due June 2021 [1]	421,219	336,975	421,219	14,743
Unamortized prepaid debt issuance costs on 7.75% Senior Notes	(1,257)	—	—	—
8.125% Senior Notes due June 2023 [1]	1,000,000	590,000	1,000,000	130,000
Unamortized prepaid debt issuance costs on 8.125% Senior Notes	(5,838)	—	—	—
12.5% Senior Notes due November 2024 [1]	403,350	277,152	403,350	42,352
Unamortized prepaid debt issuance costs and discount on 12.5% Senior Notes	(184,344)	—	—	—
Total Intelsat Luxembourg obligations	1,633,130	1,204,127	1,824,569	187,095
Intelsat Connect Finance:				
9.5% Senior Notes due February 2023 [1]	1,250,000	865,625	1,250,000	334,375
Unamortized prepaid debt issuance costs and discount on 9.5% Senior Notes	(27,741)	—	—	—
Total Intelsat Connect Finance obligations	1,222,259	865,625	1,250,000	334,375
Intelsat Jackson:				
9.5% Senior Secured Notes due September 2022	490,000	562,275	490,000	543,900
Unamortized prepaid debt issuance costs and discount on 9.5% Senior Secured Notes	(11,204)	—	(7,495)	—
8% Senior Secured Notes due February 2024	1,349,678	1,380,046	1,349,678	1,373,297
Unamortized prepaid debt issuance costs and premium on 8% Senior Secured Notes	(3,903)	—	(3,072)	—
5.5% Senior Notes due August 2023 [1]	1,985,000	1,687,250	1,985,000	1,349,800
Unamortized prepaid debt issuance costs on 5.5% Senior Notes	(8,723)	—	—	—
9.75% Senior Notes due July 2025 [1]	1,885,000	1,729,488	1,885,000	1,347,775
Unamortized prepaid debt issuance costs on 9.75% Senior Notes	(20,487)	—	—	—
8.5% Senior Notes due October 2024 [1]	2,950,000	2,669,750	2,950,000	2,079,750
Unamortized prepaid debt issuance costs and premium on 8.5% Senior Notes	(12,916)	—	—	—
Senior Secured Credit Facilities due November 2023	2,000,000	1,985,000	2,000,000	2,025,000

Unamortized prepaid debt issuance costs and discount on Senior Secured Credit Facilities	(22,149)	—	(16,955)	—
Senior Secured Credit Facilities due January 2024	395,000	398,950	395,000	400,925
Unamortized prepaid debt issuance costs and discount on Senior Secured Credit Facilities	(1,600)	—	(1,238)	—
6.625% Senior Secured Credit Facilities due January 2024	700,000	712,250	700,000	714,000
Unamortized prepaid debt issuance costs and discount on Senior Secured Credit Facilities	(2,832)	—	(2,194)	—
Super Priority Secured DIP Credit Facilities due July 2021	—	—	1,000,000	1,011,250
Total Intelsat Jackson obligations	11,670,864	11,125,009	12,723,724	10,845,697
Eliminations:				
8.125% Senior Notes of Intelsat Luxembourg due June 2023 owned by Intelsat Jackson[1]	(111,663)	(65,881)	(111,663)	(14,517)
Unamortized prepaid debt issuance costs on 8.125% Senior Notes	652	—	—	—
12.5% Senior Notes of Intelsat Luxembourg due November 2024 owned by Intelsat Connect Finance, Intelsat Jackson and Intelsat Envision[1]	(403,245)	(277,080)	(403,245)	(42,341)
Unamortized prepaid debt issuance costs and discount on 12.5% Senior Notes	184,296	—	—	—
Total eliminations:	(329,960)	(342,961)	(514,908)	(56,858)
Total Intelsat S.A. debt	14,465,483	13,117,031	15,685,885	11,441,122
Less: current maturities of long-term debt	—	—	5,903,724	6,068,372
Less: debt included in liabilities subject to compromise	—	—	9,782,161	5,372,750
Total Intelsat S.A. long-term debt	$ 14,465,483	$ 13,117,031	$ —	$ —

(1) In connection with the Chapter 11 Cases, these balances have been reclassified as liabilities subject to compromise in our consolidated balance sheet as of December 31, 2020. As of April 15, 2020, the Company ceased making principal and interest payments, and as of May 13, 2020 ceased accruing interest expense in relation to this long-term debt that was reclassified as liabilities subject to compromise. Further, $197.0 million of debt discount, premium and issuance costs related to these notes was included within reorganization items in the consolidated statements of operations for the year ended December 31, 2020.

The fair value for publicly traded instruments is determined using quoted market prices, and the fair value for non-publicly traded instruments 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 ASC 820, except our senior secured credit facilities and our 2025 Convertible Notes, the inputs for which are classified as Level 2, and Intelsat Luxembourg's 8.125% Senior Notes due 2023 (the "2023 Luxembourg Notes") and 12.5% Senior Notes due 2024 (the "2024 Luxembourg Notes"), the inputs for which are classified as Level 3. While the Company's Chapter 11 proceedings remain ongoing, trading and fair value pricing may be more volatile and limited.

Intelsat Jackson Superpriority Secured Debtor-in-Possession Term Loan Facility

On June 17, 2020 (the "Closing Date"), the DIP Debtors and DIP Lenders entered into the DIP Credit Agreement, a non-amortizing multiple draw superpriority secured debtor-in-possession term loan facility, in an aggregate principal amount of $1.0 billion, on the terms and conditions set forth therein. See Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters.

Intelsat Jackson borrowed $500.0 million of term loans under the DIP Facility on the Closing Date. Under the DIP Facility, Intelsat Jackson may, at its sole discretion, make incremental draws of the lesser of $250.0 million and the remaining available commitments of the DIP Lenders. Intelsat Jackson made two additional draws of $250.0 million each on November 27, 2020 and December 14, 2020, bringing the total aggregate principal amount outstanding under the DIP Facility to $1.0 billion as of December 31, 2020. Drawn amounts under the DIP Facility bear interest at either (i) 4.5% per annum plus a base rate of the highest of (a) the Federal Funds Effective Rate plus ½ of 1.0%, (b) the Prime Rate as in effect on such day and (c) the London Inter-Bank Offered Rate ("LIBOR Rate") for a one-month interest period on such day (or if such day is not a business day, the immediately preceding business day) plus 1.0% or (ii) 5.5% plus the LIBOR Rate. For purposes of the DIP Facility, the LIBOR Rate has an effective floor rate of 1.0%. Undrawn amounts under the DIP Facility shall be subject to a ticking fee of 3.6% of the amount of commitments of the DIP Lenders from the entry of the DIP Order until such commitments terminate, which ticking fee shall be payable on the last day of each fiscal quarter prior to the date such commitments terminate and on the date of such termination. If an event of default under the DIP Facility occurs, the overdue amounts under the DIP Facility would bear interest at an additional 2.0% per annum above the interest rate otherwise applicable.

The proceeds of the DIP Facility may be used, among other things, to pay for (i) working capital needs of the DIP Debtors in the ordinary course of business, (ii) potential C-band relocation costs, (iii) investment and other general corporate purposes, and (iv) the

costs and expenses of administering the Chapter 11 Cases. The maturity date of the DIP Facility is July 13, 2021, subject to certain extensions pursuant to the terms of the DIP Credit Agreement.

The DIP Credit Agreement includes customary negative covenants for debtor-in-possession loan agreements of this type, including covenants limiting the Company's and its subsidiaries' ability to, among other things, incur additional indebtedness, create liens on assets, make investments, loans or advances, engage in mergers, consolidations, sales of assets and acquisitions, pay dividends and distributions and make payments in respect of junior or prepetition indebtedness, in each case subject to customary exceptions for debtor-in-possession loan agreements of this type.

The DIP Credit Agreement also includes certain customary representations and warranties, affirmative covenants and events of default, including, but not limited to, payment defaults, breaches of representations and warranties, covenant defaults, certain events under the Employee Retirement Income Security Act of 1974, as amended, and change of control. Certain bankruptcy-related events are also events of default, including, but not limited to, the dismissal by the Bankruptcy Court of any of the Chapter 11 Cases, the conversion of any of the Chapter 11 Cases to a case under Chapter 7 of the Bankruptcy Code and certain other events related to the impairment of the DIP Lenders' rights or liens granted under the DIP Credit Agreement.

On August 24, 2020, the DIP Debtors and DIP Lenders entered into DIP Amendment No. 1 to the DIP Credit Agreement, and on November 25, 2020, the DIP Debtors and DIP Lenders entered into DIP Amendment No. 2 to the DIP Credit Agreement, each in connection with the Gogo Transaction (see Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters for additional information).

The foregoing descriptions of the DIP Credit Agreement, DIP Amendment No. 1, and DIP Amendment No. 2 do not purport to be complete and are qualified in their entirety by reference to the full text of the DIP Credit Agreement, DIP Amendment No. 1 and DIP Amendment No. 2, as applicable.

2019 Debt Transaction

June 2019 Intelsat Jackson Senior Notes Add-On Offering

In June 2019, Intelsat Jackson completed an add-on offering of $400.0 million aggregate principal amount of its 9.75% Senior Notes due 2025 ("2025 Jackson Notes"). The notes are guaranteed by all of Intelsat Jackson's subsidiaries that guarantee its obligations under the Intelsat Jackson Secured Credit Agreement and senior notes.

Description of Indebtedness

(a) Intelsat S.A.

4.5% Convertible Senior Notes due 2025

In June 2018, Intelsat S.A. completed an offering of 402.5 million aggregate principal amount of the 2025 Convertible Notes. The above principal amount is outstanding as of December 31, 2020. The 2025 Convertible Notes bear interest at 4.5% annually and mature in June 2025 unless earlier repurchased, converted or redeemed, as set forth in the 2025 Indenture. The 2025 Convertible Notes are guaranteed by a direct subsidiary of Intelsat Luxembourg, Intelsat Envision.

Interest is payable on the 2025 Convertible Notes semi-annually on June 15 and December 15.

The 2025 Convertible Notes are senior unsecured obligations of Intelsat S.A.

(b) Intelsat Luxembourg

7.75% Senior Notes due 2021

Intelsat Luxembourg had $421.2 million in aggregate principal amount of its 7.75% Senior Notes due 2021 (the "2021 Luxembourg Notes") outstanding at December 31, 2020. The 2021 Luxembourg Notes bear interest at 7.75% annually and mature in June 2021.

Interest is payable on the 2021 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 2021 Luxembourg Notes are senior unsecured obligations of Intelsat Luxembourg and rank equally with Intelsat Luxembourg's other senior unsecured indebtedness.

8.125% Senior Notes due 2023

Intelsat Luxembourg had $1.0 billion in aggregate principal amount of its 2023 Luxembourg Notes outstanding at December 31, 2020. $111.7 million principal amount was held by Intelsat Jackson. The 2023 Luxembourg Notes bear interest at 8.125% annually and mature in June 2023.

Interest is payable on the 2023 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 2023 Luxembourg Notes are senior unsecured obligations of Intelsat Luxembourg and rank equally with Intelsat Luxembourg's other senior unsecured indebtedness.

12.5% Senior Notes due 2024

Intelsat Luxembourg had $403.4 million in aggregate principal amount of its 2024 Luxembourg Notes outstanding at December 31, 2020. $182.0 million principal amount was held by ICF, $220.6 million was held by Intelsat Jackson and $0.7 million was held by Intelsat Envision. The 2024 Luxembourg Notes bear interest at 12.5% annually and mature in November 2024.

Interest is payable on the 2024 Luxembourg Notes semi-annually on May 15 and November 15.

The 2024 Luxembourg Notes are senior unsecured obligations of Intelsat Luxembourg and rank equally with Intelsat Luxembourg's other senior unsecured indebtedness.

(c) Intelsat Connect Finance

9.5% Senior Notes due 2023

ICF had $1.3 billion in aggregate principal amount of its 9.5% Senior Notes due 2023 (the "2023 ICF Notes") outstanding at December 31, 2020. The 2023 ICF Notes bear interest at 9.5% annually and mature in February 2023. These notes are guaranteed by Intelsat Envision and Intelsat Luxembourg.

Interest is payable on the 2023 ICF Notes semi-annually on June 15 and December 15. Beginning as of August 15, 2020, ICF may redeem some or all of the notes at the applicable redemption prices set forth in the notes.

(d) Intelsat Jackson

9.5% Senior Secured Notes due 2022

Intelsat Jackson had $490.0 million in aggregate principal amount of its 9.5% Senior Secured Notes due 2022 (the "2022 Jackson Secured Notes") outstanding at December 31, 2020. The 2022 Jackson Secured Notes bear interest at 9.5% 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 under the indenture governing the notes. However, pursuant to the adequate protection requirements under the DIP Order, interest is payable on the 2022 Jackson Secured Notes on the 30th of each month.

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 its 8% Senior Secured Notes due 2024 (the "2024 Jackson Secured Notes") outstanding at December 31, 2020. 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 under the indenture governing the notes. However, pursuant to the adequate protection requirements under the DIP Order, interest is payable on the 2024 Jackson Secured Notes on the 30th of each month.

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.

5.5% Senior Notes due 2023

Intelsat Jackson had $2.0 billion in aggregate principal amount of its 5.5% Senior Notes due 2023 (the "2023 Jackson Notes") outstanding at December 31, 2020. The 2023 Jackson Notes bear interest at 5.5% annually and mature in August 2023. These notes are guaranteed by 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 the applicable redemption prices 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.

9.75% Senior Notes due 2025

Intelsat Jackson had $1.9 billion in aggregate principal amount of its 2025 Jackson Notes outstanding at December 31, 2020. The 2025 Jackson Notes bear interest at 9.75% annually and mature in July 2025. These notes are guaranteed by certain of Intelsat Jackson's subsidiaries.

Interest is payable on the 2025 Jackson Notes semi-annually on January 15 and July 15. Intelsat Jackson may redeem some or all of the 2025 Jackson Notes at any time prior to July 15, 2021 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 notes at the applicable redemption prices set forth in the notes.

The 2025 Jackson Notes are senior unsecured obligations of Intelsat Jackson and rank equally with Intelsat Jackson's other senior unsecured indebtedness.

8.5% Senior Unsecured Notes due 2024

Intelsat Jackson had $3.0 billion in aggregate principal amount of its 8.5% Senior Unsecured Notes due 2024 (the "2024 Jackson Senior Unsecured Notes") outstanding at December 31, 2020. The 2024 Jackson Senior Unsecured Notes bear interest at 8.5% annually and mature in October 2024. These notes are guaranteed by certain of Intelsat Jackson's subsidiaries.

Interest is payable on the 2024 Jackson Senior Unsecured Notes semi-annually on April 15 and October 15. Beginning as of October 15, 2020, Intelsat Jackson may redeem some or all of the 2024 Jackson Senior Unsecured Notes at the applicable redemption prices set forth in the notes.

The 2024 Jackson Senior Unsecured 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

Under Intelsat Jackson's senior secured credit agreement, dated as of January 12, 2011 (as amended, the "Intelsat Jackson Secured Credit Agreement"), as of December 31, 2020, Intelsat Jackson had (i) $2.0 billion in aggregate principal amount outstanding of term loans due November 27, 2023, that have an applicable interest rate margin of 3.75% per annum for LIBOR loans and 2.75% per annum for Alternate Base Rate ("ABR") loans (at Intelsat Jackson's election as applicable) (the "B-3 Tranche Term Loans"); (ii) $395.0 million in aggregate principal amount outstanding of incremental floating rate term loans due January 2, 2024, that have an applicable interest rate margin of 4.5% per annum for LIBOR loans and 3.5% per annum for ABR loans (at Intelsat Jackson's election as applicable) (the "B-4 Tranche Term Loans"); and $700.0 million in aggregate principal amount outstanding of incremental fixed rate term loans due January 2, 2024, that have an interest rate of 6.625% per annum (the "B-5 Tranche Term Loans"). In April 2020, the LIBOR loans under the Intelsat Jackson Secured Credit Agreement were converted to ABR loans. The Intelsat Jackson Secured Credit Agreement is guaranteed by ICF and certain of Intelsat Jackson's subsidiaries.

However, pursuant to the adequate protection requirements under the DIP Order, interest is payable on the B-3 Tranche Term Loans, B-4 Tranche Term Loans and B-5 Tranche Term Loans on the 30th of each month, plus an incremental 2.0% default rate pursuant to the DIP Order for each tranche of term loans.

Note 13—Derivative Instruments and Hedging Activities

Interest Rate Cap Contracts

As of December 31, 2019 and 2020, we held interest rate cap contracts with an aggregate notional value of $2.4 billion that matured in February 2021. These interest rate cap contracts, which were entered into in 2017 and amended in 2018, were designed to mitigate our risk of interest rate increases on the floating rate portion of our senior secured credit facilities (see Note 12— Debt). The contracts have not been designated for hedge accounting treatment in accordance with ASC 815, *Derivatives and Hedging* ("ASC 815"), and the changes in fair value of these instruments, net of payments received, are recognized in the consolidated statements of operations during the period of change. We received $9.8 million in settlement payments related to the interest rate cap contracts for the year ended December 31, 2019, with no comparable amounts for the year ended December 31, 2020.

Preferred Stock Warrant and Common Stock Warrant

During 2017, we were issued a warrant to purchase preferred shares of one of our investments. We concluded that the warrant is a free standing derivative in accordance with ASC 815. As of December 31, 2019 and 2020, the fair value of the preferred stock warrant was zero. During 2019, we were issued a warrant to purchase common shares of a separate investment. We concluded that the warrant is a free standing derivative in accordance with ASC 815.

The following table sets forth the fair value of our derivatives by category (in thousands):

Derivatives not designated as hedging instruments	Classification	As of December 31, 2019	As of December 31, 2020
Common stock warrant	Other assets	$ 3,239	$ 3,239
Interest rate cap contracts	Other assets	372	—
Total derivatives		$ 3,611	$ 3,239

The following table sets forth the effect of the derivative instruments in our consolidated statements of operations (in thousands):

Derivatives not designated as hedging instruments	Classification	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Interest rate cap contracts	Gain (loss) included in interest expense, net	$ 14,435	$ (22,918)	$ (372)
Preferred stock warrant	Loss included in other income (expense), net	—	(4,100)	—
Total gain (loss) on derivative financial instruments		$ 14,435	$ (27,018)	$ (372)

Note 14—Leases

Lessee

We lease corporate and branch offices, various facilities, land and equipment, specifically third-party teleport and circuit/dark fiber. Certain leases include one or more options to renew, with renewal terms that can extend the lease term from one year to fifteen years. The exercise of lease renewal options is at our sole discretion. Considering the nature of our business and ongoing technology upgrades relating to the services we provide, we determined that the likelihood of exercising a renewal on any leased property and equipment is uncertain. Therefore, we do not generally include the renewal period in the expected lease terms. Some of our leases may include options to terminate the leases within six months of inception. Our lease agreements generally do not include options to purchase the leased property. The depreciable life of leasehold improvements is limited by the expected lease term in the absence of a transfer of title or purchase option reasonably certain of exercise.

Certain of our lease agreements include rental payments with escalation provisions as defined in the contracts. These escalation provisions are included in the calculation of the present value of the lease payments for purposes of determining the value of the respective ROU asset and lease liability. Our lease agreements do not contain any material residual value guarantees or materially restrictive covenants. We rent, license or sublease certain office space and land to third parties. Our sublease portfolio consists mainly of property operating leases for office space within our McLean, Virginia U.S. administrative headquarters office building.

The following table sets forth supplemental balance sheet information related to ROU assets and lease liabilities (in thousands):

	Classification	As of December 31, 2019	As of December 31, 2020
Assets			
Operating	Other assets	$ 86,780	$ 163,834
Finance	Other assets[1]	10,084	10,497
Total leased assets		$ 96,864	$ 174,331
Liabilities			
Current			
Operating	Other current liabilities	$ 12,744	$ 19,397
Finance	Other current liabilities	2,215	2,891
Long-term			
Operating	Other long-term liabilities	99,072	166,229
Finance	Other long-term liabilities	16,137	15,325
Total lease liabilities		$ 130,168	$ 203,842

(1) Net of accumulated amortization of $0.5 million and $2.5 million for the years ended December 31, 2019 and 2020, respectively.

The following table sets forth supplemental information related to the components of lease expense (in thousands):

	Classification	Year Ended December 31, 2019	Year Ended December 31, 2020
Operating lease cost	Direct costs of revenue	$ 14,210	$ 24,770
Operating lease cost	Selling, general and administrative expenses	6,159	7,420
Finance lease cost			
Amortization of leased assets	Depreciation and amortization	542	1,953
Interest on lease liabilities	Interest expense, net	813	1,708
Sublease income	Other income (expense), net	(1,206)	(953)
Net lease cost		$ 20,518	$ 34,898

The following table sets forth future minimum lease payments together with the present value of lease liabilities under leases as of December 31, 2020 for the next five years and thereafter (in thousands):

	Operating Leases	Finance Leases	Total
2021	$ 26,886	$ 4,184	$ 31,070
2022	36,770	3,905	40,675
2023	36,256	3,835	40,091
2024	34,364	2,239	36,603
2025	22,376	1,918	24,294
2026 and thereafter	96,546	7,917	104,463
Total lease payments	253,198	23,998	277,196
Less: Imputed interest[1]	67,572	5,782	73,354
Present value of lease liabilities	$ 185,626	$ 18,216	$ 203,842

(1) Calculated using the incremental borrowing rate assessed for each lease.

As of December 31, 2020, we had an additional operating lease for an in-orbit, satellite servicing vehicle, which had not yet commenced, with payments totaling approximately $75.0 million. This lease is expected to commence in 2021 and have a lease term of 5 years.

The following table sets forth supplemental cash flow information related to leases (in thousands):

	Year Ended December 31, 2019	Year Ended December 31, 2020
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from operating leases	$ 20,919	$ 32,993
Leased assets obtained in exchange for new operating lease liabilities	98,621	63,444
Leased assets obtained in exchange for new finance lease liabilities	10,626	3,127
ROU asset reductions due to modifications/renewals/terminations - operating leases	—	(8,669)

The following table sets forth the weighted average remaining lease term and weighted average discount rate under leases:

	As of December 31, 2019	As of December 31, 2020
Weighted average remaining lease term (in years)		
Operating leases	8.9	7.9
Finance leases	8.0	7.3
Weighted average discount rate[(1)]		
Operating leases	7.4 %	7.7 %
Finance leases	7.0 %	7.9 %

(1) Discount rate is the incremental borrowing rate assessed for each lease.

Lessor

We have two sales-type leases related to managed service contracts.

One sales-type lease commenced in 2019 and has an expiration date of March 31, 2030, with an option to extend the term provided the extension is reasonably feasible from a regulatory and technical standpoint. We evaluated the lease and determined that it contains lease and non-lease components. The sales-type lease component is accounted for separately from the other lease and non-lease components that meet the practical expedient criteria to be combined. Judgment is required in determining the allocation between the lease and non-lease components. ASC 606 is applied to the combined lease and non-lease components. There is no residual value of the leased assets and no interest income to be recognized under the lease. For the year ended December 31, 2019, the Company recorded revenue and direct costs of revenue of $14.7 million and $16.2 million, respectively, resulting in a net loss at commencement of the sales-type lease of approximately $1.5 million.

The second sales-type lease commenced in 2018 and has an expiration date of December 31, 2022, with automatic renewals on an annual basis unless either party terminates the lease by providing written notice at least one year prior to the renewal date. The sales-type lease also contains non-lease components that were separated and accounted for as service arrangements. The lessee has an option to purchase the underlying equipment during or after the contract term. Upon such purchase, the lessee will have option to either terminate the underlying service or continue to receive service from the Company until the end of the service term. No residual value is assumed given the term and estimated useful life of the underlying equipment. The Company recognizes an insignificant amount of interest income annually under the lease terms. For the year ended December 31, 2018, the Company recorded revenue and direct costs of revenue of $3.1 million and $2.4 million, respectively, resulting in a net profit at commencement of the sales-type lease of approximately $0.7 million.

The Company recorded a cumulative net investment in sales-type leases of approximately $13.9 million as of December 31, 2020, of which $2.0 million was included within prepaid and other current assets and $11.9 million was included within other assets in the consolidated balance sheets. The carrying value of the lease receivables approximates the net investments in the leases. As of December 31, 2020, the Company expects to receive approximately $14.1 million of lease payments over the remaining term of the service agreements, of which $2.2 million, $2.2 million, $1.3 million, $1.3 million, $1.3 million, and $5.8 million are expected to be received in 2021, 2022, 2023, 2024, 2025 and 2026 and thereafter, respectively.

Note 15—Income Taxes

In February 2018, the FASB issued ASU 2018-02, *Income Statement—Reporting Comprehensive Income (Topic 220)—Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* ("ASU 2018-02"), which allows for an optional reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the

U.S. Tax Cuts and Jobs Act (the "Act"), which was signed into law on December 22, 2017. Consequently, the amendments eliminated the stranded tax effects resulting from the Act for those entities that elect the optional reclassification. ASU 2018-02 is effective for all entities for interim and annual periods beginning after December 15, 2018. We adopted ASU 2018-02 in the first quarter of 2019, which resulted in a reclassification of stranded tax effects of $16.2 million from accumulated other comprehensive loss to accumulated deficit.

The Act includes a number of provisions, including the lowering of the U.S. corporate tax rate from 35 percent to 21 percent, effective January 1, 2018. The Act limits our U.S. interest expense deductions to approximately 30 percent of EBITDA through December 31, 2021 and approximately 30 percent of earnings before net interest and taxes thereafter. The Act also introduced a new minimum tax, the Base Erosion Anti-Abuse Tax ("BEAT"). We are treating the BEAT as a period cost.

Effective January 1, 2019, the Luxembourg corporate tax rate decreased from 26.01% to 24.94%. This resulted in a decrease in deferred tax assets and corresponding valuation allowance.

On July 2, 2018, we implemented a series of internal transactions and related steps that reorganized the ownership of certain assets among our subsidiaries (the "2018 Internal Reorganization"). The 2018 Internal Reorganization resulted in the majority of our operations being owned by a U.S.-based partnership, with certain of our wholly-owned Luxembourg and U.S. subsidiaries as partners.

In response to the COVID-19 pandemic, on March 18, 2020, the Families First Coronavirus Response Act (the "FFCR Act") was enacted, and on March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") was enacted. The FFCR Act and the CARES Act contain numerous income tax provisions, such as increasing the 30 percent adjusted taxable income threshold to 50 percent for taxable years beginning in 2019 and 2020 for purposes of determining allowable business interest expense deductions. The CARES Act repeals the 80 percent limitation for taxable years beginning before January 1, 2021 (enacted by the Act), and it further specifies that net operating losses arising in a taxable year beginning after December 31, 2017 and before January 1, 2021, are allowed as a carryback to each of the five taxable years preceding the taxable year of such losses. Modifications to the tax rules for the carryback of net operating losses and business interest limitations resulted in a federal tax refund of approximately $13.7 million for each of the years ended December 31, 2019 and 2020. In addition, the CARES Act includes refundable payroll tax credits and deferral of employment side social security payments. As of December 31, 2020, Intelsat's payroll deferral amount was approximately $6.7 million.

The following table summarizes our total income (loss) before income taxes (in thousands):

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Domestic loss before income taxes	$ (424,590)	$ (869,247)	$ (891,769)
Foreign loss before income taxes	(41,031)	(49,347)	(24,557)
Total loss before income taxes	$ (465,621)	$ (918,594)	$ (916,326)

The primary reason for the increase in domestic loss before income tax from 2018 to 2019 was related to the satellite impairment loss our Luxembourg entities recorded in 2019. The increase in domestic loss before income tax from 2019 to 2020 was primarily related to impairments of non-amortizable intangible and other assets, as well as reorganization items related to the Chapter 11 proceedings.

The provision for (benefit from) income taxes consisted of the following (in thousands):

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Current income tax provision (benefit):			
Domestic	$ 792	$ —	$ —
Foreign	50,117	20,323	(10,034)
Total	50,909	20,323	(10,034)
Deferred income tax provision (benefit):			
Domestic	—	—	—
Foreign	79,160	(27,707)	2,979
Total	79,160	(27,707)	2,979
Total income tax provision (benefit):	$ 130,069	$ (7,384)	$ (7,055)

The income tax provision (benefit) was different from the amount computed using the Luxembourg statutory income tax rate of 26.01% for 2018 and 24.94% for each of 2019 and 2020, for the reasons set forth in the following table (in thousands):

	Year Ended December 31, 2018	Year Ended December 31, 2019	Year Ended December 31, 2020
Expected tax provision (benefit) at Luxembourg statutory income tax rate	$ (121,108)	$ (229,097)	$ (228,532)
Foreign income tax differential	2,216	(23,603)	4,320
Luxembourg financing activities	51,250	(5,930)	66,772
Change in tax rate	(684)	163,831	—
Changes in unrecognized tax benefits	(2,205)	(4,178)	8,595
Changes in valuation allowance	746,905	(166,683)	792,487
Tax effect of 2011 intercompany sale	1,655	1,269	—
Foreign tax credits	138	—	(8,754)
State net operating loss modification	—	—	21,764
2018 internal reorganization	(549,382)	257,921	36,151
Impairment to intercompany investments in Luxembourg subsidiaries	—	—	(693,263)
Net operating loss carryback	—	—	(6,227)
Other	1,284	(914)	(368)
Total income tax provision (benefit)	$ 130,069	$ (7,384)	$ (7,055)

The majority of our operations are located in taxable jurisdictions, including Luxembourg, the U.S. and the United Kingdom ("UK"). 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 cumulative 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 U.S. as a result of final regulations issued with respect to the CARES Act and the UK, as well as withholding taxes on revenue earned in some of the foreign markets in which we operate.

The following table details the composition of the net deferred tax balances on our consolidated balance sheets as of December 31, 2019 and 2020 (in thousands):

	As of December 31, 2019	As of December 31, 2020
Long-term deferred taxes, net	$ (55,171)	$ (61,345)
Other assets	21,417	21,485
Net deferred taxes	$ (33,754)	$ (39,860)

The components of the net deferred tax liability were as follows (in thousands):

	As of December 31, 2019	As of December 31, 2020
Deferred tax assets:		
Accruals and advances	$ 5,812	$ 3,042
Amortizable intangible assets	788,134	897,696
Non-amortizable intangible assets	40,527	16,569
Customer deposits	3,489	2,798
Bad debt reserve	4,468	4,460
Disallowed interest expense carryforward	109,229	76,797
Net operating loss carryforward	3,077,101	3,809,049
Tax credits	13,135	22,440
Tax basis differences in investments and affiliates	99,396	56,850
Satellites and other property and equipment	—	163,335
Capital loss carryforward	—	5,999
Operating lease liabilities	—	11,766
Other	3,287	2,185
Total deferred tax assets	4,144,578	5,072,986
Deferred tax liabilities:		
Satellites and other property and equipment	(51,392)	—
Amortizable intangible assets	(7,299)	(5,384)
Non-amortizable intangible assets	(31,407)	(31,774)
Tax basis differences in investments and affiliates	(51,314)	(148,254)
Operating lease ROU asset	—	(11,727)
Basis difference in indebtedness	—	(86,297)
Other	(354)	(357)
Total deferred tax liabilities	(141,766)	(283,793)
Valuation allowance	(4,036,566)	(4,829,053)
Total net deferred tax liabilities	$ (33,754)	$ (39,860)

As of December 31, 2019 and 2020, our consolidated balance sheets included a deferred tax asset in the amount of $3.1 billion and $3.8 billion, respectively, attributable to the future benefit from the utilization of certain net operating loss carryforwards. In addition, our balance sheets as of December 31, 2019 and 2020 included $13.1 million and $22.4 million of deferred tax assets, respectively, attributable to the future benefit from the utilization of tax credit carryforwards. As of December 31, 2020, we had tax-effected U.S. federal, state and other foreign tax net operating loss carryforwards of $100.5 million expiring, for the most part, between 2024 and 2038. Of this amount, $8.5 million has an indefinite life. In addition, as of December 31, 2020, we had Luxembourg tax-effected net operating loss carryforwards of $3.7 billion and of this amount $1.3 billion expires, for the most part, in 2035. These Luxembourg net operating loss carryforwards were caused primarily by our interest expense, satellite depreciation and amortization and impairment charges related to investments in subsidiaries, goodwill and other intangible assets. Our research and development credit of $1.1 million may be carried forward to 2037. Our foreign tax credit of $21.3 million is fully valued.

Our valuation allowance as of December 31, 2019 and 2020 was $4.0 billion and $4.8 billion, respectively. Almost all of the valuation allowance relates to Luxembourg net operating loss carryforwards and deferred tax assets created by differences between the U.S. GAAP and the Luxembourg tax basis in our assets. Certain operations of our subsidiaries are controlled by various intercompany agreements which provide these subsidiaries with predictable operating profits. Other subsidiaries, principally Luxembourg and U.S. subsidiaries, are subject to the risks of our overall business conditions which make their earnings less predictable. Our valuation allowance as of December 31, 2020 also relates to certain deferred tax assets in our U.S. subsidiaries, including foreign tax credit carryforward and disallowed interest expense carryforward.

The following table summarizes the activity related to our unrecognized tax benefits (in thousands):

	2019	2020
Balance at January 1	$ 29,144	$ 24,954
Increases related to current year tax positions	70	13,445
Increases related to prior year tax positions	226	15,560
Decreases related to prior year tax positions	(432)	(23)
Expiration of statute of limitations for the assessment of taxes	(4,054)	(2,534)
Balance at December 31	$ 24,954	$ 51,402

As of December 31, 2019 and 2020, our unrecognized tax benefits were $25.0 million and $51.4 million, respectively (including interest and penalties), of which $21.5 million and $47.6 million, respectively, if recognized, would affect our effective tax rate. As of December 31, 2019 and 2020, we had recorded reserves for interest and penalties in the amount of $0.6 million and $0.8 million, respectively. We continue to recognize interest and, to the extent applicable, penalties with respect to the unrecognized tax benefits as income tax expense.

On December 2, 2019, the U.S. Department of Treasury and the U.S. Internal Revenue Service released final regulations with respect to BEAT as enacted by the 2017 Tax Reform Act. These regulations represent the final version of proposed regulations which were released in December 2018. The BEAT is a minimum tax established by the Act that subjects certain payments made by U.S. corporations or subsidiaries to foreign related parties to a secondary federal income tax regime in the U.S. The final regulations clarify which taxpayers are subject to the BEAT and how the BEAT rules apply to certain payments and transactions. We have adopted the final BEAT regulations as of the release date. These regulations are effective for the Company as of its tax year ended December 31, 2018. A second set of final regulations was issued in September 1, 2020, addressing among other topics, the application of the BEAT to partnerships and the application of the effectively connected income exception to depreciable or amortizable property contributed to a U.S. partnership by a foreign partner. Similar to the first set of final regulations issued in December 2019, these revised final regulations are effective for the tax year ended December 31, 2018. As of December 31, 2020, the Company recognized the BEAT tax impacts associated with the revised final regulations related to the tax years ended December 31, 2018, 2019 and 2020 in the amount of $1.0 million, $11.8 million, and $8.8 million, respectively.

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., UK and Brazilian subsidiaries are subject to income tax examination for periods after December 31, 2014. 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.

Effective January 31, 2020, the UK formally exited the European Union (“EU”). As a result of the withdrawal, existing tax reliefs and exemptions on intra-European transactions will likely cease to apply to transactions between UK entities and EU entities. In addition, transactions with non-EU countries, such as the U.S., may also be affected. As of December 31, 2020, all relevant tax laws and treaties remained unchanged and the tax consequences were unknown. Therefore, we have not recognized any impacts of the withdrawal in the income tax provision as of December 31, 2020. We will recognize any impacts to the tax provision when changes in tax laws or treaties between the UK and the EU or individual EU member states are enacted.

Note 16—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—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, 2020 and the expected year of payment are as follows (in thousands):

	Satellite Construction and Launch Obligations	Gogo CA Satellite Commitments	Satellite Performance Incentive Obligations[1]	Horizons-3 Satellite LLC Contribution and Purchase Obligations[2]	Customer and Vendor Contracts	Sublease Rental Income	Total
2021	$ 801,169	$ 104,968	$ 72,411	$ 29,849	$ 330,444	$ (523)	$ 1,338,318
2022	425,693	80,104	37,047	31,692	54,075	(260)	628,351
2023	144,742	61,573	25,594	32,551	32,719	(136)	297,043
2024	15,133	59,379	24,954	33,924	27,144	(67)	160,467
2025	10,308	59,914	23,154	39,023	26,658	(17)	159,040
2026 and thereafter	49,167	199,515	80,961	154,105	73,398	(129)	557,017
Total contractual commitments	$ 1,446,212	$ 565,453	$ 264,121	$ 321,144	$ 544,438	$ (1,132)	$ 3,140,236

(1) Includes $4.3 million of liabilities subject to compromise.

(2) Includes commitments to make capital contributions to and purchase satellite capacity from Horizons 3. See Note 10(b)—Investments—Horizons-3 Satellite LLC.

(a) Satellite Construction and Launch Obligations

As of December 31, 2020, we had approximately $1.4 billion of expenditures remaining under our existing satellite construction and launch contracts, including expected orbital performance incentive payments for satellites currently in the construction phase. Included in this number is the procurement and launch of seven new satellites in connection with the C-band clearing process. The Company expects to receive reimbursement payments for certain upfront C-band spectrum clearing expenses incurred, subject to the satisfaction of certain deadlines and other conditions set forth in the FCC Final Order.

These contracts typically require that we make progress payments during the period of the satellites' construction and contain provisions that allow us to cancel the contracts for or without cause. If cancelled without cause, we could be subject to substantial termination penalties, including the forfeiture of progress payments made to-date and additional penalty payments. If cancelled for cause, we are entitled to recover progress payments made to-date and 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, 2020, we had $264.1 million of satellite performance incentive obligations, including future interest payments, for satellites currently in orbit.

(c) Gogo CA Satellite Commitments

We have agreements with vendors to provide us with transponder and teleport satellite services on our Gogo CA business. These agreements vary in length and amount. As of December 31, 2020, we had approximately $565.5 million of expenditures remaining under our existing commitments.

(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, 2020, we had commitments under these customer and vendor contracts which totaled approximately $544.4 million related to the provision of equipment, services and other support.

(e) Rental Income and Expense

Rental income and sublease income are included in other income (expense), net in the accompanying consolidated statements of operations. Total rent expense for the year ended December 31, 2018 was $14.0 million under ASC 840. We adopted ASC 842 effective January 1, 2019. Please refer to Note 14—Leases for operating lease expense for 2019 and 2020 and Note 1—Background and Summary of Significant Accounting Policies for transition guidance.

Note 17—Contingencies

On May 13, 2020, Intelsat S.A. and certain of its subsidiaries filed voluntary petitions for relief under title 11 of the Bankruptcy Code in the Bankruptcy Court. As a result of such bankruptcy filings, substantially all proceedings pending against the Debtors have been stayed and prepetition liabilities are subject to compromise. See Note 2—Chapter 11 Proceedings, Ability to Continue as a Going Concern and Other Related Matters.

SES Claim

On July 14, 2020, SES Americom, Inc. ("SES") filed a proof of claim in the Bankruptcy Court in the amount of $1.8 billion against each of the Debtors. SES asserts that the Debtors owe money (or will owe money) to SES pursuant to certain contractual and fiduciary obligations made in the context of the consortium agreement between Debtor Intelsat US LLC, SES, and other satellite operators (the "Consortium Agreement"). SES claims that it is entitled to 50% of the combined payments that may eventually be payable to the Debtors and SES pursuant to the FCC Final Order, which provides for Acceleration Payments subject to the satisfaction of certain deadlines and other conditions set forth therein. SES's proof of claim alleges that the Debtors breached the Consortium Agreement by taking the position that the Debtors are not required to split Acceleration Payments with SES and the other members of the consortium. The proof of claim also alleges breach of fiduciary duties and unjust enrichment and seeks monetary and punitive damages. We dispute the allegations in the proof of claim and on October 19, 2020, filed an objection to the claim, which we intend to litigate vigorously. A trial on the SES claim is scheduled to commence on June 28, 2021 in the Bankruptcy Court. To the extent that any portion of SES's claim is allowed, we have asked the Bankruptcy Court to 'equitably subordinate' such claim based on SES's conduct in matters related to the Consortium Agreement. While the ultimate resolution of the claim is not currently predictable, if there is an adverse ruling, the ruling could constitute a material adverse outcome on our future consolidated financial condition.

Other Litigation Matters

In the absence of the automatic stay due to the Chapter 11 Cases, 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 18—Related Party Transactions

(a) Shareholders' Agreements

Certain shareholders of Intelsat S.A. entered into a shareholders' agreement in December 2018, which provides, among other things, specific rights to and limitations upon the holders of Intelsat S.A.'s share capital with respect to shares held by such holders.

(b) Governance Agreement

In December 2018, the Company entered into a governance agreement with its shareholder affiliated with Serafina S.A. The agreement contains provisions relating to the composition of the Company's 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 as a result of a joint venture with JSAT (see Note 10(b)—Investments—Horizons-3 Satellite LLC).

Note 19—Condensed Combined Debtors' Financial Information

The following presents our Debtors' condensed combined balance sheet as of December 31, 2020, and statements of operations and cash flows for the year ended December 31, 2020. Consolidating adjustments include eliminations of the following:

- investments in subsidiaries;
- intercompany accounts;
- intercompany sales and expenses; and
- intercompany equity balances.

Intercompany balances with non-Debtor affiliates have not been eliminated. On the Debtors' condensed combined balance sheet, these primarily consist of net intercompany trade receivables generated under our Master Intercompany Service Agreement ("MISA"), funding for the operations of non-Debtor affiliates and funding for the acquisition of Gogo CA. On the Debtors' condensed combined statements of operations, total reported revenue includes intercompany revenue of $295.0 million for the year ended December 31, 2020, primarily consisting of satellite capacity charges and revenue recognized pursuant to intercompany agreements between certain Debtor entities and a newly-formed non-Debtor entity relating to the management of certain reorganization-related costs. Cost from affiliates primarily relates to sales and technical support services provided to Debtors as specified under the MISA. Investments in non-Debtor affiliates are presented under the equity method of accounting in the condensed combined financial statements set forth below.

DEBTORS' CONDENSED COMBINED BALANCE SHEET

(in thousands, except per share amounts)

	December 31, 2020
ASSETS	
Current assets:	
Cash and cash equivalents	$ 879,191
Restricted cash	20,817
Receivables, net of allowance of $34,391	561,573
Contract assets	15,474
Inventory	1,347
Prepaid expenses and other current assets	100,021
Intercompany receivables	678,188
Total current assets	2,256,611
Satellites and other property and equipment, net	4,656,678
Goodwill	2,624,452
Non-amortizable intangible assets	2,295,000
Amortizable intangible assets, net	245,649
Contract assets, net of current portion	26,642
Investment in affiliates	150,029
Other assets	357,897
Total assets	$ 12,612,958
LIABILITIES AND SHAREHOLDERS' DEFICIT	
Current liabilities:	
Accounts payable and accrued liabilities	$ 222,876
Taxes payable	6,743
Employee related liabilities	36,563
Accrued interest payable	17,747
Current maturities of long-term debt	5,903,724
Contract liabilities	146,762
Deferred satellite performance incentives	47,377
Other current liabilities	43,885
Total current liabilities	6,425,677
Contract liabilities, net of current portion	1,422,893
Deferred satellite performance incentives, net of current portion	138,116
Deferred income taxes	61,069
Accrued retirement benefits, net of current portion	129,837
Other long-term liabilities	188,394
Liabilities subject to compromise	10,168,518
Shareholders' deficit:	
Common shares, nominal value $0.01 per share	1,421
Paid-in capital	2,573,840
Accumulated deficit	(8,416,410)
Accumulated other comprehensive loss	(80,397)
Total shareholders' deficit	(5,921,546)
Total liabilities and shareholders' deficit	$ 12,612,958

DEBTORS' CONDENSED COMBINED STATEMENTS OF OPERATIONS

(in thousands)

	Year Ended December 31, 2020
Revenue	$ 1,741,077
Operating expenses:	
Direct costs of revenue (excluding depreciation and amortization)	267,158
Selling, general and administrative	260,192
Cost from affiliates	43,444
Depreciation and amortization	629,519
Impairment of non-amortizable intangible and other assets	191,943
Other operating expense—C-band	33,642
Total operating expenses	1,425,898
Income from operations	315,179
Interest expense, net	808,781
Equity in losses of affiliates	(58,165)
Other income, net	18,270
Reorganization items	(385,861)
Loss before income taxes	(919,358)
Benefit from income taxes	(7,694)
Net loss	$ (911,664)

DEBTORS' CONDENSED COMBINED STATEMENT OF CASH FLOWS

(in thousands)

	Year Ended December 31, 2020
Cash flows from operating activities:	
Net loss	$ (911,664)
Adjustments to reconcile net loss to net cash provided by operating activities:	
Depreciation and amortization	629,519
Provision for expected credit losses	51,914
Foreign currency transaction gain	(924)
Impairment of non-amortizable intangible and other assets	191,943
Share-based compensation	10,425
Deferred income taxes	2,876
Amortization of discount, premium, issuance costs and related costs	22,136
Non-cash reorganization items	196,974
Debtor-in-possession financing fees	59,682
Amortization of actuarial loss and prior service credits for retirement benefits	2,635
Unrealized losses on derivative financial instruments	372
Unrealized gains on investments and loans held-for-investment	(5,433)
Equity in losses of affiliates	58,165
Other non-cash items	(73)
Changes in operating assets and liabilities:	
Receivables	(14,888)
Intercompany receivables	(144,220)
Prepaid expenses, contract and other assets	(21,858)
Accounts payable and accrued liabilities	129,986
Accrued interest payable	52,623
Contract liabilities	(70,143)
Accrued retirement benefits	(15,857)
Other long-term liabilities	5,848
Net cash provided by operating activities	230,038
Cash flows from investing activities:	
Capital expenditures (including capitalized interest)	(599,283)
Dividends from affiliates	30,401
Proceeds from principal repayments on loans held-for-investment	973
Capital contribution to affiliates	(9,005)
Acquisition of loan to affiliate	(426,376)
Other proceeds from satellites	5,625
Net cash used in investing activities	(997,665)
Cash flows from financing activities:	
Proceeds from debtor-in-possession financing	1,000,000
Debtor-in-possession financing fees	(59,682)
Principal payments on deferred satellite performance incentives	(28,831)
Net cash provided by financing activities	911,487
Effect of exchange rate changes on cash, cash equivalents and restricted cash	835
Net change in cash, cash equivalents and restricted cash	144,695
Cash, cash equivalents, and restricted cash, beginning of period	755,313
Cash, cash equivalents, and restricted cash, end of period	$ 900,008
Reconciliation of cash, cash equivalents and restricted cash reported within the condensed consolidated Debtors' balance sheet to the total sum of these same amounts shown on the condensed consolidated Debtors' statement of cash flows:	
Cash and cash equivalents	$ 879,191
Restricted cash	20,817
Total cash, cash equivalents and restricted cash reported in the condensed consolidated Debtors' statement of cash flows	$ 900,008

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

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, 2020. 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, 2020.

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, 2020. During the fourth quarter of 2020, we acquired Gogo CA and excluded it from management's assessment of internal control over financial reporting. Gogo CA represents 4.2% and 0.8% of total assets and revenue, respectively, excluded from management's assessment of the consolidated financial statement amounts as of and for the year ended December 31, 2020.

Changes in Internal Control over Financial Reporting

Except as described below, there were no other changes in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a-15(f) of the Exchange Act during the quarter ended December 31, 2020 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

On December 1, 2020, we completed our acquisition of Gogo CA. As part of our ongoing integration of the Gogo CA business, we are currently integrating policies, processes, people, technology and operations for the combined Company. Management will continue to evaluate the Company's internal control over financial reporting as it continues to integrate the Gogo CA business.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item will be included in our proxy statement for our 2021 annual meeting of shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2020 (the "2021 Proxy Statement"), under the heading "Corporate Governance" and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by this item will be included in our 2021 Proxy Statement under the heading "Compensation Discussion and Analysis" and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item will be included in our 2021 Proxy Statement under the heading "Corporate Governance" and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item will be included in our 2021 Proxy Statement under the heading "Corporate Governance" and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by this item will be included in our 2021 Proxy Statement under the heading "Corporate Governance" and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a)(1) The following financial statements are included in this Annual Report on Form 10-K:

(a)(2) The following financial statement schedule is included in this Annual Report on Form 10-K:

(b) The following exhibits are filed as part of this Annual Report on Form 10-K:

Exhibit No.	Document Description
2.1	Purchase and Sale Agreement, dated as of August 31, 2020, by and between Gogo Inc. and Intelsat Jackson Holdings S.A. (incorporated by reference to Exhibit 2.1 of Intelsat S.A.'s Current Report on Form 8-K, File No. 001-35878, filed on September 1, 2020).
3.1	Consolidated Articles of Incorporation of Intelsat S.A., as amended on June 16, 2020 (incorporated by reference to Exhibit 99.1 of Intelsat S.A.'s Current Report on Form 8-K, File No. 001-35878, filed on June 18, 2020).
4.1	Indenture for Intelsat S.A.'s 4½% Convertible Senior Notes due 2025, dated as of June 18, 2018, by and between Intelsat S.A., as Issuer, Intelsat Envision Holdings LLC, as Guarantor and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.1 of Intelsat S.A.'s Current Report on Form 6-K, File No. 001-35878, filed on June 19, 2018).
4.2	Indenture for Intelsat (Luxembourg) S.A.'s 7¾% Senior Notes due 2021 and 8 1/8% 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 (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).
4.3	First Supplemental Indenture for Intelsat (Luxembourg) S.A.'s 7¾% Senior Notes due 2021 and 8 1/8% 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).
4.4	Indenture for Intelsat (Luxembourg) S.A.'s 12½% 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 (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).
4.5	Indenture for Intelsat Connect Finance S.A.'s 9 1/2% Senior Notes due 2023, dated as of August 16, 2018, by and among Intelsat Connect Finance S.A., as Issuer, Intelsat Envision Holdings LLC, Intelsat (Luxembourg) S.A., as Parent Guarantor and U.S. Bank, National Association, as Trustee (including the form of the 9 1/2% 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 August 16, 2018).
4.6	Indenture for Intelsat Jackson Holdings S.A.'s 5½% 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 Guarantor, 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).
4.7	First Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5½% 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).
4.8	Second Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5 1/2% 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).
4.9	Third Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5 1/2% 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 (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 28, 2017, as amended).
4.10	Fourth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5½% Senior Notes due 2023, dated as of June 29, 2018, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Genesis Inc., as New Guarantor, and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 2.22 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2019).
4.11	Fifth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5½% Senior Notes due 2023, dated as of July 2, 2018, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Alliance LP, Intelsat Genesis GP LLC and Intelsat Ventures S.à r.l., collectively as New Guarantors, and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 2.23 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2019).
4.12	Sixth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5½% Senior Notes due 2023, dated as of May 2, 2019, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat US Finance LLC, as New Guarantor, and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.12 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
4.13	Seventh Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 5½% Senior Notes due 2023, dated as of April 24, 2020, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Virginia Holdings LLC, as New Guarantor, and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.5 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on June 4, 2020).
4.14	Indenture for Intelsat Jackson Holdings S.A.'s 8½% Senior Notes due 2024, dated as of September 19, 2018, by and between 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. and Intelsat Connect Finance S.A., each as a Parent Guarantor, the subsidiary guarantors named therein and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 99.2 to Intelsat S.A.'s Current Report on Form 6-K, File No. 001-35878, filed September 19, 2018).
4.15	First Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 8½% Senior Notes due 2024, dated as of May 2, 2019, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat US Finance LLC, as New Guarantor, and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.14 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
4.16	Second Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 8½% Senior Notes due 2024, dated as of April 24, 2020, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Virginia Holdings LLC, as New Guarantor, and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.1 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on June 4, 2020).

Exhibit No.	Document Description
4.17	Indenture for Intelsat Jackson Holdings S.A.'s 9 3/4% Senior Notes due 2025, dated as of July 5, 2017, 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. and Intelsat Connect Finance S.A., each as a Parent Guarantor, the subsidiary guarantors named therein and U.S. 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 July 5, 2017).
4.18	First Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9¾% Senior Notes due 2025, dated as of June 29, 2018, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Genesis Inc., as New Guarantor, and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 2.16 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2019).
4.19	Second Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9¾% Senior Notes due 2025, dated as of July 2, 2018, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Alliance LP and Intelsat Genesis GP LLC, collectively as New Guarantors, and U.S. 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 February 20, 2019).
4.20	Third Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9¾% Senior Notes due 2025, dated as of May 2, 2019, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat US Finance LLC, as New Guarantor, and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.18 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
4.21	Fourth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9¾% Senior Notes due 2025, dated as of April 24, 2020, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Virginia Holdings LLC, as New Guarantor, and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.2 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on June 4, 2020).
4.22	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 (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).
4.23	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 (incorporated by reference to Exhibit 2.27 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
4.24	Second Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 8% Senior Secured Notes due 2024, dated as of June 29, 2018, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Genesis Inc., as New Guarantor, and Wilmington Trust, National Association, as Trustee (incorporated by reference to Exhibit 2.20 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2019).
4.25	Third Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 8% Senior Secured Notes due 2024, dated as of July 2, 2018, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Alliance LP, Intelsat Genesis GP LLC and Intelsat Ventures S.à r.l., collectively as New Guarantors, and Wilmington Trust, National Association, as Trustee (incorporated by reference to Exhibit 2.21 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2019).
4.26	Fourth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 8% Senior Secured Notes due 2024, dated as of May 2, 2019, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat US Finance LLC, as New Guarantor, and Wilmington Trust, National Association, as Trustee (incorporated by reference to Exhibit 4.23 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
4.27	Fifth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 8% Senior Secured Notes due 2024, dated as of April 24, 2020, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Virginia Holdings LLC, as New Guarantor, and Wilmington Trust, National Association, as Trustee (incorporated by reference to Exhibit 4.3 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on June 4, 2020).
4.28	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).
4.29	First Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9½% 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 (incorporated by reference to Exhibit 2.29 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
4.30	Second Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9½% Senior Secured Notes due 2022, dated as of June 29, 2018, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Genesis Inc., as New Guarantor, and Wilmington Trust, National Association, as Trustee (incorporated by reference to Exhibit 2.18 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 20, 2019).
4.31	Third Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9½% Senior Secured Notes due 2022, dated as of July 2, 2018, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Alliance LP, Intelsat Genesis GP LLC and Intelsat Ventures S.à r.l., collectively as New Guarantors, and Wilmington Trust, 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, 2019).
4.32	Fourth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9½% Senior Secured Notes due 2022, dated as of May 2, 2019, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat US Finance LLC, as New Guarantor, and Wilmington Trust, National Association, as Trustee (incorporated by reference to Exhibit 4.28 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
4.33	Fifth Supplemental Indenture for Intelsat Jackson Holdings S.A.'s 9½% Senior Secured Notes due 2022, dated as of April 24, 2020, by and among Intelsat Jackson Holdings S.A., as Issuer, Intelsat Virginia Holdings LLC, as New Guarantor, and Wilmington Trust, National Association, as Trustee (incorporated by reference to Exhibit 4.4 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on June 4, 2020).
4.34	Description of Intelsat S.A.'s Common Shares*

Exhibit No.	Document Description
10.1	Governance Agreement, dated as of December 6, 2018, 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, 2019).
10.2	Shareholders Agreement, dated as of December 6, 2018, by and among Intelsat S.A. and the shareholders party thereto (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, 2019).
10.3	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).
10.4	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).
10.5	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).
10.6	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 (incorporated by reference to Exhibit 4.58 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
10.7	Release of Intelsat (Luxembourg) S.A. from Credit Agreement, dated as of December 22, 2016, by Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 4.59 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
10.8	Amendment No. 3 and Joinder Agreement, dated as of November 27, 2017, by and among Intelsat Connect Finance 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-3 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, and the Amendment No. 2 and Joinder Agreement, dated as of November 27, 2013) (incorporated by reference to Exhibit 99.1 of Intelsat S.A.'s Current Report on Form 6-K, File No. 001-35878, filed on November 27, 2017).
10.9	Amendment No. 4 and Joinder Agreement, dated as of December 12, 2017, by and among Intelsat Connect Finance 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-3 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, the Amendment No. 2 and Joinder Agreement, dated as of November 27, 2013, and the Amendment No. 3 and Joinder Agreement, dated as of November 27, 2017) (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 12, 2017).
10.10	Amendment No. 5 and Joinder Agreement, dated as of January 2, 2018, by and among Intelsat Connect Finance 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-4 Term Loan Lenders and the Tranche B-5 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, the Amendment No. 2 and Joinder Agreement, dated as of November 27, 2013, the Amendment No. 3 and Joinder Agreement, dated as of November 27, 2017, and the Amendment No. 4 and Joinder Agreement, dated as of December 12, 2017) (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 2, 2018).
10.11	Amendment No. 6 and Joinder Agreement, dated as of November 8, 2018, by and among Intelsat Connect Finance 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, to the Credit Agreement, dated as of January 12, 2011 (as amended by the Amendment and Joinder Agreement, dated as of October 3, 2012, the Amendment No. 2 and Joinder Agreement, dated as of November 27, 2013, the Amendment No. 3 and Joinder Agreement, dated as of November 27, 2017, the Amendment No. 4 and Joinder Agreement, dated as of December 12, 2017, and the Amendment No. 5 and Joinder Agreement, dated January 2, 2018) (incorporated by reference to Exhibit 99.1 of Intelsat S.A.'s Current Report on Form 6-K, File No. 001-35878, November 8, 2018).
10.12	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).
10.13	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).
10.14	Supplement No. 4 to Guarantee, dated as of June 28, 2013, to the Guarantee dated as of January 12, 2011, by and among Intelsat Finance Bermuda Ltd., as New Guarantor, and Bank of America, N.A., as Administrative Agent.*
10.15	Supplement to Guarantee, dated as of June 29, 2018, to the Guarantee dated as of January 12, 2011, by and among each of the subsidiaries of Intelsat Jackson Holdings S.A. listed on Annex A thereto, as New Guarantors, and Bank of America, N.A., as Administrative Agent.*
10.16	Supplement to Guarantee, dated as of July 2, 2018, to the Guarantee dated as of January 12, 2011, by and among each of the subsidiaries of Intelsat Jackson Holdings S.A. listed on Annex A thereto, as New Guarantors, and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.13 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).

Exhibit No.	Document Description
10.17	Supplement No. 3 to Guarantee, dated as of May 3, 2019, to the Guarantee dated as of January 12, 2011, by and between Intelsat US Finance LLC, as New Guarantor, and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.14 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
10.18	Supplement No. 4 to Guarantee, dated as of April 24, 2020, to the Guarantee dated as of January 12, 2011, by and between Intelsat Virginia Holdings LLC, as New Guarantor, and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.1 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on June 4, 2020).
10.19	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).
10.20	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).
10.21	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).
10.22	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 (incorporated by reference to Exhibit 4.54 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 000-35878, filed on February 28, 2017, as amended).
10.23	Luxembourg Claims Pledge Agreement, dated as of January 12, 2011, by and among Intelsat Jackson Holdings S.A., Intelsat Intermediate Holding Company S.A., Intelsat Phoenix Holdings S.A., Intelsat Subsidiary Holding Company S.A., Intelsat Operations S.A. and Intelsat (Luxembourg) Finance Company S.à.a r.l., as Pledgors, and Wilmington Trust FSB, as Pledgee (incorporated by reference to Exhibit 10.19 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
10.24	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 (incorporated by reference to Exhibit 4.56 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
10.25	Agreement for the Adherence by Intelsat Connect Finance S.A. 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 (incorporated by reference to Exhibit 4.61 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
10.26	Agreement for the Adherence by Intelsat Ventures S.à r.l. and Intelsat Alliance LP to the Luxembourg Shares and Beneficiary Certificates Pledge Agreement, dated as of July 2, 2018, 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 10.22 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
10.27	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 (incorporated by reference to Exhibit 4.55 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
10.28	Agreement for the Adherence by Intelsat Connect Finance S.A. 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 (incorporated by reference to Exhibit 10.24 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
10.29	Agreement for the Adherence to the Luxembourg Claims Pledge Agreement, dated as of July 2, 2018, by and among Intelsat Jackson Holdings S.A., Intelsat Align S.à r.l. and by Intelsat Ventures S.à r.l., as Pledgors, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee or Pledgee (incorporated by reference to Exhibit 10.25 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
10.30	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).
10.31	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.àr.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).
10.32	Supplement to Security and Pledge Agreement, dated as of June 29, 2018, to the 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, 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.*

Exhibit No.	Document Description
10.33	Supplement to Security and Pledge Agreement, dated as of July 2, 2018, to the 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, 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 10.28 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
10.34	Supplement No. 3 to Security and Pledge Agreement, dated as of May 3, 2019, to the Security and Pledge Agreement, dated as of January 12, 2011, by and among Intelsat Jackson Holdings S.A., Intelsat US Finance LLC, as a 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 10.29 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
10.35	Supplement No. 4 to Security and Pledge Agreement, dated as of April 24, 2020, to the Security and Pledge Agreement, dated as of January 12, 2011, by and among Intelsat Jackson Holdings S.A., Intelsat Virginia Holdings LLC, as a 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 10.2 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on June 4, 2020).
10.36	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).
10.37	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).
10.38	Collateral Agency and Intercreditor Joinder, dated as of June 28, 2013, by and among Intelsat Finance Bermuda Ltd., as new Grantor, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee.*
10.39	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 (incorporated by reference to Exhibit 4.52 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
10.40	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 (incorporated by reference to Exhibit 4.53 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
10.41	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 (incorporated by reference to Exhibit 4.57 of Intelsat S.A.'s Annual Report on Form 20-F, File No. 001-35878, filed on February 28, 2017, as amended).
10.42	Collateral Agency and Intercreditor Joinder, dated as of June 29, 2018, by and among Intelsat Connect Finance 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.*
10.43	Collateral Agency and Intercreditor Joinder, dated as of July 2, 2018, by and among Intelsat Connect Finance 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 (incorporated by reference to Exhibit 10.35 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
10.44	Collateral Agency and Intercreditor Joinder, dated as of May 3, 2019, by and among Intelsat Connect Finance 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 (incorporated by reference to Exhibit 10.36 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).
10.45	Collateral Agency and Intercreditor Joinder, dated as of April 24, 2020, by and among Intelsat Connect Finance 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 (incorporated by reference to Exhibit 10.3 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on June 4, 2020).
10.46	Deed of Debenture, dated as of June 28, 2013, by and among Intelsat Finance Bermuda Ltd., as Chargor, and Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as Collateral Trustee.*
10.47	Superpriority Secured Debtor in Possession Credit Agreement, dated as of June 17, 2020, by and among Intelsat Jackson Holdings S.A., as Borrower, the Guarantor parties thereto, Credit Suisse AG, as Administrative Agent and Collateral Agent, and the Lender parties thereto (incorporated by reference to Exhibit 10.1 of Intelsat S.A.'s Current Report on Form 8-K, File No. 001-35878, filed on June 18, 2020).

Exhibit No.	Document Description
10.48	Joinder Agreement No. 1, dated as of August 7, 2020, to Superpriority Secured Debtor in Possession Credit Agreement, dated as of June 17, 2020, by and among Intelsat Velocity Holdings LLC, as a New Guarantor, Intelsat Invoice Services LLC, as a New Guarantor, and Credit Suisse AG, Cayman Islands Branch as Administrative Agent (incorporated by reference to Exhibit 10.1 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on November 5, 2020).
10.49	Amendment No. 1, dated as of August 24, 2020, to Superpriority Secured Debtor in Possession Credit Agreement, dated as of June 17, 2020, by and among Intelsat Jackson Holdings S.A., as Borrower, the Guarantor parties thereto, Credit Suisse AG, as Administrative Agent and Collateral Agent and the Lender parties thereto (incorporated by reference to Exhibit 10.2 of Intelsat S.A.'s Quarterly Report on Form 10-Q, File No. 001-35878, filed on November 5, 2020).
10.50	Amendment No. 2, dated as of November 25, 2020, to Superpriority Secured Debtor in Possession Credit Agreement, dated as of June 17, 2020, by and among Intelsat Jackson Holdings S.A., as Borrower, the Guarantor parties thereto, Credit Suisse AG, as Administrative Agent and Collateral Agent and the Lender parties thereto.*
10.51	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).†
10.52	First Amendment, dated as of April 18, 2013, to Employment Agreement, dated as of March 18, 2013, by and between Intelsat Corporation and Stephen Spengler (incorporated by reference to Exhibit 10.38 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.53	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).†
10.54	Third Amendment, dated as of December 31, 2017, to Employment Agreement, dated as of March 18, 2013, by and among Stephen Spengler, Intelsat S.A. and Intelsat Management LLC (incorporated by reference to Exhibit 10.40 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.55	Fourth Amendment, dated as of December 24, 2018, to Employment Agreement, dated as of March 18, 2013, by and among Stephen Spengler, Intelsat S.A., Intelsat Management LLC and Intelsat US LLC (incorporated by reference to Exhibit 10.41 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.56	Employment Agreement, dated as of June 3, 2019, by and among David M. Tolley, Intelsat S.A. and Intelsat US LLC (incorporated by reference to Exhibit 10.42 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.57	Employment Agreement, dated as of January 9, 2018, by and between Samer Halawi and Intelsat Corporation (incorporated by reference to Exhibit 10.43 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.58	First Amendment, dated as of December 28, 2018, to Employment Agreement, dated as of January 9, 2018, by and between Samer Halawi and Intelsat US LLC (incorporated by reference to Exhibit 10.44 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.59	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).†
10.60	First Amendment, dated as of April 18, 2013, to Employment Agreement, dated as of March 18, 2013, by and among Intelsat S.A., Intelsat Investments S.A., Intelsat Management LLC and Michelle Bryan (incorporated by reference to Exhibit 10.46 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.61	Second Amendment, dated as of December 24, 2018, to Employment Agreement, dated as of March 18, 2013, by and among Intelsat S.A., Intelsat Management LLC, Intelsat US LLC and Michelle Bryan (incorporated by reference to Exhibit 10.47 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.62	Employment Agreement, dated as of December 21, 2015, by and between Intelsat Corporation and Michael DeMarco (incorporated by reference to Exhibit 10.48 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.63	First Amendment, dated as of August 21, 2017, to Employment Agreement, dated as of December 21, 2015, by and among Intelsat Corporation and Michael DeMarco (incorporated by reference to Exhibit 10.49 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.64	Second Amendment, dated as of December 28, 2018, to Employment Agreement, dated as of December 21, 2015, by and between Intelsat US LLC and Michael DeMarco (incorporated by reference to Exhibit 10.50 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.65	Form of Time-Based Restricted Stock Unit Award Agreement between Intelsat S.A. and certain directors, pursuant to Intelsat S.A.'s 2013 Equity Incentive Plan (incorporated by reference to Exhibit 10.51 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†≋
10.66	Form of Time-Based Restricted Stock Unit Award Agreement between Intelsat S.A. and its executive officers, pursuant to Intelsat S.A.'s 2013 Equity Incentive Plan (incorporated by reference to Exhibit 10.52 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†≋
10.67	Form of Performance-Based Restricted Stock Unit Award Agreement between Intelsat S.A. and its executive officers, pursuant to Intelsat S.A.'s 2013 Equity Incentive Plan (incorporated by reference to Exhibit 10.53 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†≋
10.68	Option Agreement, dated as of April 18, 2013, by and between Intelsat S.A. and David McGlade (incorporated by reference to Exhibit 10.54 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.69	First Amendment to Option Agreement, dated as of October 24, 2014, to Option Agreement, dated as of April 18, 2013, by and between Intelsat S.A. and David McGlade (incorporated by reference to Exhibit 10.55 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†

Exhibit No.	Document Description
10.70	Second Amendment to Option Agreement, dated as of January 2, 2016, to Option Agreement, dated as of April 18, 2013, by and between Intelsat S.A. and David McGlade (incorporated by reference to Exhibit 10.56 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.71	Option Agreement, dated as of April 18, 2013, by and between Intelsat S.A. and David McGlade (incorporated by reference to Exhibit 10.57 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.72	First Amendment to Option Agreement, dated as of October 24, 2014, to Option Agreement, dated as of April 18, 2013, by and between Intelsat S.A. and David McGlade (incorporated by reference to Exhibit 10.58 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.73	Second Amendment to Option Agreement, dated as of December 15, 2015, to Option Agreement, dated as of April 18, 2013, by and between Intelsat S.A. and David McGlade (incorporated by reference to Exhibit 10.59 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.74	Employee Nonqualified Option Award Agreement, dated as of May 1, 2013, by and between Intelsat S.A. and David McGlade (incorporated by reference to Exhibit 10.60 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.75	First Amendment, dated as of December 15, 2015, to Employee Nonqualified Option Award Agreement, dated as of May 1, 2013, by and between Intelsat S.A. and David McGlade (incorporated by reference to Exhibit 10.61 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.76	Employee Nonqualified Option Award Agreement, dated as of May 1, 2013, by and between Intelsat S.A. and Stephen Spengler (incorporated by reference to Exhibit 10.62 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.77	First Amendment, dated as of December 15, 2015, to Employee Nonqualified Option Award Agreement, dated as of May 1, 2013, by and between Intelsat S.A. and Stephen Spengler (incorporated by reference to Exhibit 10.63 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.78	Employee Nonqualified Option Award Agreement, dated as of December 15, 2015, by and between Intelsat S.A. and Stephen Spengler (incorporated by reference to Exhibit 10.64 of Intelsat S.A.'s Annual Report on Form 10-K, File No. 001-35878, filed on February 20, 2020).†
10.79	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).†
10.80	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).†
10.81	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).†
10.82	First 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 18, 2015).†
10.83	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).†
10.84	Intelsat S.A.'s 2020 Key Employee Incentive Plan (incorporated by reference to Exhibit 10.1 of Intelsat S.A.'s Current Report on Form 8-K, File No. 001-35878, filed on May 1, 2020).†
10.85	Intelsat S.A.'s 2021 Key Employee Incentive Plan (incorporated by reference to Exhibit 10.1 of Intelsat S.A.'s Current Report on Form 8-K, File No. 001-35878, filed on December 21, 2020).†
10.86	Intelsat S.A.'s Form of Retention Agreement (incorporated by reference to Exhibit 10.2 of Intelsat S.A.'s Current Report on Form 8-K, File No. 001-35878, filed on May 1, 2020).†
10.87	Form of Indemnification Agreement between Intelsat S.A. and its directors and officers (incorporated by reference to 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).†
21.1	List of significant subsidiaries of Intelsat S.A.*
23.1	Consent of KPMG LLP, independent registered public accounting firm.*
31.1	Rule 13a-14(a)/15d-14(a) Certification of Principal Executive Officer.*
31.2	Rule 13a-14(a)/15d-14(a) Certification of Principal Financial Officer.*
32.1	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.*
32.2	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.*
101	The following financial information from the Company's Annual Report on Form 10-K for the year ended December 31, 2020, formatted in Inline Extensible Business Reporting Language (iXBRL): (i) Consolidated Balance Sheets as of December 31, 2019 and 2020, (ii) Consolidated Statements of Operations for the years ended December 31, 2018, 2019 and 2020, (iii) Consolidated Statements of Comprehensive Loss for the years ended December 31, 2018, 2019 and 2020, (iv) Consolidated Statements of Changes in Shareholders' Deficit for the years ended December 31, 2017, 2018, 2019 and 2020, (v) Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2019 and 2020, and (vi) Notes to Consolidated Financial Statements.*
104	Cover Page Interactive Data File - the cover page XBRL tags are embedded within the Inline XBRL document.

* Filed herewith

† Management contract or compensatory plan or arrangement.

⌗ Certain confidential information contained in this exhibit was omitted by means of redacting a portion of the text.

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS

Description	For the year ended December 31, 2020	
Allowance for credit losses (in thousands)	**Accounts Receivable**	**Contract Assets**
Balance at January 1, 2020	$ 40,028	$ —
Cumulative-effect adjustment of ASU 2016-13 adoption[(1)]	—	916
Business combination adjustments[(2)]	2,616	816
Charged to costs and expenses	54,783	2,157
Deductions[(3)]	(56,642)	—
Balance at December 31, 2020	$ 40,785	$ 3,889

(1) See Note 1—Background and Summary of Significant Accounting Policies—*(w) Recently Adopted Accounting Pronouncements* for more information.

(2) Represents an acquisition date allowance for purchased financial assets with credit deterioration with a corresponding increase to the amortized cost of the financial asset in accordance with ASC 805.

(3) Uncollectible accounts written off, net of recoveries.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

INTELSAT S.A.

Date: March 30, 2021

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

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Signature	Title	Date
/s/ STEPHEN SPENGLER **Stephen Spengler**	Chief Executive Officer and Director (Principal Executive Officer)	March 30, 2021
/s/ DAVID TOLLEY **David Tolley**	Chief Financial Officer (Principal Financial Officer)	March 30, 2021
/s/ STEPHEN BACICA **Stephen Bacica**	Vice President and Controller, Intelsat US LLC (Principal Accounting Officer)	March 30, 2021
/s/ DAVID McGLADE **David McGlade**	Chairman and Director	March 30, 2021
/s/ JUSTIN BATEMAN **Justin Bateman**	Director	March 30, 2021
/s/ ROBERT CALLAHAN **Robert Callahan**	Director	March 30, 2021
/s/ JOHN DIERCKSEN **John Diercksen**	Director	March 30, 2021
/s/ EDWARD KANGAS **Edward Kangas**	Director	March 30, 2021
/s/ ELLEN PAWLIKOWSKI **Ellen Pawlikowski**	Director	March 30, 2021
/s/ RAYMOND SVIDER **Raymond Svider**	Director	March 30, 2021