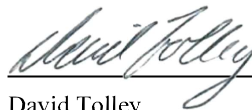
Intelsat S.A.
Consolidated Financial Statements

For the year ended December 31, 2020
(With the report of the Réviseur d'Entreprises agréé thereon)

Stephen Spengler
Chief Executive Officer



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Intelsat S.A.
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For the year ended December 31, 2020

Background

Intelsat S.A. (the "Company", "we", "us" or "our") 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.

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, as applicable, included in this Management Report and accompanying consolidated financial statements 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.

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 Note 12—Debt.

On June 9, 2020, we 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). 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.

Gogo Transaction

On December 1, 2020, we completed our acquisition of Gogo Inc.'s ("Gogo") commercial aviation business ("Gogo CA"). As a result of the acquisition (the "Gogo Transaction"), we became the global leader in providing in-flight connectivity ("IFC") and wireless in-flight entertainment solutions to the commercial aviation industry.

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.

Business overview

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 significant 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 high-throughput satellites and software-defined satellite 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 in 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.

Results of Operations

Years Ended December 31, 2019 and 2020

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 years ended December 31, 2019 and 2020 (in thousands, except percentages; some percentage changes were deemed not meaningful (“NM”):

	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		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 revenues	-	15,585	15,585	NM
Total	$ 2,061,465	$ 1,913,080	$ (148,385)	(7)%

Income from Operations

In 2020, our income from operations was $0.3 billion, a $0.1 billion decrease compared to 2019, which is attributable to the decrease in revenue. The decrease in revenue was primarily due to non-renewals, renewals at lower pricing or lower capacity and service contractions. Operating expenses increased, largely due to increases in bad debt expense, professional fees and other costs related to the acquisition of Gogo CA, and staff-related expenses. Additionally, we recognized an impairment of non-amortizable intangibles and other assets (see Note 11—Goodwill and Other Intangible Assets). These increases were offset by the recognition of a satellite impairment loss in 2019 with no comparable loss in 2020 (Note 9—Satellites and Other Property and Equipment).

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.

For the year ended December 31, 2020, interest expense, net was $813.6 million as compared to $1.3 billion for the year ended December 31, 2019. The net decrease of $459.5 million was principally due to the following: (i) 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 (ii) 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.

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.

Key performance indicators

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 fixed satellite services 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. generally accepted accounting principles ("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, 2019	Year Ended December 31, 2020
Net loss	$ (911,210)	$ (909,271)
Add:		
Interest expense, net	1,273,112	813,603
Loss on early extinguishment of debt	—	—
Provision for (benefit from) income taxes	(7,384)	(7,055)
Depreciation and amortization	658,233	653,447
EBITDA	$ 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, 2019	Year Ended December 31, 2020
Net loss	$ (911,210)	$ (909,271)
Add:		
Interest expense, net	1,273,112	813,603
Loss on early extinguishment of debt	—	—
Provision for (benefit from) income taxes	(7,384)	(7,055)
Depreciation and amortization	658,233	653,447
EBITDA	1,012,751	550,724
Add:		
Compensation and benefits	13,189	57,786
Non-recurring and other non-cash items	58,625	75,913
Satellite impairment loss	381,565	—
Impairment of non-amortizable intangible and other assets		191,943
Reorganization items	—	385,861
Proportionate share from unconsolidated joint venture:		
Interest expense, net	5,014	3,451
Depreciation and amortization	10,320	11,258
Adjusted EBITDA	$ 1,481,464	$ 1,276,936

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 fixed satellite services ("FSS") sector make our net cash provided by operating activities less volatile than that of typical companies outside our industry.

Other indicators

Research and development

During the year ended December 31, 2020, the Company did not incur expenses for development activities.

Own shares

The Company does not have any of its own shares.

Financial instruments

We are primarily exposed to the market risk associated with unfavorable movements in interest rates and foreign currencies. The risk inherent in our market risk sensitive instruments and positions is the potential loss arising from adverse changes in those factors. We do not currently use material foreign currency derivatives to hedge our foreign currency exposures nor we purchase or hold any derivative financial instruments for speculative purposes.

Employees

Intelsat fully complies with the laws and regulations relating to its employees, provides training and supports career development.

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 U.S. Federal Aviation Administration ("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.

Principal risks and uncertainties

Business Risks

- 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.

Satellite Industry Risks

- 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.

Regulatory Risks

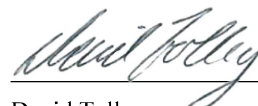
- We are subject to the orbital slot and spectrum access requirements of the International Telecommunication Union and the regulatory and licensing requirements in each of the countries in which we provide services, operate facilities, or license terminals, and our business is sensitive to regulatory 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.

Risks 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.

Additional risks not currently known by us, or that are currently believed to be immaterial, also may materially adversely affect our business, financial condition or results of operations in the future.

Stephen Spengler
Chief Executive Officer



David Tolley
Chief Financial Officer

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 consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP"), in accordance with a derogation pursuant to Article 27 of the amended law of 19 December 2002 obtained from the Ministry of Justice. A reconciliation of shareholders' equity and result for the period with International Financial Reporting Standards as adopted by the European Union ("IFRS") is included in Note 19—Reconciliation with IFRS.

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.

	As of December 31, 2019	Fair Value Measurements at 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

	As of December 31, 2020	Fair Value Measurements at 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—Reconciliation with International Financial Reporting Standards (referred to hereafter as "IFRS")

The reconciliation of the shareholders' equity under U.S. GAAP to the shareholders' equity under IFRS as at December 31, 2020 was as follows:

	2019 USD Thousands	2020 USD Thousands
Shareholders' equity under U.S. GAAP	$ (4,999,858)	$ (5,921,471)
Reversal of asset impairment	104,099	104,099
Income tax provision	(11,440)	(8,965)
Depreciation of impaired assets	(94,174)	(104,099)
Pension accumulated other comprehensive income adjustment	12,440	12,330
Pension related expenses	(12,440)	(12,330)
Leases	-	(5,837)
Bankruptcy accounting	-	(123,256)
Government grants	-	32,523
Shareholders' equity under IFRS	**$ (5,001,373)**	**$ (6,027,006)**

The reconciliation of the result for the period under U.S. GAAP to the result for the period under IFRS as at December 31, 2020 was as follows:

	2019 USD Thousands	2020 USD Thousands
Result for the period under U.S. GAAP	$ (913,595)	$ (911,664)
Income tax provision	2,472	2,475
Depreciation of impaired assets	(9,913)	(9,925)
Pension related expenses	(12,440)	(12,330)
Share-based compensation	(3,022)	1,811
Leases	-	(5,837)
Bankruptcy accounting	-	(123,256)
Government grants	-	32,523
Result for the period under IFRS	$ **(936,498)**	**$ (1,026,203)**

Impairment of long-lived assets (IAS 36)

Under IFRS, an impairment loss recognized in prior periods for an asset other than goodwill is reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognized. In 2010, the Company's G-15 satellite was initially impaired. As of December 31, 2010, the Company recovered control of the satellite and it was determined that the carrying amount of the asset, as described in International Accounting Standard ("IAS") 36.117, was fully recovered and therefore the Company has increased to its recoverable amount by the full amount of the initial impairment. Under U.S. GAAP, an impairment loss may not be reversed if the fair value of the impaired asset or asset group increases subsequently.

Pension-related expenses (IAS 19 & IAS 19 R)

In 2011, the International Accounting Standards Board issued revisions to IAS 19 ("IAS 19R"), the IFRS accounting standard for retirement plans. Except for gains and losses recognized under other comprehensive income instead of the profit & loss account, as it is recognized under U.S. GAAP, there were no other material differences for the Company as a result of IAS 19R.

Share-based compensation (IFRS 2)

IFRS 2 Share-based Compensation requires the Company to measure share-based compensation related to share purchase options and RSUs at the fair value of the option or RSU on the date of the grant, and recognize the fair value as expense over the vesting period of the award. IFRS 2 also requires that an award with graded vesting be considered as separate grants with different vesting dates and fair values. Under U.S. GAAP, awards with graded vesting are recognized as expense on a straight-line basis over the entire vesting period.

Leases (IFRS 16)

IFRS 16 Leases requires all leases to be accounted for as finance leases, whereas under U.S. GAAP a lease may be classified as an operating lease or a finance lease. In both cases, lessees will recognize a right-of-use asset and a lease liability. However, a lessee with a finance lease is required to apply a financing model in which the expense resulting from the lease declines during the lease term. In comparison, an operating lease results in lease expense recognized on a straight-line basis, by amortizing the leased asset more slowly than a financing leased asset.

Bankruptcy accounting

Under U.S. GAAP, the accounting for Chapter 11 bankruptcy is governed by ASC 852, *Reorganizations*. No comparable accounting standard exists under IFRS. Therefore, all items continue to be recognized and measured in accordance with the applicable IFRS standards. This includes continued recognition of interest expense on unsecured senior notes, as well as the amortization of debt issuance costs and discounts/premiums attached to those debts, subsequent to May 13, 2020 when the Chapter 11 Cases commenced.

Government grants (IAS 20)

IAS 20 states that a company recognizes a government grant when there is a reasonable assurance that the grant will be received and that the entity will comply with any conditions attached to the grant. Subject to the above, IAS 20 requires government grants to be recognized in profit or loss on a systematic basis over the periods in which the entity recognizes expenses for the related costs for which the grants are intended to compensate. Under U.S. GAAP, the expected reimbursement payments from the FCC related to costs incurred in connection with the C-band clearing efforts during the year ended December 31, 2020 were recorded under Long-Term Contract Liabilities on the balance sheet as at December 31, 2020.

Note 20—Employees

During the year ended December 31, 2020, on average we had 1,270 full-time regular employees, as follows:

- 672 employees in engineering, operations and related information systems;
- 202 employees in finance, legal and other administrative functions;
- 310 employees in sales, marketing and strategy; and
- 87 employees in support of government sales and marketing.

Total employee expenses represented USD $244.3 million for the year ended December 31, 2020.

Note 21—Auditor fees

Fees billed to the Company and its subsidiaries by KPMG Luxembourg, Société coopérative, and other member firms of the KPMG network during the years ended December 31, 2019 and 2020 were as follows:

(USD in thousands, VAT excluded)	2019	2020
Audit fees annual accounts and consolidated accounts	$ 3,183	$ 5,264
Tax fees	11	-

Note 22—Key management compensation

During the year ended December 31, 2020, key management received compensation as follows:

(USD in millions)	
Remuneration including bonuses	$ 27.4
Director fees	1,5
Pension benefits	0.1
Other benefits	0.4

No advances or loans were granted to the key management members of the Company during the year ended December 31, 2020.

Note 23—List of consolidated subsidiaries

The list of our subsidiaries consolidated in full in the accounts of Intelsat S.A. as of December 31, 2020 is set forth below. Unless otherwise stated, the subsidiaries listed below are directly or indirectly owned 100% by Intelsat S.A.

1. Horizons Satellite Holdings LLC, owned 50%, a limited liability company organized under the laws of Delaware.
2. Horizons-1 Satellite LLC, owned 50%, a limited liability company organized under the laws of Delaware.
3. Horizons-2 Satellite LLC, owned 50%, a limited liability company organized under the laws of Delaware.
4. Horizons-3 License LLC, a limited liability company organized under the laws of Delaware.
5. Intelsat (Luxembourg) S.A., a company organized under the laws of Luxembourg.
6. Intelsat Africa (Pty.) Ltd., a company organized under the laws of South Africa.
7. Intelsat Align S.à r.l., a company organized under the laws of Luxembourg.
8. Intelsat Alliance LP, a limited partnership organized under the laws of Delaware.
9. Intelsat Asia (Hong Kong) Limited, a company organized under the laws of Hong Kong.
10. Intelsat Asia Carrier Services LLC, a limited liability company organized under the laws of Delaware.
11. Intelsat Asia Pty. Ltd., a company organized under the laws of Australia.
12. Intelsat Aviation AcquisitionCo LLC, a limited liability company organized under the laws of Delaware.
13. Intelsat Aviation HoldCo LLC, a limited liability company organized under the laws of Delaware.
14. Intelsat Aviation TopCo LLC, a limited liability company organized under the laws of Delaware.
15. Intelsat Brasil Ltda., a company organized under the laws of Brazil.
16. Intelsat Brasil Servicos de Telecomunicacao Ltda., a company organized under the laws of Brazil.
17. Intelsat Canada ULC, an unlimited liability company organized under the laws of Canada.
18. Intelsat Clearinghouse LLC, a limited liability company organized under the laws of Delaware.
19. Intelsat Connect Finance S.A., a company organized under the laws of Luxembourg.
20. Intelsat Cosmos OOO, a company organized under the laws of Russia.
21. Intelsat Envision Holdings LLC, a limited liability company organized under the laws of Delaware.
22. Intelsat Finance Bermuda Ltd., a company organized under the laws of Bermuda.
23. Intelsat France SAS, a company organized under the laws of France.
24. Intelsat General Communications LLC, a limited liability company organized under the laws of Delaware.
25. Intelsat Genesis GP LLC, a limited liability company organized under the laws of Delaware.
26. Intelsat Genesis Inc., a corporation organized under the laws of Delaware.
27. Intelsat Global Sales & Marketing Ltd., a company organized under the laws of England and Wales.
28. Intelsat Holdings LLC, a limited liability company organized under the laws of Delaware.
29. Intelsat Holdings S.A., a company organized under the laws of Luxembourg.
30. Intelsat Horizons-3 LLC, a limited liability company organized under the laws of Delaware.
31. Intelsat India Private Limited, a company organized under the laws of India.
32. Intelsat Inflight (Shanghai) Limited, a company organized under the laws of China.
33. Intelsat Inflight Brasil Participacoes Ltda., a company organized under the laws of Brazil.
34. Intelsat Inflight Brasil Telecomunicacoes Ltda., a company organized under the laws of Brazil.
35. Intelsat Inflight Canada ULC, a company organized under the laws of Canada.
36. Intelsat Inflight France SAS, a company organized under the laws of France.
37. Intelsat Inflight Germany GmbH, a company organized under the laws of Germany.
38. Intelsat Inflight Godo-Kaisha, a company organized under the laws of Japan.
39. Intelsat Inflight HK Limited, a company organized under the laws of Hong Kong.
40. Intelsat Inflight India LLP, a limited liability partnership organized under the laws of India.
41. Intelsat Inflight International Holdings LLC, a limited liability company organized under the laws of Delaware.
42. Intelsat Inflight Licenses LLC, a limited liability company organized under the laws of Delaware.
43. Intelsat Inflight LLC, a limited liability company organized under the laws of Delaware.
44. Intelsat Inflight México, S. de R.L. de C.V., a company organized under the laws of Mexico.
45. Intelsat Inflight Netherlands B.V., a company organized under the laws of the Netherlands.
46. Intelsat Inflight Pty. Ltd., a company organized under the laws of Australia.
47. Intelsat Inflight SG Pte. Ltd., a company organized under the laws of Singapore.
48. Intelsat Inflight Switzerland GmbH, a company organized under the laws of Switzerland.
49. Intelsat Inflight UK Limited, a company organized under the laws of England and Wales.
50. Intelsat International Employment, LLC, a limited liability company organized under the laws of Delaware.
51. Intelsat International Systems LLC, a limited liability company organized under the laws of Delaware.
52. Intelsat Investment Holdings S.à r.l., a company organized under the laws of Luxembourg.
53. Intelsat Investments S.A., a company organized under the laws of Luxembourg.
54. Intelsat Invoice Services LLC, a limited liability company organized under the laws of Delaware.
55. Intelsat Israel Ltd., a company organized under the laws of Israel.
56. Intelsat Jackson Holdings S.A., a company organized under the laws of Luxembourg.
57. Intelsat Kommunikations GmbH, a company organized under the laws of Germany.
58. Intelsat License Holdings LLC, a limited liability company organized under the laws of Delaware.

59. Intelsat License LLC, a limited liability company organized under the laws of Delaware.
60. Intelsat Satellite Communications Limited, a company organized under the laws of Kenya.
61. Intelsat Satellite LLC, a limited liability company organized under the laws of Delaware.
62. Intelsat Senegal S.à r.l., a company organized under the laws of Senegal.
63. Intelsat Services and Equipment LLC, a limited liability company organized under the laws of Delaware.
64. Intelsat Singapore Pte. Ltd., a company organized under the laws of Singapore.
65. Intelsat Subsidiary (Gibraltar) Limited, a company organized under the laws of Gibraltar.
66. Intelsat UK Financial Services Ltd., a company organized under the laws of England and Wales.
67. Intelsat US Finance LLC, a limited liability company organized under the laws of Delaware.
68. Intelsat US LLC, a limited liability company organized under the laws of Delaware.
69. Intelsat Velocity Holdings LLC, a limited liability company organized under the laws of Delaware.
70. Intelsat Ventures S.à r.l., a company organized under the laws of Luxembourg.
71. Intelsat Virginia Holdings LLC, a limited liability company organized under the laws of Virginia.
72. Mountainside Teleport LLC, a limited liability company organized under the laws of Delaware.
73. PanAmSat de México, S. de R.L. de C.V., a company organized under the laws of Mexico.
74. PanAmSat Europe Corporation, a corporation organized under the laws of Delaware.
75. PanAmSat India Marketing, L.L.C., a limited liability company organized under the laws of Delaware.
76. PanAmSat India, LLC, a limited liability company organized under the laws of Delaware.
77. PanAmSat International Holdings LLC, a limited liability company organized under the laws of Delaware.
78. PanAmSat International Sales, LLC, a limited liability company organized under the laws of Delaware.
79. PanAmSat Satellite Europe Limited, a company organized under the laws of England and Wales.
80. PanAmSat Sistemas de Comunicação DTH do Brasil Ltda., a company organized under the laws of Brazil.
81. Southern Satellite Licensee LLC, a limited liability company organized under the laws of Delaware.
82. Southern Satellite LLC, a limited liability company organized under the laws of Delaware.
83. WP COM, S. de R.L. de C.V., a company organized under the laws of Mexico.

Note 24—Subsequent events

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.